



CTC Source Protection Region

Source Protection Committee Meeting #8/09

Chair: Susan Self

Tuesday, November 24, 2009
10 AM to 3PM; Lunch to be served at 12:00 PM
Black Creek Pioneer Village, North Theatre
1000 Murray Ross Parkway
Toronto, ON M3J 2P3

AGENDA

1. **DISCLOSURE OF PECUNIARY INTEREST**
2. **BUSINESS ARISING FROM THE MINUTES**
3. **DELEGATIONS**
4. **CORRESPONDENCE**
5. **PRESENTATIONS**
 - 5.1 Rodney Bouchard, Lake Ontario Collaborative Update in reference to item 6.2
6. **ITEMS FOR COMMITTEE ACTION**
 - 6.1 Stage 1 Public Consultation in Vulnerable Areas
 - 6.2 CTC SPC acceptance in principle of delineation of Intake Protection Zones 1 and 2 (IPZ1 and IPZ2) Lake Ontario Collaborative – Surface Water Vulnerability Assessment for each CTC source protection area
 - 6.3 CTC Chair's Quarterly Report to Source Protection Authorities

6.4 Explanatory wording related to water budgets and SGRA delineation

6.5 SPP Municipal Planners Meeting

7. ITEMS FOR COMMITTEE INFORMATION

7.1 Results of the 360 Review (SPC Survey)

7.2 Communications Update

7.3 MOE Liaison Update – verbal update

8. NEW BUSINESS

Next meeting of the Source Protection Committee #1/10, will be held on Monday, January 18, 2010, at 10:00 AM at Black Creek Pioneer Village, North Theatre located at 1000 Murray Ross Pkwy, Toronto, ON M3J 2P3.

6. ITEMS FOR COMMITTEE ACTION

Item 6.1

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Working Group Chair

RE: Stage 1 Public Consultation in Vulnerable Areas

KEY ISSUE

The CTC SPC Communications and Outreach Working Group (COWG) is recommending a plan and specific communications to be sent to property owners in vulnerable areas identified within the three source protection areas.

RECOMMENDATION

THAT the SPC endorses the recommendations of the CTC SPC Communications and Outreach Working Group as set out below;

THAT source water protection staff be directed, working with municipal and stewardship staff, to contact affected persons within the delineated vulnerable areas (such as Well Head Protection Areas and Intake Protection Zones) to begin Stage 1 consultation by sending the correspondence and explanatory information found in Attachments 1, 2, 3 and 4, after the mapping of these areas have been accepted by the SPC;

THAT staff be directed to work directly with the municipalities who operate drinking water systems within the CTC SPR to ensure that the proposed Stage 1 consultation is conducted with their knowledge and endorsement (attachment 5);

THAT staff be directed to report back regularly to the SPC on any communications or feedback received and any response recommended;

AND FURTHER THAT the COWG reports back at SPC meeting #1/10 to be held Monday January 18, 2010 on recommendations for Stage 2 public consultations - regulatory.

BACKGROUND

At SPC Meeting #3/08 held on March 17, 2008, the SPC authorized formation of the Communications and Outreach Working Group (COWG) by RES #A32/08 and further directed the COWG at meeting #6/09 held on September 14, 2009 by RES #A128/09 to convene to develop a formal consultation plan for the Assessment Report stage for SPC approval. The SPC also directed staff to proceed with Stage 1 consultation to individuals in identified vulnerable areas by RES #A128/09.

The COWG met on November 5, 2009 to review the proposed materials prepared by staff to be distributed to affected individuals in vulnerable areas (such as Well Head Protection Areas and Intake Protection Zones) to commence Stage 1 public consultations. Staff is advice on the

specific content of this correspondence to ensure that it meets the needs of the SPC and to ensure members are fully informed on the work in the event that they receive questions from individuals or their stakeholder group. Advice of the COWG was also sought on the preferred municipal contacts to be named in the letter and the appropriate signatory (ies).

Current Status

The COWG reviewed the proposed materials to be sent for Stage 1 consultation and examples of the recommended materials as revised by the COWG are found in Attachments 1, 2, 3 and 4. The package will include:

- the letter-to-landowner sent to the mailing address of the property with the name of the owner/tenant/lessee, if known;
- a map showing the specific vulnerable area and corresponding vulnerability score relevant to this property and surrounding properties;
- a pamphlet which provides an overview description of vulnerable areas and scoring; and
- a enclosure letter from the municipality responsible for the drinking water well.

Following review of the draft mail-out materials COWG members recommended that landowner packages be sent in an envelope of the local municipality and that a note of endorsement from the municipality be included with the package. It is believed that this approach will lend credibility to the outreach as more landowners will be familiar with their municipality than with their Conservation Authority or Source Protection Committee. This approach will also have the additional benefit of linking the efforts of the SPC to the municipal partners who may be ultimately responsible for enforcing source protection plans. Should a municipality not wish to include an enclosure letter and/or approve the use of their envelopes for the mailing, staff will proceed with sending the material out in conservation authority envelopes for that area.

The original letter-to-landowner was developed in partnership with staff of the South Georgian Bay Lake Simcoe (SGBLS) Source Protection Region and Region of York staff. The CTC is planning to send the letter to all property owners within mapped vulnerable areas with vulnerability scores of 4 or higher which correspond with the range where there could be low, moderate or significant drinking water threats. The SGBLS plans to send their letter only to property owners where significant threat activities have been specifically identified through Threats Assessment work, due to workload concerns. The Region of York staff prefers the CTC's approach to advise all landowners. Further, at the CTC we do not yet have the Threats assessment reports and do not want to delay Stage 1 consultation while we get them.

Prior to the acceptance of WHPA delineations by the CTC SPC at SPC Meeting #1/10 on January 18, 2010 (see attachments 6 & 7 for an anticipated schedule for Assessment Report development) the COWG proposes that staff contact municipal staff and elected officials to ensure that local and regional municipalities are aware of the proposed outreach and have reviewed the package to landowners (attachments 1 – 5) and to develop a note of endorsement (attachment 5). The COWG proposes that this approach be taken proactively as it is expected that landowners may contact local elected officials for further information. CTC staff will provide elected officials and their staff with information regarding source water protection and the SPC as well as information on whom to contact so that landowners can be directed to the appropriate CTC staff and municipal staff person (as listed below).

Staff will coordinate the identification of property owners and mailing the package with conservation authority stewardship staff and municipal contact for each well.

The following individuals are our municipal staff contacts:

- Region of Halton – Sudhakar Kurli, Source Protection Coordinator;
- Towns of Erin & Hillsburgh – Frank Smedley, Water Superintendent;
- Township of Amaranth – Susan Stone, CAO/Clerk Treasure;
- Town of Orangeville and Town of Mono – Doug Jones, Director, Environmental Development Services;
- Region of Peel – Rodney Bouchard, Program Planning & Project Manager;
- Region of York – Wendy Kemp, Manager, Water Resources;
- Region of Durham – Beata Golas, Hydrogeologist; and
- *City of Toronto – Bill Snodgrass, Senior Engineer, Water & Wastewater Services – no WHPAs.*

Next Steps

Stage 1 Consultation

Staff will start coordination steps immediately with stewardship and municipal contacts in the Regions of Peel, York and Halton as the WHPA delineation and vulnerability assessments for those wells are currently in peer review and will be coming forward shortly for review to the Ad Hoc Working Group (which was approved at SPC Meeting #7/09 held on October 20, 2009). The Ad Hoc Working Group will consider the work and when satisfied recommend to the SPC the acceptance of the mapping and vulnerability assessment as foundation material for the Assessment Report. Upon SPC acceptance of the mapping, Stage 1 consultation will commence for that area.

Upon receipt of the groundwater vulnerability reports from the other municipalities, staff will begin the coordination activities with those stewardship and municipal staff to prepare for Stage 1 consultation in those areas while the peer review and acceptance process proceeds in parallel. This work will commence upon SPC approval with Regions of Peel, Halton and York, as the vulnerability studies have been received from these jurisdictions and are under peer review.

Stage 2 Consultation

As directed at SPC Meeting #6/09 by Res#A128/09, staff will work with the SPC Communications & Outreach Working Group (COWG) to develop a plan for Stage 2 consultation as well as materials to provide information about the process and on-going information to come forward to the SPC meeting #1/10 to be held Monday January 18, 2010.

The preliminary proposal of the COWG is to exceed the minimum number of formal meetings (one in each Source Protection Area) and hold a series of open houses and meetings during the last week of April and early May, in the following locations:

- *Orangeville area* – focus on wells in Amaranth, Orangeville, Mono and north part of the Town of Caledon (Mono has wells located in the Town of Caledon);
- *Erin/Hillsburgh area* – local wells in those communities;
- *Georgetown/Acton* – Region of Halton's wells for Town of Halton Hills;
- *Caledon* – focus Region of Peel wells in Caledon East, Palgrave, Inglewood, Cheltenham, Alton and Caledon Village;
- *Vaughan/King City area* – focus on Region of York wells in Kleinburg, Nobleton and King City;

- *Whitchurch/Stouffville* area – focus on Region of York wells in Whitchurch and Stouffville and Region of Durham well in Uxville; and
- *Whitby* area – focus on Lake Ontario intakes in Durham to meet mandatory minimum requirement for a meeting in the Central Lake Ontario Source Protection Area. Considering a workshop/presentation on the Lake Ontario Collaborative to be held in conjunction with this meeting.

Where possible, these consultation opportunities, or additional meetings, would benefit from being combined with other related activities to encourage attendance and provide more information to the public. It is proposed to share the plans with adjacent source protection regions to determine if there are opportunities to share events, particularly where WHPAs and other vulnerable areas extend into adjacent areas.

Report prepared by: Nicholas Schulz, extension 5392

Emails: nschulz@trca.on.ca

For Information contact: Nicholas Schulz, extension 5392

Emails: nschulz@trca.on.ca

Date: November 10, 2009

Attachments:

1. Draft Letter-to-landowners
2. Example of WHPA map to be shared with outreach package
3. Draft information pamphlet distributed at SPC Meeting #8/09
4. Draft Municipal Enclosure Note

Attachment 1 of 4: Draft Letter-to-landowners

PRIVATE AND CONFIDENTIAL

Date

«Name»

«Street»

«CityTown», «Prov»

«Postal»

Dear «Name»,

You are receiving this letter because your property, located at **XXXXX XXXX**, is within the “Wellhead Protection Area” (**WHPA**) of **Name of well** located at **insert well location**. **Name of well** is managed by the **name of municipality** and supplies drinking water to **XXX** residents in your community.

The enclosed map and pamphlet identifies the location of your property within the WHPA, explains what a WHPA is, how it is mapped, and what activities are defined as drinking water threats. Because threat activities that occur within a WHPA have a greater potential to impact the drinking water supply, it is important that residents and municipalities work together to remove the potential for contamination from these sources. To help us do this work, we need the assistance of you and your neighbours in identifying past, present or planned land use activities on your property or in the immediate vicinity of **Name of Well**. Local knowledge of the threats activities in your area is something we invite you to share with us through either the **Name of Municipality** or conservation authority staff person below.

In keeping with provincial privacy legislation, information about your property will not be communicated to the public in a manner that will identify any personal information.

The CTC Source Protection Committee (SPC) is responsible for working with Conservation Authorities and **name of municipality** to ensure completion of these studies and develop policies that will protect the sources of municipal drinking water. The CTC SPC includes representation from municipalities, industry, farming, health and the environment. At this time the CTC SPC is reaching out directly to you and other residents, businesses and landowners within mapped vulnerable areas to explain:

- what the risk and threat assessment process means to you
- how you can comment on and provide information for the technical studies being completed
- how you can get involved in protecting drinking water supplies for **Name of Well**
- what activities may threaten drinking water in **name of municipality**

What is Source Water Protection and what does it mean to you?

Source Water Protection starts by conducting scientific studies which will provide the CTC SPC with an understanding of how drinking water moves into and out of the system. This technical work is currently being compiled into draft *Assessment Reports* which will be made available in spring 2010. At that time you will have the opportunity to provide formal comments which will be considered by the CTC SPC in finalizing this work. Following its completion, the *Proposed Assessment Report* will be submitted for approval to the Ministry of the Environment by August 17, 2010.

Using the information from the Assessment Reports, the CTC SPC will develop Source Protection Plans containing policies to reduce or prevent all significant drinking water threats. These Source Protection Plans will be submitted to the Ministry of the Environment by August 20, 2012 for approval. When implemented, source protection plans could have implications for persons whose properties involve an activity or condition that has been identified as a risk to drinking water now or in the future. More information regarding drinking water threats can be found in the documents provided with this letter.

Get Involved

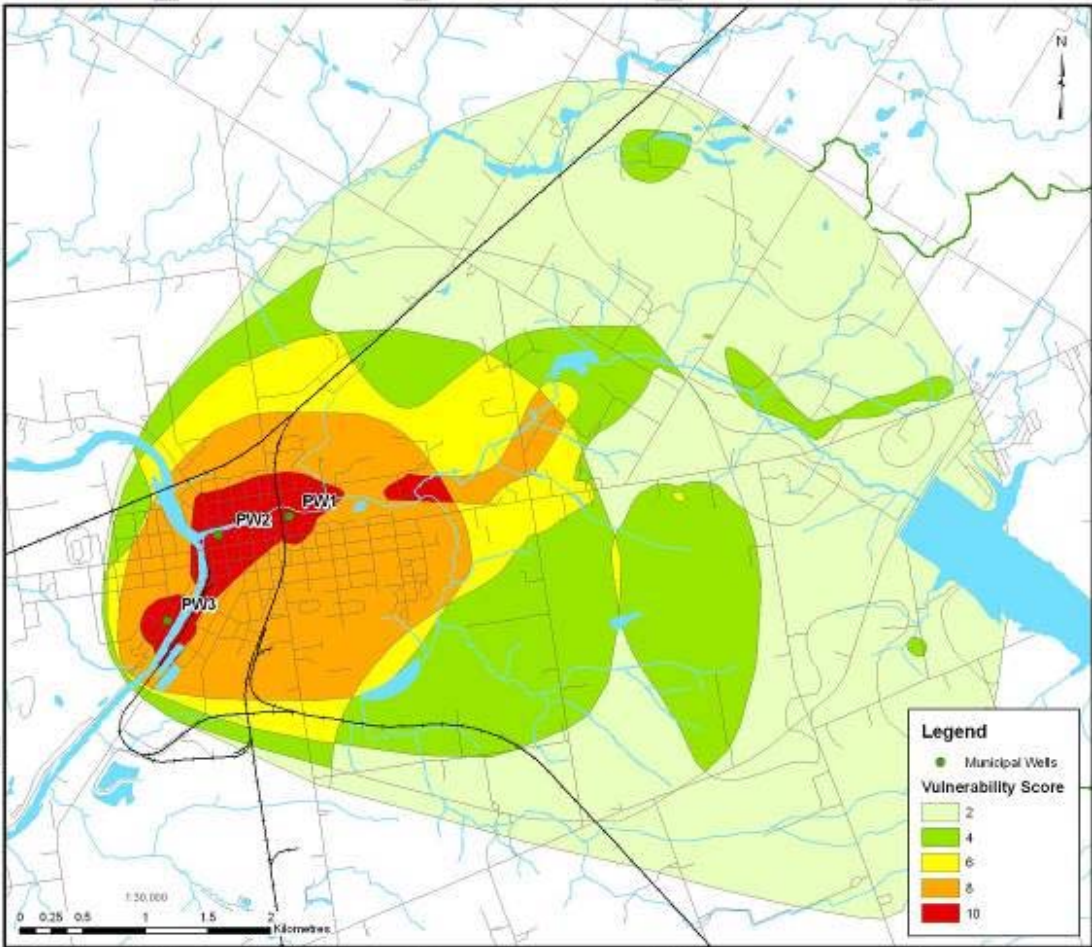
For information about municipal drinking water systems in ***Name of Municipality*** or to provide knowledge about threats activities near ***Name of Well*** please contact [municipal](#) or source water protection staff below.

In the spring of 2010 the CTC SPC will host public meetings to discuss the Assessment Report studies in ***Name of municipality*** and the surrounding area. A notice of meeting dates and locations will be sent to you, published in local newspapers and posted online at www.ctcswp.ca as details are confirmed. We encourage you to join us at the meeting nearest to you.

Susan Self
Chair CTC Source Protection Committee

Insert name and title of municipal contact For more information on the Source Water Protection program and the CTC SPC you can visit the website www.ctcswp.ca or contact Nicholas Schulz, Supervisor Communications, TRCA, at 416-661-6600 X5752 or by email at sourcewater@trca.on.ca

Attachment 2 of 4: Example of WHPA map to be shared with outreach package



Attachment 3 of 4: Draft information pamphlet distributed at SPC Meeting #8/09

Attachment 4 of 4: Draft Municipal Enclosure Note

Dear <<Name>>,

In May of 2000 the contamination of the water supply in Walkerton, Ontario resulted in the death of seven people and severe illness for about 2,500 residents. As a result of this tragedy the Ontario government passed the *Clean Water Act, 2006* (CWA) to protect municipal sources of drinking water.

Working closely with the ***name of municipality*** the CWA requires the CTC Source Protection Committees to develop policies which will protect our sources of drinking water from past, present and potential future threats. Other provincial legislation (e.g. *Safe Drinking Water Act*) requires that ***name of municipality*** test, treat and monitor the quality of our drinking water and ensure that staff are properly trained and certified.

Insert municipally specific information about the quality of drinking water in the region including information about water related funding programs available.

For the past two years the ***name of municipality*** has been working with the CTC SPC to map our drinking water sources and to identify vulnerable areas which may pose threats to it. This technical work will be used by the CTC SPC to develop source protection plans containing policies to reduce or prevent all significant drinking water threats.

Name of municipality advises you to read the information in this package carefully as the policies to be developed by the CTC SPC may have implications for activities on your property. For information about municipal drinking water systems in ***name of Municipality*** please contact ***insert municipal contact information.***

For more information on the Source Water Protection program and the CTC SPC you can visit the website www.ctcswp.ca or contact Nicholas Schulz, Supervisor Communications, TRCA, at 416-661-6600 X5752 or by email at sourcewater@trca.on.ca.

Insert name and signature of municipal official (local decision on who will send it)

Item 6.2

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Beverley Thorpe, Project Manager, CTC Region

RE: CTC SPC acceptance in principle of delineation of Intake Protection Zones 1 and 2 (IPZ1 and IPZ2) Lake Ontario Collaborative – Surface Water Vulnerability Assessment for each CTC source protection area

KEY ISSUE

Presentation by Rodney Bouchard, Region of Peel seeking CTC SPC acceptance of delineation of the Intake Protection Zones 1 and 2 for Lake Ontario drinking water intakes in the CTC, plus update on work underway to identify pathogen threats and spill scenarios leading to Intake Protection Zone 3 delineation and assessment.

RECOMMENDATION

THAT the SPC accepts in-principle the Lake Ontario Intake Protection Zones 1 & 2 for the CTC Source Protection Region as illustrated in figures 1 - 8 of attachment 4 subject to revisions to meet the revised technical rules;

THAT staff be directed to take the revised mapping and the updated vulnerability scores for each intake to the Ad Hoc Working Group for their review and recommendation back to the SPC;

AND FURTHER THAT the SPC directs staff to report back on further progress on Phase 3 work at a future meeting of the SPC when the remaining analysis has been completed.

BACKGROUND

In December 2005, Bill 43, *The Clean Water Act* was introduced by the Ontario Government as a commitment to protect municipal drinking water sources and ultimately protect human health and the environment. In early 2006, the Ministry of Environment (MOE) made available \$51 million in grants for technical studies recognizing the need to support the early collection of technical information related to municipal residential drinking water systems.

The Collaborative Study to Protect Lake Ontario Drinking Water (Collaborative) was established in 2006 to undertake source protection technical studies for Lake Ontario. The Collaborative was organized by the Ontario Water Works Research Consortium (OWWRC), as this municipal utilities consortium proved effective in conducting municipally-funded research of Lake Ontario nearshore water quality issues that impacted water treatment plants. At its inception, the Collaborative was comprised of municipalities around Lake Ontario stretching from Region of Niagara to Prince Edward County. A steering committee was formed to direct the study and the Region of Peel was appointed as Chair of the steering committee.

The July 3, 2007 release of the first set of regulations under the *Clean Water Act, 2006* (the Act) authorized the formation of Source Protection Committees (SPCs) to lead the stakeholder driven source protection process for each of the Source Protection Areas (SPAs) and Source Protection Regions (SPR) created under the Act. With the creation of SPCs, the Collaborative's mandate was modified, resulting in the ultimate governance of the Collaborative now being directed by the SPCs with Lake Ontario municipal drinking water sources. The Collaborative's current mandate is to provide the required technical data and information for the SPCs with Lake Ontario municipal drinking water intakes to complete their assessment reports.

Table 1 identifies the municipal, SPA and SPR partners included in the existing Collaborative.

Table 1
Municipalities, Source Protection Regions and Source Protection Authorities
Represented in the Lake Ontario Collaborative

Source Protection Region (Source Protection Areas)	Municipality	Water Treatment Plant (WTP)
Halton-Hamilton (<i>Hamilton SPA, Halton SPA</i>)	City of Hamilton	Woodward Ave
	Halton Region	Burlington Oakville Burloak (new)
Niagara Peninsula	Niagara Region	Grimsby
CTC (<i>Credit Valley SPA, Toronto and Region SPA, Central Lake Ontario SPA</i>)	City of Toronto	F J Horgan Toronto Island R C Harris R L Clark
	Durham Region	Ajax Bowmanville Oshawa Whitby
	Peel Region	Lorne Park Lakeview
Quinte (<i>Prince Edward SPA</i>)	Prince Edward County	Wellington
Trent Conservation Coalition (<i>Ganaraska SPA, Lower Trent SPA</i>)	Durham Region	Newcastle
	Municipality of Port Hope	Port Hope
	Town of Cobourg	Cobourg

DELINEATION OF INTAKE PROTECTION ZONES 1 AND 2 (IPZ1, IPZ2)

Phase 1 Study

In early 2006, the MOE provided source protection grant funding to the Region of Peel, as the lead applicant on behalf of the Collaborative, in the amount of \$595,000 for Phase 1 of the Collaborative study. The Collaborative retained the Ontario Clean Water Agency (OCWA) to manage the technical study. A consultant, Stantec Consulting, and Environment Canada were retained to complete the technical study components. The Phase 1 study was designed to meet the requirements of the MOE's Draft Guidance Module 4 – Surface Water Vulnerability Assessment. Refer to Table 2 in Attachment 1 for a summary of Phase 1 tasks and activities.

IPZ1 and IPZ2 for each intake in the CTC source protection areas were delineated and vulnerability scores assigned in accordance with this guidance and a final report on this work was prepared by the consultants for each of the CTC municipality's intakes dated January 2008 (copies of the reports for Peel, Toronto and Durham are being provided to SPC members on disc with this agenda package).

Phase 2 Study

In 2007, the MOE provided source protection funding to the Collaborative (through the Region of Peel) in the amount of \$2,195,000 for Phase 2 of the Collaborative Study. The Phase 2 study was designed to address the requirements of MOE draft Guidance Module 5 – Issues Evaluation and Threats Inventory and Module 6 – Tier 1 Semi-Quantitative Risk Analysis. The Phase 2 study was partially completed but the study was halted by the MOE in May 2008 as (then proposed) Assessment Report Regulation and Technical Rules would likely change the methodology for assessing drinking water threats and evaluating drinking water issues.

Refer to Table 3 in Attachment 2 for a summary of Phase 2 tasks and components.

On December 12, 2008 the MOE released the most current version of the Assessment Report Technical Rules made under the *Clean Water Act, 2006*. These rules identify the technical study components to be undertaken to enable Source Protection Committees to complete the Assessment Reports for their respective Source Protection Areas (SPAs). The applicable requirements in the Technical Rules for the Lake Ontario intakes relating to delineation and vulnerability assessment of IPZ1 and IPZ2 zones are as follows:

61. An area known as IPZ-1 shall be delineated in respect of each surface water intake associated with a drinking water system described in rules 58 and 59 and shall be composed of the following areas:

(1) the area within each surface water body that is:

(a) within a circle that has a radius of 1000 metres centered on the crib of the intake, if the intake is a type A intake [i.e. Great Lakes intake];

(2) where the area delineated in accordance with subrule (1) abuts land,

(a) a setback of not more than 120 metres inland along the abutted land measured from the high water mark of the surface water body that encompasses the area where overland flow drains into the surface water body; and

(b) the area of the Regulation Limit along the abutted land.

65. An area known as IPZ-2 shall be delineated for each surface water intake associated with a drinking water system described in rule 58, and shall be composed of the following areas:

(1) the area within each surface water body that may contribute water to the intake where the time of travel to the intake, subject to rule 66, is equal to or less than the time that is sufficient to allow the operator of the system to respond to an adverse condition in the quality of the surface water;

(2) the area within the storm sewershed of each storm sewer that discharges into a surface water body that may contribute water to the intake where the time of travel to the intake, subject to rule 66, is equal to or less than the time that is sufficient to allow the operator of the system to respond to an adverse condition in the quality of the surface water;

- (3) where the area delineated in accordance with subrule (1) abuts land,
- (a) a setback of not more than 120 metres inland along the abutted land measured from the high water mark of the surface water body that encompasses the area where overland flow drains into the surface water body; and
 - (b) the area of the Regulation Limit along the abutted land. ****Note that Section 1(1) of the Technical Rules defines 'Regulation Limit' as the areas delineated in accordance with O. Reg. 97/04 (Content of Conservation Authority Regulations Under Subsection 28(1) of the Act: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses) for the purpose of describing the areas where development is prohibited unless a person obtains a permission under section 28 of the Conservation Authorities Act**
72. Where an area that is an IPZ-2 includes a setback from a surface water body delineated in accordance with subrules 65(3), 68(2) or 70(2) the area may be extended to include an area that contributes water to the IPZ-2, as the case may be, through a transport pathway.
73. When determining the extent to which the IPZ-2 shall be extended for the purpose of rule 72, the following factors shall be considered:
- (1) the hydrological and hydrogeological conditions in the area that contributes water to the intake protection zone through the transport pathway; and
 - (2) the design of the pathway, if it is an transport pathway that is anthropogenic in origin.
86. A vulnerability score shall be assigned to each IPZ-1 and 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.
87. The vulnerability score assigned to each IPZ-1, 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,
- $$B \times C$$
- 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 protection zone determined in accordance with rules 94 and 96.
88. An IPZ-1 shall be assigned an area vulnerability factor of 10.
89. 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.
94. A source vulnerability factor shall be assigned to each surface water intake protection zone related to a type I, II or III system in accordance with Table 3 where a factor of 1 corresponds to a higher vulnerability.

95. When determining the source vulnerability factor to be assigned to a surface water intake protection zone, the following factors shall be considered:
- (1) the depth of the intake from the top of the water surface,
 - (2) the distance of the intake from land;
 - (3) the number of recorded drinking water issues related to the intake, if any.

Table 3 – Source Vulnerability Factors

Intake Type	Source Vulnerability Factor
type A intake	0.5 to 0.7
type B intake	0.7 to 0.9
type C intake	0.9 or 1
type D intake	0.8 to 1

***Classification of intake types is referred to in section 55(1) of the Technical Rules*

96. A source vulnerability factor assigned for the purpose of rule 94 may be expressed to one decimal place.

Based on these Technical Rules, the work remaining to be done to complete the assessment of the IPZ1 and IPZ2 previously delineated, is to review and revise as necessary, the shoreward extent of IPZ1 and IPZ2 and to review and revise as necessary, the vulnerability score for each intake.

Peer Review of IPZ1 and IPZ2 Delineation

Based on the following reasons, formal third party peer review for the Phase 1 and 2 work for Lake Ontario WTP intakes in CTC is not being undertaken:

- The models developed for delineation of IPZ-2s was undertaken by specialists in the field of hydrodynamic modeling (HCCL and Baird). In addition, the MOE Source Protection Staff held two Great Lakes Technical Experts workshop (December 5, 2008 and June 11, 2009) that included experts in hydrodynamic modeling such as consultants, universities researchers, Environment Canada NWRI modelers, etc. The modeling methodologies for delineation of IPZ-2s were thoroughly vetted through these workshops.
- Peer review would likely indicate that IPZ-2 up-stream and upland delineations can be refined with more data. This is something that is already known.
- The Phase 1 reports were prepared to meet the requirements of the Assessment Report Guidance Modules that were available prior to the release of the Technical Rules. The Phase 1 reports, specifically the IPZ-2 delineations and vulnerability scoring for IPZs 1 and 2 is being reviewed by Collaborative PMs to assess whether they meet the Assessment Report Technical Rules. Table 4 in Attachment 3 summarizes the vulnerability scoring and uncertainty analysis, as presented in the

respective Phase 1 reports dated January 18, 2008, for the IPZs-1 and 2 of Lake Ontario WTP intakes in the CTC. Figures 1 through 8 in Attachment 4 depict the IPZs 1 and 2 for these intakes, as presented in the Phase 1 reports.

PHASE 3 LAKE ONTARIO COLLABORATIVE WORK

The release of the Draft Assessment Report Technical Rules in June 2008, and subsequent release of final Technical Rules in November 2008 initiated a significant change of direction for the Collaborative. This resulted in modification of the overall mandate, governance and management of the Collaborative and change in study direction.

These Technical Rules superseded the Assessment Report Draft Guidance Modules dated October 2006 and significantly changed the technical requirements for preparation of Assessment Reports. Particular to the Great Lakes such as Lake Ontario, the Technical Rules now add requirement to specify the delineation of IPZ-3 utilizing hydrodynamic modelling to simulate spill scenarios to identify significant threats to Great Lakes based municipal drinking water intakes. This change in threats assessment methodology resulted from the fact that the threat scoring process under the previous Assessment Report Guidance Modules would not result in any significant threats for IPZ-1 and IPZ-2. This resulted in a change in direction for the undertaking of studies under the Collaborative.

In the summer of 2008, at the request of the CTC SPR Project Manager and supported by Trent Conservation Coalition (TCC) SPR, Quinte SPR and Niagara SPR PMs, the Region of Peel committed to continue to lead the Collaborative as the Steering Committee Chair. This commitment was identified in a Region of Peel Council Resolution dated October 9, 2008, as presented in Attachment 5. Further, the Region of Peel committed to take over the project management of the study from the Ontario Clean Water Agency (OCWA) for the next phase of study.

Current Collaborative Structure and Governance

Project governance and management for the Phase 3 study is provided as follow:

- A Management Committee consisting of the Chairs of the five (5) Lake Ontario SPCs and project managers and the Region of Peel and chaired by the CTC SPC chair provide overall direction to ensure the Assessment Report requirements are met;
- A Steering Committee consisting of representatives from the Lake Ontario municipal partners, CTC Project Manger and chaired by the Region of Peel. This committee directs the technical work and approves budget expenditures in accordance with the direction of the management committee.
- A Project Manager to direct the technical studies, manages the budget, retains consultants, and interfaces between the Steering Committee and Management Committee. This role is being performed by a Region of Peel project manager.
- Modelling technical group to undertake the modeling studies including the lake-wide modeling and spill scenario modeling. This group consists of representatives from the City of Toronto, Region of Peel, Environment Canada, Queen's University, and MOE.

Phase 3 Study Workplan

In early 2009, the Region of Peel prepared a workplan for the proposed Phase 3 Collaborative study. This workplan identified the Collaborative's modified governance and management structure and Phase 3 Collaborative study components. The Phase 3 work plan proposed to

use the remaining MOE grant funding from the incomplete Phase 2 study. On March 2, 2009, the proposed Phase 3 Workplan was presented to the Chairs of the Source Protection Committees of Lake Ontario SPAs/SPRs. The Phase 3 work plan was approved in concept by the Chairs of Lake Ontario SPAs/SPRs.

The Phase 3 workplan includes the following tasks:

1. Communications Plan;
2. Data Management Plan;
3. Phase 2 Study Wrap Up;
4. Pathogen Monitoring Plan – Lake Ontario Winter Sampling;
5. Watershed Pollutant Loading;
6. Phase 3 Municipal Data Compilation and Inventory and Issues Evaluation;
7. IPZ-3 Delineation, Spill Simulations and Threats Assessments; and
8. Reporting.

A copy of the Collaborative Phase 3 Work Plan is included in Attachment 6 and provides details for each of the tasks.

In March 2009, the Region of Peel and MOE initiated an amendment to the Phase 2 Grant Funding Agreement between the MOE and Region of Peel to enable the use of the remaining funding for Phase 3 activities. As of November 13, 2009, information provided by MOE Source Protection staff indicates that the agreement is awaiting signature by MOE senior management.

Phase 3 Study Status

The following sections provide an update on the status of the Collaborative Phase 3 Study, specifically relating to the CTC SPR.

Task 1 – Communication Plan

The communication plan has been updated as follows:

- Regular update meetings between Collaborative PM and CTC SPR PM;
- On-going regular communication between Collaborative PM and CTC SPR staff;
- Development of Collaborative section on the CTC SPR web portal to store Collaborative related technical documents, presentations, and communications. This web portal is maintained by CTC SPR staff; and
- Collaborative update meetings to Collaborative SPC chairs. The most recent meeting occurred in Kingston, ON on September 23, 2009 and included representatives from CTC SPR, Quinte SPR, TCC SPR, Halton-Hamilton SPR, Niagara Region SPR, Cataraqui SPR, Environment Canada, Queen's University, City of Toronto, Region of Peel, and Region of Halton.

Task 2 – Data Management Plan

The data management plan was initially developed by Environment Canada as part of the Phase 2 study. This data management plan is being updated and maintained by Environment Canada to include technical data being collected as part of the technical study components including pathogen monitoring, tributary loading, Lake Ontario physical data, etc.

Task 3 – Phase 2 Study Wrap-Up

- In July 2009, the Region of Peel requested that Stantec provide a cost estimate for wrapping up the Phase 2 study. This request outlined that the deliverables would be a summary report to each municipality and SPRs on the work completed and data compiled as part of the Phase 2 Study up until the MOE stop work order in May 2008;
- A workplan and cost estimate was received from Stantec on September 23, 2009;
- Region of Peel staff prepared a summary of the Stantec workplan and cost estimate. A recommended direction was identified. This summary and recommended direction was provided to Collaborative SPR PMs via email on September 24, 2009;
- Collaborative SPR PMs have agreed in principle to move with proposed direction on Stantec Proposal. Consensus was received from CTC SPR PMs on October 13, 2009 to proceed with Action Items 1 and 2 of the Phase 2 Wrap Up Work Plan (Attachment 7);
- The Region of Peel provided verbal authorization to Stantec on October 16, 2009 to proceed with the Action Items 1 and 2 of the Phase 2 Wrap Up Work Plan;
- Region of Peel staff met with Stantec on November 11, 2009 to obtain an update and provide further direction on these Phase 2 Wrap Up activities;
- It is anticipated that summary technical reports for the Phase 2 study work will be provided to municipalities and associated SPRs by January 2010; and
- The Region of Peel Purchase Order with OCWA for the project management of Phase 1 and 2 LOC studies is in close-out.

Task 4 – Pathogen Monitoring Program

As part of the Phase 2 study, Environment Canada was retained by the Collaborative to undertake a pathogen monitoring program a pilot study area that encompasses the following facilities:

- Two Lake Ontario WTP intakes in Peel Region;
- One WTP intake in the City of Toronto;
- One WTP intake for a municipality outside the CTC;
- One wastewater treatment plant effluent discharge in Peel Region; and
- Tributary discharges from the Credit and Humber Rivers.

The pathogen monitoring plan included sampling for cryptosporidium, giardia, campylobacter, enteric viruses, and E. coli at these locations.

The Phase 2 pathogen monitoring program was terminated in May 2009 as the MOE source protection staff indicated that additional pathogen monitoring would not be needed nor funded as part of the Phase 3 study. Environment Canada has prepared a draft summary report for the Phase 2 pathogen monitoring activities. This report dated October 2009 provides details on sampling locations, sampling intervals, sampling parameters, and monitoring results. A copy of Environment Canada's Phase 2 pathogen monitoring summary report is presented in Attachment 8.

At the termination of the Phase 2 pathogen monitoring program, Environment Canada recommended to the Collaborative that a second year of pathogen monitoring would be critical to:

- assure that the initial pathogen results for the 2008-2009 monitoring period were not anomalous; and
- to establish a baseline for monitored pathogens in general accordance with the USEPA's Long Term to Enhanced Surface Water Treatment Rule (LT2 Rule) for cryptosporidium.

The Collaborative agreed with Environment Canada's recommendation for further monitoring and petitioned the MOE Source protection branch, through a letter by the CTC SPC Chair dated June 29, 2009, to support continued and increased pathogen monitoring for the pilot study area and beyond.

The MOE responded to the CTC SPC chair letter in a letter from the MOE Source Protection Branch Director dated July 17, 2009. The MOE response indicated that

- The MOE Source Protection Branch would not support additional monitoring for the pathogens at this time;
- The proposed pathogen monitoring scope of work exceeded the scope of the *Clean Water Act, 2006*;
- Under Rule 114(2) of the Assessment Report Technical Rules, a microbial risk assessment (MRA) can be used to determine if a pathogen issue exists at a drinking water intake; and
- The MOE Source Protection Branch would support the Collaborative in developing a microbial risk assessment for the WTPs in the pilot study area.

The CTC SPC chair issued a letter on October 8, 2009 responding to the MOE's July 17, 2009 letter. The CTC SPC Chair response letter indicated:

- Additional pathogen monitoring is necessary to establish an appropriate baseline and identify the range (max-min) of pathogen occurrence at the WTP intakes. The use of the USEPA's LT2 Rule baseline monitoring protocol is a scientifically established process for this purpose.
- The Region of Peel allocated \$250,000 of its own funds to Environment Canada and its partners to extend the pathogen monitoring for another year up until March 2010;
- The Region of Peel is using its own funds to initiate a Quantitative Microbial Risk Assessment (QMRA) for evaluation of pathogen risks at its two Lake Ontario WTP intakes. Pathogen monitoring data from the pilot study area will be used to develop the QMRA.
- The MOE is requested to provide technical and funding support for additional pathogen monitoring and risk evaluation.

A copy of Environment Canada's draft October 2009 Summary Pathogen Monitoring Report and correspondence between MOE Source Protection Branch and CTC SPC Chair is included in Attachments 8 & 9

Task 5 – Watershed (Tributary) Pollutant Loading Study

Watershed pollutant loads estimates are required by the Collaborative study team to support spill scenario modeling for facilities located on the Lake Ontario shoreline near the mouth of tributaries and upstream of Lake Ontario. The watershed pollutant loading data and spill scenario modeling results will be used to establish IPZ-3 for each of the Lake Ontario municipal intakes in CTC SPR.

Funding for the watershed pollutant loading study has been received from different agencies. The 2008-2009 portion of the pollutant loading study was funded by the Collaborative under the Phase 2 Study. The 2009-2010 portion of the pollutant loading study is being funded by the TRCA with support from other partner CAs.

Conservation Authority staff from multiple Conservation Authorities continue to sample Twenty Mile Creek, Sixteen Mile Creek, Credit River, Duffins Creek, Carruthers Creek, Ganaraska River and Cobourg Creek. These pilot watersheds were selected on the basis of initial loadings estimates completed by TRCA and Environment Canada for Lake Ontario tributaries extending from the Niagara River to Prince Edward County. The pilot watersheds reflect a representative ranges of topography, land use, soils and drainage areas for the Ontario portion of Lake Ontario.

The goal of the study is to sample run-off from 25 or more storm events over the course of two years (2008-2010) to prepare statistical summary of water quality that can be used to compute loads. Water quality data collected from these pilot watersheds is being used to calibrate and validate Environment Canada's SWAT Model, which is being investigated as an alternate means of providing watershed pollutant loads to the lake.

Plans are underway to link watershed loading estimates and SWAT Model with hydrodynamic models for Lake Ontario to understand the dynamics of when and how drinking water plant intakes could be impacted.

Task 6 – Phase 3 Municipal Data Compilation

The Collaborative PM sent a letter dated June 23, 2009 under Region of Peel letterhead to each of the Collaborative municipal partners requesting that they assist in compiling municipal data in support of the Phase 3 study. A copy of the letter submitted to the City of Toronto and Region of Durham is provided in Attachments 10 & 11. This correspondence requested the following information and data from the partner municipalities:

- Municipal contaminant source inventory information;
- Municipal raw water quality data from Lake Ontario WTPs;

- Precipitation data for 2004-2009;
- Municipal Lake Ontario WTP technology inventory; and
- Identification and description of any drinking water issues.

This data is intended to mainly support the undertaking of spill scenario modeling for development of IPZ-3 for each Lake Ontario municipal intake.

The following provides a status update on the Municipal Data Compilation for the municipal partners in the CTC SPR with Lake Ontario WTP intakes:

- Peel: Data and information for the contaminant source inventory, raw water quality data, and issues identification has been compiled into a central repository for further evaluation. Precipitation data is being compiled and should be complete by the end of November.
- Toronto: Data and information has not been received from the City of Toronto. Recent discussion with City of Toronto staff indicates that data is being compiled and will be available by the end of the year. City of Toronto staff also indicated that much of this information was provided to Stantec Consulting as part of the Phase 2 study. The data from Stantec will be made available as part of the Phase 2 Study Wrap Up.
- Durham: Data and information from the Region of Durham has not been received. Recent discussion with Region of Durham staff indicates that data is being compiled and should be available by the end of the year.

Task 7 - IPZ-3 Delineation, Spill Simulations and Threats Assessments

Steps to enable the undertaking of spill scenario modeling have been underway since January 2009. It was decided by the Collaborative technical members that the early development of modeling components was necessary to enable any spill scenario modeling. These steps have included the following:

- The Lake Ontario wide model has been developed and calibrated by Environment Canada using Lake Ontario physical data (i.e. current velocity, current direction, temperature, etc..) from 2006, as this was the most complete data set at the time. The Lake Ontario wide model is currently being revised using the 2007 data set.
- A comparison of lake wide model results between the Prince Ocean Model (POM) and Estuary and Lake Computer Model (ELCOM) and MIKE 3D has been completed by Environment Canada and results are within tolerable comparative ranges.
- Environment Canada's SWAT model for the priority tributaries on Lake Ontario have been developed and calibrated by Environment Canada.
- Water Resources modeling researchers at Queen's University has been retained by the Collaborative to develop a more detailed Lake Ontario modeling grid for the Cobourg to Kingston area.
- Spill scenario modeling has being initiated for 2 of the 8 scenarios that are included in the Phase 3 Workplan. This modeling group is being led by Bill Snodgrass at the City of Toronto. Ray Dewey, modeling consultant for the City of Toronto, is leading the initial Tier 1 level of spill scenario modeling. This modeling is being supported by Queen's University, Environment Canada, and MOE. It is anticipated that the results for the initial spill scenario models will be available by the end of November 2009.
- The calibrated lake-wide model for Lake Ontario and SWAT model for the tributaries to Lake Ontario are being linked to enable Tier 2 level of spill scenario modeling for

- upstream contaminant sources.
- It is anticipated that the spill scenario modeling for all 8 scenarios identified in the Phase 3 workplan will be completed by February 2010. This includes two scenarios in the CTC SPR, one along the Lake Ontario shoreline and one upstream of a Lake Ontario tributary. Further details on these 8 scenarios are provided in the Phase 3 Work Plan.

Task 8 – Reporting

A comprehensive report for the tasks undertaken as part of the Phase 3 Study will be prepared and will provide the initial delineations of IPZ-3 for Lake Ontario WTP intakes. It is anticipated that this report will be available for review in draft form by April 2010. The initial Assessment Reports prepared for the CTC SPR will contain the results of the IPZ1 and 2 delineation , vulnerability scores and threats assessment and issues evaluation, but not the IPZ3 results. These will be included in amended Assessment Reports after the work has been completed, reviewed and accepted by the CTC SPC.

Amendment to Peel-MOE Agreement for LOC Grant Funding

The latest version of the draft amendment the Collaborative grant funding agreement between the Region of Peel and MOE was provided to the MOE source protection staff via email on September 29, 2009.

As of this date, a signed agreement has yet to be received from the MOE. MOE Source Protection staff has indicated that they are seeking senior management approval - Assistant Deputy Minister for the Drinking Water Division.

Budget

There is approximately \$415,000 remaining in LOC Phase 2 budget for use in the Phase 3 Study. A breakdown of this budget allocation is as follows:

- \$125K to Stantec for Phase 2 Close-out reporting and data transfer. This is being done under the Region of Peel's existing Phase 2 Study Purchase Order (PO) to Stantec.
- \$45K to Queen's University for Lake Ontario modeling in Cobourg to Kingston area; PO has been issued by Region of Peel.
- \$30K to OCWA (Larry Moore) for Research Advisory Role and support. PO has been issued by Region of Peel.
- \$215K for spill scenario modeling. This will be allocated to Environment Canada and City of Toronto's modeling consultant.

The Region of Peel is funding the following pathogen associated work which MOE has determined is not currently eligible under the source water protection funding envelope:

- \$125K to Environment Canada for pathogen monitoring; PO has been issued
- \$100K to University of Alberta for cryptosporidium analysis; PO has been issued
- \$25K to University of Quebec – Institut Armand Frappier for virus analysis; PO has been issued.
- \$50K to Canadian Water Network for QMRA; PO is in progress.

Issues

- The Collaborative was pleased that the MOE revised the Technical Rules to include a new requirement to identify IPZ3 which allows for assessing more realistically potential threats and issues outside of the confined IPZ1 and IPZ2 zones. However time required to rescope the remaining work to be done and the lengthy approval process is delaying the completion of the Phase 3 work.
- Municipal staff, particularly in Peel Region have undertaken direct responsibility for overseeing work and reviewing their own records to aid in identifying potential drinking water threats and issues. This support has been provided in-kind. The commitment and support of all municipal partners for timely completion is important to the success of the project.
- Remaining Collaborative Phase 2 Grant Funding may not be sufficient to complete the reporting requirements for the Phase 3 study components. The Lake Ontario Source Protection Regions, including CTC, will likely need to provide funding to support the completion of the Phase 3 Study.

NEXT STEPS

- Development of work plan to undertake a quantitative risk assessment of pathogen risks in support of collecting information for all municipal Lake Ontario drinking water intakes, including those in CTC. This workplan will be submitted to the MOE Source Protection Branch, and Standards Branch for funding consideration outside of the source water protection funding envelope.
- Completion of detailed workplan and funding requirements needed to complete the Phase 3 Study per the revised scope of work approved by the province.
- Meeting of the Collaborative Steering Committee of municipal and source protection leads to approve work plan and budget and to review/confirm reporting relationships and responsibilities to complete Phase 3.
- Evaluation of data received from municipalities as part of Phase 3 Task 6 – Municipal Data Compilation
- Presentation to SPCs on results of initial spill scenario modeling for selected scenarios - target date for CTC SPC is at March 1, 2010 joint meeting with Halton-Hamilton and Region of Niagara SPCs.

Report prepared by: Rodney Bouchard, 905-791-7800 extension 4894

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Emails: rodney.bouchard@peelregion.ca

Date: November 13, 2009

Attachments: 11

Note: Please see document titled "*CTC SPC acceptance in principle of delineation of Intake Protection Zones 1 and 2 (IPZ1 and IPZ2) Lake Ontario Collaborative – Surface Water Vulnerability Assessment for each CTC source protection area*" included within agenda package.

Item 6.3

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Susan Self, Chair, CTC Source Protection Committee

RE: CTC Chair's Quarterly Report to Source Protection Authorities

KEY ISSUE

Review and acceptance of the CTC Chair's Quarterly Report for the 3 CTC Source Protection Authorities

RECOMMENDATION

THAT the SPC approves the submission of the 1st Quarterly Report from the CTC Source Protection Committee Chair to each of the 3 CTC Source Protection Authorities.

BACKGROUND

As required under the *Clean Water Act, 2006* the CTC Source Protection Committee must provide a quarterly report to each of the Source Protection Authorities within the CTC Source Protection Region. The CTC Chair, in agreement with the CAOs of the three CTC Source Protection Authorities, will provide written quarterly reports in the months of November, February, May and August until the Source Protection Plan is submitted in August, 2012. It is the preference of all three Source Protection Authorities that these quarterly reports be received by the Conservation Authority board and then accepted as correspondence by the Source Protection Authority at the subsequent convened Source Protection Authority meeting. Source Protection Authority meetings will be convened on an as needed basis to receive key items (such as the draft Proposed Assessment Report) from the Source Protection Committee Chair.

Terms of Reference

On Monday, August 17, 2009 the Ministry of the Environment posted notices of approval of the Terms of Reference for the TRSPA, CLOSPA and CVSPA (Attachment 1) to the Environmental Registry (EBR). The notice is published as an information notice and formalizes the three letters of approval received by Susan Self, Chair CTC SPC, and the relevant Source Protection Authority CAOs on August 12, 2009 (Attachment 2).

As regulated by Ontario Regulation 287/07 Section 17 2(a) the posting of approval to the EBR sets a due date of August 17, 2010 for submission of the CTC Source Protection Region's Assessment Reports to the Ministry of the Environment. Within this time frame two public consultation periods must be held as regulated by Ontario Regulation 287/07 Sections 15 and 16.

The Terms of Reference documents as approved on August 17, 2009 will require amendment to the Source Protection Planning tasks when the Province provides the Source Protection Planning Regulations. This regulation is expected to be issued in February 2010 and it is proposed that the public comment period required for these amended Terms of Reference

documents are anticipated to be included with the Assessment Report consultation as outlined below.

Assessment Report

To meet the tight regulatory timelines imposed by the August 17, 2010 deadline CTC staff have developed a schedule for activities through to the submission of the last CTC Assessment Report to the Ministry of the Environment (Attachment 3). It is the belief of staff and of the CTC Source Protection Committee Chair that there is little room for deviation from these timelines for the successful completion of the Assessment Reports.

Technical leads in the CVSPA, TRSPA and CLOSPA have begun to draft a first draft of the Assessment Report for their respective Source Protection Area. The technical leads recognize the tight timelines which are required of them and are working diligently to have a complete draft of the Assessment Reports completed by the 1st of March 2010. While this deadline appears achievable for all three Source Protection Areas the CVSPA and TRSPA have identified the receipt of municipally lead technical studies as a potential barrier to meeting this date. Through the previous MOE grant funding program to municipalities, the vast majority of municipalities in the CTC SPR chose to apply directly for funding to lead studies to do WHPA delineation, vulnerability assessment and threats and issues evaluations. Some of these studies have been provided to us and a number are scheduled to be received imminently but there are some that are seriously overdue. An active update status review process has been established with the technical leads and a number of meetings with the municipal lead and their senior manager and consultants are being held in an attempt to bring closure to these technical studies in order for the CTC SPR to meet its Assessment Report deadlines. These delays appear to be a combination of changing rules requiring additional work, limited consultant capacity and different interpretations of the work required to comply with the threats assessment and issues evaluation.

The CTC Project Manager and technical leads met with Ministry of the Environment staff on Friday, November 13, 2009 to discuss the importance of municipalities meeting the deadlines for these studies. The MOE offered support to assist with obtaining specific studies from municipal partners as required. CTC staff are of the opinion that this is not required at this time, but will review as necessary.

Consultation of CTC Assessment Reports

As regulated by the *Clean Water Act, 2006* Source Protection Committees must offer two periods for public consultation on the Assessment Reports. By the *Clean Water Act, 2006* regulations (Attachment 4) these consultation periods must include:

- making a draft proposed assessment report available for public review
- releasing a public notice that a draft proposed assessment report is available for comment
- a public comment period of no less than 35 days from the date the public notice is published
- at least one public meeting in each source protection area, at least 21 days after the public notice is published
- a second public comment period of no less than 30 days for final public comments on the proposed assessment report

At SPC Meeting #6/09 by Res#A128/09, the SPC approved a staged consultation approach with the intent of expediting the regulated consultation stage and provide the SPC and technical leads with advance notice of potential concerns or issues. On Tuesday, November 5 the Communications Outreach Working Group of the CTC Source Protection Committee met to develop a plan for consultation with landowners whose properties are wholly or partially within vulnerable areas. Following this meeting the Working Group recommended consultation as outlined below.

Stage 1 Consultation

The Communications Outreach Working Group reviewed the proposed materials to be sent for Stage 1 consultation and examples of the recommended materials are found as Attachments 5, 6, 7 & 8.

The package will include:

- the letter-to-landowner sent to the mailing address of the property with the name of the owner/tenant/lessee, if known;
- a map showing the specific vulnerable area and corresponding vulnerability score relevant to this property and surrounding properties;
- a pamphlet which provides an overview description of vulnerable areas and scoring; and
- an enclosure letter from the municipality responsible for the drinking water well.

Communications Outreach Working Group members recommended that landowner packages be sent in an envelope of the local municipality and that an enclosure letter from the municipality be included with the package. It is believed that this approach will lend credibility to the outreach as more landowners will be familiar with their municipality than with their Conservation Authority or Source Protection Committee. This approach will also have the additional benefit of linking the efforts of the SPC to the municipal partners who may be ultimately responsible for enforcing source protection plans. Should a municipality not wish to include an enclosure letter and/or approve the use of their envelopes for the mailing, staff will proceed with sending the material out in conservation authority envelopes for that area.

The Stage 1 consultation will begin no sooner than January 18, 2010 when a number of Wellhead Protection Area studies are anticipated to be brought to the SPC for acceptance.

Stage 2 Consultation

At SPC Meeting #6/09 by Res#A128/09, the SPC approved and authorized the Communications & Outreach Working Group to develop a plan for Stage 2 consultation as well as materials to provide information about the process and on-going information to come forward to the SPC meeting #1/10 to be held Monday January 18, 2010.

The preliminary proposal to exceed minimum formal meeting requirements is to hold a series of open houses and meetings during the last week of April and early May, in the following locations:

- *Orangeville* area – focus on wells in Amaranth, Orangeville, Mono and north part of the Town of Caledon (Mono has wells located in the Town of Caledon)
- *Erin/Hillsburgh* area – local wells in those communities
- *Georgetown/Acton* – Region of Halton's wells for Town of Halton Hills
- *Caledon* area– focus on Region of Peel wells in Caledon East, Palgrave, Inglewood, Cheltenham, Alton and Caledon Village
- *Vaughan/King City* area – focus on Region of York wells in Kleinburg, Nobleton and King City
- *Whitchurch/Stouffville* area – focus on Region of York wells in Whitchurch and Stouffville and Region of Durham well in Uxville
- *Whitby* area – focus on Lake Ontario intakes in Durham to meet mandatory minimum requirement for a meeting in the Central Lake Ontario Source Protection Area. Considering a workshop/presentation on the Lake Ontario Collaborative to be held in conjunction with this meeting.
- *Toronto* area - focus on Lake Ontario intakes in Toronto. Considering a workshop/presentation on the Lake Ontario Collaborative to be held in conjunction with this meeting.

Where possible, these consultation opportunities, or additional meetings, would benefit from being combined with other related activities to encourage attendance and provide more information to the public. It is proposed to share the plans with adjacent source protection regions to determine if there are opportunities to share events, particularly where WHPAs and other vulnerable areas extend into adjacent areas.

Source Protection Plans

On September 2, 2009 the CTC SPC met at Black Creek Pioneer Village to review *EBR Posting #010-6726: Source Protection Plans under the Clean Water Act, 2006: A Discussion Paper on Requirements for the Content and Preparation of Source Protection Plans*. The committee also conducted "dry-run" exercises to test how the proposed source protection plan policies might be applied. On September 9, 2009 CTC SPC Chair, Susan Self, submitted comments to the MOE on behalf of the CTC Source Protection Committee. A copy of these comments was sent to the CAOs of each of the CTC Source Protection Authorities.

At SPC Meeting #8/09 held on November 24, 2009 staff proposed steps to conduct a meeting with the intent of re-engaging municipal planning staff in source water protection in February 2010. This timing is to coincide with the expected release of the draft source protection planning regulation. At the November 24, 2009 CTC planning staff proposed that the Chair send a letter to senior municipal planning staff in all municipalities wholly or partially within the CTC to invite planning staff to attend a meeting that will commence development of a workplan and budget for source water protection planning, including identifying the appropriate staff contacts.

As noted in the *Terms of Reference* section above once the source protection planning regulation is released amendments will be required to the Terms of Reference for each of the CTC Source Protection Areas. The public consultation which is required for these amendments is proposed to coincide with the public consultation of the Assessment Reports.

NEXT STEPS

The next CTC SPC Chair's quarterly report will be delivered in February 2010 and will provide an update on the draft Assessment Report work. It is anticipated that in late February or early March a draft version of the Assessment Reports will be made available to the Source Protection Authority for review.

Report prepared by: Nicholas Schulz, 416-661-6600 X5392

Emails: nschulz@trca.on.ca

For Information contact: Nicholas Schulz, 416-661-6600 X5392

Emails: nschulz@trca.on.ca

Date: November 10, 2009

Attachments:

1. EBR posting of Approval of the Terms of Reference for the a) TRSPA, b) CLOSPA and c) CVSPA
2. Three letters of approval received by Susan Self, Chair CTC SPC, and the relevant Source Protection Authority CAOs on August 12, 2009
3. CTC Assessment Report Development Timeline
4. *Clean Water Act, 2006* Regulations regarding Assessment Report Consultation
5. Stage 1 Consultation Package - Part 1: Draft letter-to-landowner sent to the mailing address of the property with the name of the owner/tenant/lessee, if known
6. Stage 1 Consultation Package - Part 2: Draft map showing the specific vulnerable area and corresponding vulnerability score relevant to this property and surrounding properties
7. Stage 1 Consultation Package - Part 3: Draft pamphlet which provides an overview description of vulnerable areas and scoring
8. Stage 1 Consultation Package - Part 4: Draft enclosure letter from the municipality responsible for the drinking water well

Note: Attachments 5 - 8 will be brought to the committee for approval by agenda Item #6.1 for SPC Meeting #8/09.

Attachment 1a of 8: TRSPA Terms of Reference Approval



Environmental Registry
Registre environnemental



EBR Registry Number: 010-7405

Information Notice:

Title: Ministry:

Terms of Reference for the Toronto and Region Source Protection Area Ministry of the Environment

Date Information Notice loaded to the Registry:

August 17, 2009

Keyword(s): Aquifers | Drinking Water | Ground Water | Water | Wells | Protected Areas

This notice is for your information. The Environmental Bill of Rights does not require this notice to be placed on the Environmental Registry, however, section 6 of the Act does allow the Environmental Registry to be used to share information about the environment with the public.

Rationale for Exemption to Public Comment:

The purpose of this information notice is to advise the public that the Terms of Reference document prepared for the Toronto and Region Source Protection Area in accordance with section 8 of the *Clean Water Act, 2006* has been approved by the Minister of the Environment.

This notice is being published as an information notice on the Environmental Registry, as required under section 11 of the *Clean Water Act, 2006* and is for your information only.

Description:

The purpose of the *Clean Water Act, 2006* is to protect existing and future sources of drinking water, as part of an overall commitment to human health and the environment.

The Act requires the preparation of a Terms of Reference for the relationships and division of responsibilities between the municipalities and Source Protection Committees for the development of the Assessment Report and Source Protection Plan. Source Protection Plans are to be submitted to the Minister of the Environment in 2012.

Terms of Reference documents are being prepared for each of the 40 source protection areas in the province. The *Clean Water Act, 2006* (subsection 10(2)) sets out that the Minister of the Environment shall make a decision on each of the 40 Terms of Reference documents.

Section 11 of the *Clean Water Act, 2006* requires that "As soon as reasonably possible after the terms of reference are approved by the Minister, the Minister shall publish a notice of the approval on the environmental registry established under the Environmental Bill of Rights, 1993".

Once the Terms of Reference is approved by the Minister of the Environment, Source Protection Committees will proceed to develop the Assessment Report, which will identify drinking water threats within their respective source protection areas.

Contact:

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 Phone: (416) 314-0560 Fax: (416) 327-6926

Location(s) Related to this Information:

CITY OF TORONTO MONO REGIONAL MUNICIPALITY OF DURHAM REGIONAL MUNICIPALITY OF PEEL REGIONAL MUNICIPALITY OF YORK TOWN OF MONO TOWNSHIP OF ADJALA-TOSORONTIO

Additional Information:

The following government offices have additional information regarding this Notice. To arrange a viewing

Other Information:

When making a decision on the submitted Terms of Reference, the Minister considered whether legislative requirements were met and how the Source Protection Committee considered comments received from the public, municipalities, band councils and other stakeholders.

There were seventeen (17) comments submitted during the consultation period for the proposed Toronto and Region Source Protection Area Terms of Reference document. Comments received from two municipalities were considered unresolved. Their concerns are with the scope of public consultation for the assessment report, involvement of municipalities in the development of source protection policies, assignment of tasks in the Terms of Reference workplan and water quality in Lake Ontario and the support needed to assess and address water quality of the lake. These comments were considered in making a decision on the Terms of Reference.

The Source Protection Authority provided comments on the submitted proposed Terms of Reference document regarding future funding for municipalities impacted by source protection, water quality of Lake Ontario and integrating source protection into other provincial programs.

Other Public Consultation Opportunities:

During preparation of the Terms of Reference, the Source Protection Committee consulted with the public through two consultation periods. A 35-day consultation period on a draft proposed Terms of Reference included a public meeting. Any comments submitted during the consultation period were required to be considered by the Source Protection Committee and incorporated into a revised document called the proposed Terms of Reference. This proposed document was then posted for a further 30-day consultation period. Any public comments received during this period were submitted to the Minister along with the proposed Terms of Reference for consideration.



**of these documents please
call the Ministry Contact or
the Office listed below.**

Source Protection Programs Branch 2 St. Clair Avenue West Toronto Ontario M4V 1L5 Phone: (416) 212-5296

The documents linked below are provided for the purposes of enhancing public consultation. All links will open in a new window

1. Conservation Ontario

Website

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Attachment 1b of 8: CLOSPA Terms of Reference Approval



EBR Registry Number: 010-7404

Information Notice:

Title: Ministry:

Terms of Reference for the Central Lake Ontario Source Protection Area Ministry of the Environment

Date Information Notice loaded to the Registry:

August 17, 2009

Keyword(s): Aquifers | Drinking Water | Ground Water | Water | Wells | Protected Areas

This notice is for your information. The Environmental Bill of Rights does not require this notice to be placed on the Environmental Registry, however, section 6 of the Act does allow the Environmental Registry to be used to share information about the environment with the public.

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Once the Terms of Reference is approved by the Minister of the Environment, Source Protection Committees will proceed to develop the Assessment Report, which will identify drinking water threats within their respective source protection areas.

Contact:

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 Phone: (416) 314-0560 Fax: (416) 327-6926

Location(s) Related to this Information:

CITY OF OSHAWA Clarington MUNICIPALITY OF CLARINGTON TOWN OF WHITBY WHITBY

Additional Information:

The following government offices have additional information regarding this Notice. To arrange a viewing of these documents please call the Ministry Contact or the Office listed below.

Other Information:

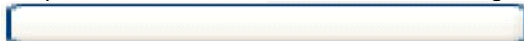
When making a decision on the submitted Terms of Reference, the Minister considered whether legislative requirements were met and how the Source Protection Committee considered comments received from the public, municipalities, band councils and other stakeholders.

There were three (3) comments submitted by the public during the 30-day consultation period for the Central Lake Ontario proposed Terms of Reference document. One of the three comments was an unresolved comment from a municipality. Their concerns are with the scope of public consultation for the assessment report, involvement of municipalities in the development of source protection policies, assignment of tasks in the Terms of Reference workplan and water quality in Lake Ontario and the support needed to assess and address water quality of the lake. These comments were considered in making a decision on the Terms of Reference.

The Source Protection Authority provided comments on the submitted proposed Terms of Reference document regarding future funding for municipalities impacted by source protection, water quality of Lake Ontario and integrating source protection into other provincial programs.

Other Public Consultation Opportunities:

During preparation of the Terms of Reference, the Source Protection Committee consulted with the public through two consultation periods. A 35-day consultation period on a draft proposed Terms of Reference included a public meeting. Any comments submitted during the consultation period were required to be considered by the Source Protection Committee and incorporated into a revised document called the proposed Terms of Reference. This proposed document was then posted for a further 30-day consultation period. Any public comments received during this period were submitted to the Minister along with the proposed Terms of Reference for consideration.



Source Protection Programs Branch 2 St. Clair Avenue West Toronto Ontario M4V 1L5 Phone: (416) 212-5296

The documents linked below are provided for the purposes of enhancing public consultation.

All links will open in a new window

1. **Conservation Ontario Website**

The materials on this web site are protected by Crown copyright. You may copy and re-distribute any of the Environmental Bill of Rights information on this web site provided that the contents remain unchanged and the source of the contents is clearly referenced. You are not permitted to alter or add to the contents.

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Attachment 1c of 8: CVSPA Terms of Reference Approval



Environmental Registry
Registre environnemental



EBR Registry Number: 010-7403

Information Notice:

Title: Ministry:

Terms of Reference for the Credit Valley Source Protection Area Ministry of the Environment

Date Information Notice loaded to the Registry:

August 17, 2009

Keyword(s): Aquifers | Drinking Water | Ground Water | Water | Wells | Protected Areas

This notice is for your information. The Environmental Bill of Rights does not require this notice to be placed on the Environmental Registry, however, section 6 of the Act does allow the Environmental Registry to be used to share information about the environment with the public.

Rationale for Exemption to Public Comment:

The purpose of this information notice is to advise the public that the Terms of Reference document prepared for the Credit Valley Source Protection Area in accordance with section 8 of the *Clean Water Act, 2006* has been approved by the Minister of the Environment.

This notice is being published as an information notice on the Environmental Registry, as required under section 11 of the *Clean Water Act, 2006* and is for your information only.

Description:

The purpose of the *Clean Water Act, 2006* is to protect existing and future sources of drinking water, as part of an overall commitment to human health and the environment.

The Act requires the preparation of a Terms of Reference for the relationships and division of responsibilities between the municipalities and Source Protection Committees for the development of the Assessment Report and Source Protection Plan. Source Protection Plans are to be submitted to the Minister of the Environment in 2012.

Terms of Reference documents are being prepared for each of the 40 source protection areas in the province. The *Clean Water Act, 2006* (subsection 10(2)) sets out that the Minister of the Environment shall make a decision on each of the 40 Terms of Reference documents.

Section 11 of the *Clean Water Act, 2006* requires that "As soon as reasonably possible after the terms of reference are approved by the Minister, the Minister shall publish a notice of the approval on the environmental registry established under the Environmental Bill of Rights, 1993".

Once the Terms of Reference is approved by the Minister of the Environment, Source Protection Committees will proceed to develop the Assessment Report, which will identify drinking water threats within their respective source protection areas.

Contact:

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 Phone: (416) 314-0560 Fax: (416) 327-6926

Location(s) Related to this Information:

CALEDON CITY OF BRAMPTON CITY OF MISSISSAUGA CITY OF TORONTO TOWN OF CALEDON TOWN OF ERIN TOWN OF HALTON HILLS TOWN OF OAKVILLE TOWN OF ORANGEVILLE TOWNSHIP OF EAST GARAFRAXA

Additional Information:

The following government offices have additional information regarding this Notice. To arrange a viewing

Other Information:

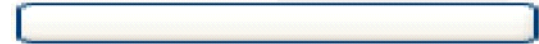
When making a decision on the submitted Terms of Reference, the Minister considered whether legislative requirements were met and how the Source Protection Committee considered comments received from the public, municipalities, band councils and other stakeholders.

There were seven (7) comments submitted during the consultation period for the proposed Credit Valley Source Protection Area Terms of Reference document. Comments received from one municipality are considered unresolved, and concern the scope of public consultation for the Assessment Report. These comments were considered in making a decision on the Terms of Reference.

The Source Protection Authority provided comments on the submitted proposed Terms of Reference document regarding future funding for municipalities impacted by source protection, water quality of Lake Ontario and integrating source protection into other provincial programs.

Other Public Consultation Opportunities:

During preparation of the Terms of Reference, the Source Protection Committee consulted with the public through two consultation periods. A 35-day consultation period on a draft proposed Terms of Reference included a public meeting. Any comments submitted during the consultation period were required to be considered by the Source Protection Committee and incorporated into a revised document called the proposed Terms of Reference. This proposed document was then posted for a further 30-day consultation period. Any public comments received during this period were submitted to the Minister along with the proposed Terms of Reference for consideration.



**of these documents please
call the Ministry Contact or
the Office listed below.**

Source Protection Programs Branch 2 St. Clair Avenue West Toronto Ontario M4V 1L5 Phone: (416) 212-5296

The documents linked below are provided for the purposes of enhancing public consultation. All links will open in a new window

1. Conservation Ontario

Website

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Attachment 2 of 8: Letters of Approval

Ministry
of the
Environment

Office of the Minister

135 St. Clair Ave. West
12th Floor
Toronto ON M4V 1P5
Tel (416) 314-6790
Fax (416) 314-6748

Ministère
de
l'Environnement

Bureau du ministre

135, avenue St. Clair ouest
12^e étage
Toronto ON M4V 1P5
Tél (416) 314-6790
Télééc (416) 314-6748



AUG 12 2009

ENV1174IT-2008-451

Susan Self, Chair of CTC SPC
5 Shoreham Dr.
Downsview, ON M3N 1S4

Patricia Mullin, Chair
Credit Valley Conservation Authority
1255 Old Derry Rd.
Mississauga, ON L5N 6R4

Rae Horst, Chief Administrative Officer
Credit Valley Conservation Authority
1255 Old Derry Rd.
Mississauga, ON L5N 6R4

Dear Ms. Self, Ms. Mullin, and Ms. Horst:

You submitted your proposed Terms of Reference document for the Credit Valley Source Protection Area on December 22, 2008. I have completed my review of the proposed Terms of Reference and in accordance with my authority under Section 10(2) of the Clean Water Act, 2006 hereby approve the Terms of Reference as updated on July 7, 2009.

I acknowledge the comments from the Source Protection Authority regarding integration of source protection with other ministry programs and conservation authority work, concerns regarding implementation costs and long term support to Lake Ontario water quality.

I would also like to commend the CTC SPC for holding three (3) public meetings for the Credit Valley Source Protection Area Terms of Reference. It demonstrates the committee's commitment to the transparent and consultative nature of the source protection program. Furthermore, I would also like to express my pleasure on the way



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that the committee organized the Terms of Reference package. It was well organized and easy to follow.

As per the Clean Water Act, 2006 and General Regulation, your Assessment Report is due to be submitted to the Director by the first anniversary of the date that the notice of approval of the Terms of Reference for the Credit Valley Source Protection Area is posted to the Environmental Registry.

Thank you for your work to protect Ontario's source waters.

Sincerely,



John Gerretsen
Minister

cc: Ian Smith, Director, Ministry of the Environment
Peter Hulsman, Ministry of Natural Resources
Beverley Thorpe, Project Manager, CTC Source Protection Region

Bent.

Ministry
of the
Environment

Office of the Minister

135 St. Clair Ave. West
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Ministère
de
l'Environnement

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Télééc (416) 314-6748



AUG 12 2009

ENV1174IT-2008-453

Susan Self
Chair, CTC SPC
5 Shoreham Drive
Downsview, Ontario
M3N 1S4

Gerri Lynn O'Connor,
Chair, Toronto and Region SPA
5 Shoreham Drive
Downsview, Ontario
M3N 1S4

Dear Ms. Self and Ms. O'Connor:

You submitted your proposed Terms of Reference document for the Toronto and Region Source Protection Area on December 22, 2008. I have completed my review of the proposed Terms of Reference and in accordance with my authority under Section 10(2) of the Clean Water Act, 2006 hereby approve the Terms of Reference as updated on July 7, 2009.

I acknowledge the comments from the Source Protection Authority regarding integration of source protection with other ministry programs and conservation authority work, concerns regarding implementation costs and long term support to Lake Ontario water quality.

In addition, I acknowledge the inclusion of the Uxville municipal non-residential water supply system in the Terms of Reference through municipal council resolution; I am encouraged by this collaboration. I would also like to note that Durham Region's request for funding to complete technical work for this system is under review by ministry staff.

I appreciate the efforts undertaken by the CTC Source Protection Committee and Toronto and Region Source Protection Authority during the consultation periods for the Terms of Reference that go above and beyond the legislative requirements. Specifically, the extended periods of consultation for the draft proposed Terms of Reference document and extensive notification of the public and stakeholders about the consultation periods. The upcoming consultations for the Assessment Report and Source Protection Plan



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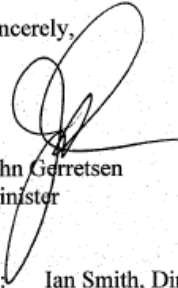
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phases of source protection planning will benefit from your extra efforts within the Terms of Reference phase.

As per the Clean Water Act, 2006 and General Regulation, your Assessment Report is due to be submitted to the Director by the first anniversary of the date that the notice of approval of the Terms of Reference for the Toronto and Region Source Protection Area is posted to the Environmental Registry.

Thank you for your work to protect Ontario's source waters.

Sincerely,



John Garretsen
Minister

cc: Ian Smith, Director, Ministry of the Environment
Peter Hulsman, Ministry of Natural Resources
Beverley Thorpe, Project Manager, CTC Source Protection Region

Ministry
of the
Environment

Office of the Minister

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ENV1174IT-2008-452

AUG 12 2009

Susan Self
42 Balsam Street N.
Uxbridge, ON L9P 1B3

Gerry Emm
100 Whiting Ave
Oshawa, ON L1H 3T3

Dear Ms. Self and Mr. Emm:

You submitted your proposed Terms of Reference document for the Central Lake Ontario Source Protection Area on December 20, 2008. I have completed my review of the proposed Terms of Reference and in accordance with my authority under Section 10(2) of the Clean Water Act, 2006 hereby approve the Terms of Reference as updated on July 7, 2009.

I acknowledge the comments from and resolution passed by the Source Protection Authority regarding integration of source protection with other ministry programs and conservation authority work, concerns regarding implementation costs and long term support to Lake Ontario water quality.

I appreciate the efforts undertaken by the CTC Source Protection Committee and Central Lake Ontario Source Protection Authority during the consultation periods for the Terms of Reference that go above and beyond the legislative requirements. Specifically, the extended periods of consultation for the draft proposed Terms of Reference document and extensive notification of the public and stakeholders about the consultation periods. The upcoming consultations for the Assessment Report and Source Protection Plan phases of source protection planning will benefit from your extra efforts within the Terms of Reference phase.



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As per the Clean Water Act, 2006 and General Regulation, your Assessment Report is due to be submitted to the Director by the first anniversary of the date that the notice of approval of the Terms of Reference for the Central Lake Ontario Source Protection Area is posted to the Environmental Registry. Thank you for your work to protect Ontario's source waters.

Sincerely,



John Gerretsen
Minister

cc: Ian Smith, Director, Ministry of the Environment
Peter Hulsman, Ministry of Natural Resources
Beverley Thorpe, Project Manager, CTC Source Protection Region

Attachment 3 of 8: CTC Assessment Report

	Aug '09	Sept '09	Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	June '10	July '10	Aug '10
Technical Components drafted													
Stage 1 consultation: unregulated outreach to landowners													
SPC acceptance and Peer Review of technical studies													
Technical Staff amalgamate components into AR													
Full Draft AR to SPC for approval								X					
Draft Accepted AR circulated to clerks and posted for public comment								X					
Open houses and consultation with stakeholders with identified Significant Risk								X	X				
Comments received								X	X				
AR revised to reflect comments received								X	X				
Full Proposed AR to SPC for approval								X	X				
Proposed AR circulated to clerks and posted for public comment								X	X				
Comments on Proposed AR received								X	X				
Proposed AR comments to SPC & SPA								X	X				
Proposed AR submitted to MOE with consolidated comments								X	X				
												X	X
												X	X

Note: "X" indicates timing within the month

Components for the amended AR:

- IPZ 3 in Lake Ontario
- Tier 3 WB: Whitchurch-Stouffville, Orangeville, Acton/Georgetown
- Any updated technical work to the initial AR

Attachment 4 of 8: *Clean Water Act, 2006* Regulations

Regulated Consultation on draft assessment report

15. (1) A source protection committee that is preparing an assessment report for a source protection area shall, before submitting the proposed assessment report to the source protection authority under section 16 of the Act, prepare a draft of the proposed assessment report, publish the draft on the Internet and make it available for inspection by the public at one or more locations that, in the opinion of the source protection committee, are sufficiently accessible to give the public in the source protection area a reasonable opportunity to inspect the draft.
- (2) As soon as reasonably possible after publishing the draft on the Internet, the source protection committee shall,
- (a) publish a notice described in subsection (3) in one or more newspapers that, in the opinion of the source protection committee, are of sufficiently general circulation to bring the notice to the attention of the public in the source protection area;
 - (b) make the notice referred to in clause (a) available for inspection by the public at one or more locations that, in the opinion of the source protection committee, are sufficiently accessible to give the public in the source protection area a reasonable opportunity to inspect the notice; and
 - (c) give a copy of the notice referred to in clause (a) to,
 - (i) the clerk of each municipality in which any part of the source protection area is located,
 - (ii) if any part of the reserve of a band is included in the source protection area, the chief of the band,
 - (iii) every person known to the source protection committee who is engaging in an activity listed under subclause 15 (2) (g) (i) of the Act that is or would be a significant drinking water threat,
 - (iv) if the terms of reference list a matter that requires consultation with another source protection committee during the preparation of the assessment report, the chair of the other source protection committee, and
 - (v) every person or body that,
 - (A) is established pursuant to the Great Lakes Water Quality Agreement of 1978 that is referred to in paragraph 1 of subsection 14 (1) of the Act, and
 - (B) is involved in the development or implementation of a remedial action plan or lakewide management plan in accordance with Annex 2 of the Agreement.
- (3) The notice referred to in clause (2) (a) shall advise the public in the source protection area and the persons referred to in clause (2) (c) of the opportunity to,
- (a) view the draft of the proposed assessment report on the Internet;
 - (b) inspect the draft of the proposed assessment report, during times specified in the notice, at a location specified in the notice;
 - (c) attend a public meeting on the draft of the proposed assessment report on a date, at a time and at a location specified in the notice; and
 - (d) submit written comments on the draft of the proposed assessment report to the source protection committee by a date specified in the notice that is not earlier than 35 days after the notice is first published under clause (2) (a).

- (4) The source protection committee shall hold at least one public meeting, at a location in the source protection area, at least 21 days after the notice is published under subsection (2), for the purpose of giving the public an opportunity to review the draft, ask questions and make comments.
- (5) In finalizing the proposed assessment report, the source protection committee shall consider,
 - (a) written comments that are submitted to the source protection committee by the date specified under clause (3) (d); and
 - (b) comments made at the public meeting.

Submission of proposed assessment report to source protection authority

- 16.** (1) When the source protection committee submits the proposed assessment report to the source protection authority under clause 16 (a) of the Act, it shall,
- (a) give the source protection authority a summary of any concerns that were raised by bands during the preparation of the proposed assessment report and that were not resolved to the satisfaction of the bands; and
 - (b) give a copy of the proposed assessment report and the summary referred to in clause (a) to each chief of a band to whom notice was required to be given under subclause 15 (2) (c) (ii).
- (2) For the purpose of clause 16 (c) of the Act, the invitation to submit written comments to the source protection authority shall invite comments to be submitted within 30 days after the publication of the proposed assessment report on the Internet under that clause.

Submission of proposed assessment report to Director

- 17.** (1) When the source protection authority submits the proposed assessment report to the Director under subsection 17 (1) of the Act, it shall,
- (a) give the Director the summary of concerns referred to in clause 16 (1) (a); and
 - (b) give the source protection committee copies of the comments referred to in clauses 17 (1) (a) and (c) of the Act.
- (2) The source protection authority shall submit the proposed assessment report to the Director and take the other steps that are required to comply with subsection 17 (1) of the Act by a date that is not later than,
- (a) the first anniversary of the date that notice of the approval of the terms of reference is published under section 11 of the Act, if clause (b) does not apply; or
 - (b) the second anniversary of the date specified by the Minister under subsection 36 (1) of the Act, if the assessment report is being prepared as part of the review of a source protection plan that is required under section 36 of the Act.

Attachments 5 - 8: Landowner Outreach Materials

The draft attachments for Chair's Quarterly Report are being brought to the committee for approval by agenda Item#6.1 for SPC Meeting #8/09 held on Tuesday, November 24, 2009. The approved outreach materials will be included as Attachments 5 - 8 for the Chair's Quarterly Report to the CTC Source Protection Authorities.

Item 6.4

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Beverley Thorpe, Project Manager, CTC Region

RE: Explanatory wording related to water budgets and SGRA delineation

KEY ISSUE

Approval of explanatory wording to be included on Significant Groundwater Recharge Area (SGRA) mapping and in water budget reports.

RECOMMENDATION

THAT the CTC SPC approves the explanatory wording to be included on maps delineating Significant Groundwater Recharge Areas (SGRA) and in the body and executive summary of water budget reports as set out in Part 1 of this report;

THAT staff be directed to take the necessary actions to finalize previously accepted water budget reports to include: a) the explanatory wording as approved, and; b) the final maps of SGRAs, the text and maps describing the options considered and rationale for the approach used to delineate SGRAs in the specific source protection area as set out in Part 2 of this report;

THAT staff be directed to post the revised water budget reports on the CTC website entitled as "SPC Accepted Draft" documents;

AND FURTHER THAT staff use the explanatory wording in preparing the relevant parts of the Assessment Reports dealing with water budgets and on SGRA maps for each source protection area in the CTC Source Protection Region.

BACKGROUND

PART 1 - EXPLANATORY TEXT TO BE ADDED TO SGRA MAPS AND TEXT OF WATER BUDGET REPORTS

The approach used by technical staff to identify subwatersheds with potential surface water or groundwater stress, and mapping of SGRAs has been prescribed by the province to comply with their requirements under the *Clean Water Act, 2006*. Members of the CTC SPC have noted however, that there is a high potential for the results of these analyses, particularly the maps which show the spatial extent of these areas, to be used by a number of parties for other purposes. While it is an important part of the investment of the public funds for these products to be used to benefit other water management initiatives, it is important that the context and limitations of the analysis be very clear.

To that end, staff was directed by the SPC through RES #A136/09 passed at meeting #7/09 held October 20, 2009, to prepare explanatory wording for the approval of the SPC to be

included on all maps of water budget stress and SGRA and to also be included in a more fulsome version in both the Executive Summary and text of the Water Budget reports prepared for each source protection area in the CTC.

Proposed Explanatory Text

Maps

It is recommended that the following text be added to each map product showing potential water budget stress and SGRA.

DATE - This map has been prepared to meet provincial requirements under the Clean Water Act, 2006 and should not be used for other purposes without consultation with the responsible conservation authority. The analysis used to produce this map relies on best available information. Priority should be given to site specific information collected in accordance with accepted scientific protocols when being used for other purposes.

Reports

It is recommended that the following text be added to the Executive Summary and text of each water budget report.

This report has been prepared to meet provincial requirements under the Clean Water Act, 2006 and should not be used for other purposes without consultation with the responsible conservation authority. The water budget process follows a tiered process to screen the areas to identify where there is potential water quantity stress. These potentially stressed areas that are associated with mandated drinking water supplies are then studied in more detail. The process is designed so that each successive tier in the analysis (up to and including Tier 3), becomes more complex, requiring increased sophisticated analysis and data. As a result, with each successive tier the certainty in the findings of the analysis is increased.

The analysis used to produce this report was based on best information available at the time. Priority should be given to site specific information collected in accordance with accepted scientific protocols when being used for other decision-making purposes, such as determining the impact of a specific water taking.

PART 2 - SUMMARY OF MATERIAL TO BE INCLUDED IN WATER BUDGET REPORTS DESCRIBING DELINEATION OF SGRAs

Legislative and Regulatory Requirements

The *Clean Water Act, 2006* [section 15(2)(d)], requires that the assessment report identifies all the significant groundwater recharge areas in the source protection area.

Ontario Regulation 287/07 defines significant recharge areas [section 1.(1)] as areas within which it is desirable to regulate or monitor drinking water threats that may affect the recharge of an aquifer.

The “Technical Rules: Assessment Report, *Clean Water Act, 2006*, December 12, 2008” sets out the detailed requirements to delineate these vulnerable areas [Rules 5, 44-46].

The Technical Rules also require assigning vulnerability scores to the SGRAs [Rules 8, 80-81], doing an uncertainty analysis (“high” or “low” to be assigned to the delineation of the SGRA [Rule13]), and identifying specific conditions which must be listed as drinking water threats in an SGRA [Rule 126]. The results of the analyses required to do this latter work will be

presented to the SPC when completed and included in the respective assessment report.

How are SGRAs Delineated – General

Delineating SGRAs is part of the process of preparing the water budget for the source protection area. Since water budgets are prepared using a tiered approach, the SGRA delineation is further refined at each tier. For those parts of Credit Valley (CVSPA) and Toronto and Region (TRSPA) source protection areas which are undergoing Tier 3 water budget analysis, the SGRA delineation will be updated within each local study area, and this refined mapping, when completed, will replace the current SGRA maps for each of these local study areas only. However, since the Tier 3 water budget work currently underway in CVSPA and TRSPA will not be completed in time for inclusion in the initial assessment reports submitted to the province for approval, the current SGRA maps produced from the respective Tier 1 or Tier 2 water budgets will be included in the assessment report for that source protection area. When the updated water budget information is available, amended assessment reports will be prepared and submitted.

Optional Approaches to Delineating SGRA

The Technical Rules provides the following options for the delineation of SGRAs -

44. *Subject to Rule 45, an area is a significant groundwater recharge area if:*
- (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*
 - (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 evaporation for the whole of the related groundwater recharge area from the annual precipitation for the whole of the related groundwater recharge area.*
45. *Despite rule 44, an area shall not be delineated as a significant groundwater recharge area unless the area has a hydrological connection to a surface water body or aquifer that is the source of a drinking water for a drinking water system.*
46. *The areas described in rule 44 shall be delineated using the models developed for the purposes of Part III of these rules and with consideration of the topography, surficial geology, and how land cover affects groundwater and surface water.*

Considerations in Delineating SGRAs

In selecting the method to recommend, CTC technical staff was asked by the CTC SPC Ad Hoc Working Group to assess the options available and provide professional technical recommendations based on the following considerations:

1. Identify the preferred method which is based on the best scientific information available to reduce uncertainty.
 - a. For the CTC, sufficient information was available to use either method under Rule 44.
 - b. However the method under Rule 44(2) requires calculating the surplus of total observed precipitation minus the total evapotranspiration (AET). To do this requires estimating interception and depression storage losses. Values of 0.55 times the surplus represent a simplified estimate of the average split between

infiltration and run-off. Estimating evapotranspiration (AET) is difficult. As a result, the uncertainty of this method is considered higher than the method under Rule 44 (1).

2. Select the area to calculate the recharge across as "the whole of the related groundwater recharge area" considering the following:
 - a. Evaluating the results of different approaches to identify the one that best matches other technical information - geology/ hydrology/physiography, i.e. knowledge of surficial and quaternary geology, the function of the regional and local groundwater systems (including recognizing that there is one groundwater flow system from the crest of the oak Ridges Moraine to Lake Ontario), the location of all drinking water wells (includes private systems), fit with statistical distribution of the data; and
 - b. Identifying "the whole of the related groundwater recharge area" option that reduces artificial discontinuities in mapping across boundaries within the whole of the source protection region.

To comply with Rule 45, areas where there are no groundwater supplies, e.g. municipally serviced by Lake Ontario-based supplies, were "clipped" to remove them. Staff has considered this requirement, and recommend that significant recharge areas to be "clipped" are only those that are not up gradient of any known groundwater-based drinking water systems.

SGRA Delineation in Credit Valley Source Protection Area (CVSPA)

A Tier 2 water budget has been completed for the whole of the CVSPA. This water budget was prepared in an integrated approach, using both the three-dimensional numerical modelling of the surface water combined with groundwater flows and fluxes. The Tier 2 water budget study built upon previous modeling work (2000 and 2006) and aimed to improve the previous understanding of the magnitude, contribution and interactions of components of the hydrological cycle.

The approach utilized the following numeric models:

- HSP-F (Hydrologic Simulation Program - Fortran): evaluation of surface flow based on precipitation, geology, soils, slopes, land use, demands etc; and
- FEFLOW (Finite Element Flow): evaluation of subsurface flows and fluxes based on surface recharge (from HSP-F output), geology, boundaries, demands, hydrogeology, hydraulic conductivities etc.

The outputs of the surface water model were used as input estimates of recharge in the groundwater model.

A key objective of the modeling was to develop a quantified understanding of the hydrological and hydrogeological fluxes throughout the watershed. To accomplish this, the following natural components were analyzed and assessed:

- Precipitation : rainfall snowfall etc.,
- Surface fluxes : once precipitation hits the ground, how much of it flows over the surface, where it goes and how it moves,
- Evapotranspiration: how much precipitation is returned to the atmosphere through evaporation from water surfaces (ponds lakes, rivers), or through transpiration from vegetative surfaces,
- Recharge: what proportion of precipitation enters the ground from the land surface, and from subsurface flow from neighbouring watersheds and

- subwatersheds (where applicable), respectively,
- Groundwater fluxes: once in the ground, how does it move, where does it go

These inputs were approximated within the models to obtain the best representation of precipitation, surface fluxes, recharge, groundwater flow fluxes, boundary conditions and other parameters with observed data within each of 22 subwatersheds in the Credit River.

The initial SGRA analysis to identify “the whole of the related groundwater recharge area”, was based on dividing the Credit River watershed into three separate areas. The divisions were based on the location of the Niagara Escarpment and Oak Ridges Moraine – upper, middle and lower Credit River (see Attachment 1). Based on this approach three threshold criteria for annual recharge (measured as millimeters of water that goes into the ground per year – mm/yr), were calculated, one for each area:

- Upper Credit had a Threshold Criteria of 350 mm/year
- Middle Credit had a Threshold Criteria of 200 mm/year
- Lower Credit had a Threshold Criteria of 179 mm/year

CVC staff was directed by the CTC SPC Ad Hoc Working Group to examine the effect of calculating average recharge and the resultant significant recharge threshold criteria based on the following three scenarios:

- Scenario 1 – initial study as described previously: Threshold Criteria ranging from 170 to 300 mm/yr (Attachment 1).
- Scenario 2 – Calculate Threshold Criteria and map SGRAs for each of 22 Subwatersheds : Threshold Criteria ranging from 36 mm/yr to 397 mm/yr (Attachment 2); and
- Scenario 3 – Calculate Threshold Criteria for the entire watershed: Threshold Criteria 230 mm/yr (Attachment 3). Areas mapped as an SGRA using this approach are located on the areas of the watershed encompassing the Niagara Escarpment and northwards towards the headwaters. These areas coincide with the location of the highest concentration of municipal and private drinking water wells.

CVSPA staff reviewed the results obtained from each scenario and recommended that computing the threshold criteria to delineate SGRAs across the entire CVSPA provides the most technically defensible determination of “significant recharge”.

A review of the three scenarios showed that the subwatershed and the “three zones” approach were less defensible as they yielded inconsistencies across subwatershed/ zone boundaries, due to the average recharge rate being different for neighbouring subwatersheds/zones. Such discontinuities in the boundaries would be difficult to justify on a scientific (geology, hydrogeology, physiography) basis.

The scenario utilizing the entire watershed “the whole of the related groundwater recharge area” proved to provide the most workable expression of SGRAs. The resultant map of SGRAs, with the “clipped” areas removed is found as Attachment 4.

SGRA Delineation in Toronto and Region Source Protection Area (TRSPA)

An Enhanced Tier 1 water budget has been completed for the whole of the TRSPA. The water budget models used were PRMS (Precipitation Runoff Modelling System - surface water) and MODFLOW (Three dimensional Modular Flow Analysis - groundwater), both of which were developed by the United States Geological Survey. The models were constructed in one hectare grid cells (100 meters x 100 meters). Recharge was calculated for each grid cell based on inputs of daily climate data (precipitation, temperature, solar radiation), physiography (soil type, slope, vegetative cover), land use, and depth to the water table. The PRMS results were then applied as an input to the MODFLOW model as a validation step.

Two options for delineation of “the whole of the related groundwater recharge area” were presented to the CTC SPC Ad Hoc Working Group. The Threshold Criteria for annual recharge (measured as millimeters of water that goes into the ground per year – mm/yr) were calculated as follows:

- Scenario 1 - Threshold Criteria calculated for each individual major watersheds that drain directly to Lake Ontario (Attachment 5). The significant recharge Threshold Criteria ranges from 93 to 178 mm/yr. The resultant SGRAs are found in headwaters areas on the Oak Ridges Moraine for the Humber, Don and Rouge Rivers and Duffins Creek associated with the Oak Ridges Moraine, and in the headwaters areas of Etobicoke Creek, Mimico Creek, Highland Creek, Petticoat Creek, and Carruthers Creek watersheds located within the south slope physiographic region. Many of the non-moraine significant recharge areas would be located where recharge is less than 100 mm/yr, which is considered to be a low recharge rate in TRCA’s watershed planning processes.
- Scenario 2 - Threshold Criteria calculated for the entire TRCA jurisdiction (Attachment 6). In this option, the significant recharge Threshold Criteria is 150 mm/yr. Areas mapped as SGRAs are located on much of the Oak Ridges Moraine as well as isolated patches associated with sandy soils from the former Lake Iroquois shoreline. A recharge rate of over 150 mm/yr is generally considered to be moderate to high recharge in TRCA’s watershed planning processes.

TRCA staff reviewed both averaging approaches relative to the four criteria above, and has recommended that calculating the Threshold Criteria to delineate SGRAs across the entire TRSPA provides the most technically defensible determination of “significant recharge”. The resultant map of SGRAs, with the “clipped” areas removed is found as Attachment 7. Within TRSPA, this eliminates SGRAs in the urbanized communities in north Brampton, Toronto, Vaughan, Richmond Hill, and Ajax.

SGRA Delineation in Central Lake Ontario Source Protection Area (CLOSPA)

A Tier 1 water budget has been completed for the whole of the CLOSPA and no further water budget work is being undertaken for source water protection purposes. The water budget models used were U.S. Geological Survey (USGS) Precipitation-Runoff Modelling System (PRMS) and USGS MODFLOW (groundwater). The models were based on analysis of

conditions for 25 meter by 25 meter grid cells (PRMS) and 100 meter by 100 meter grid cells (MODFLOW).

The PRMS model results were used to determine the location of the significant groundwater recharge areas (SGRAs). The PRMS model provided estimates of precipitation, interception, evaporation, potential and actual evapotranspiration, snow melt, run-off, infiltration, interflow, and groundwater recharge. All physical properties, including land-use classes, were represented on a 25-meter cell grid covering the study area.

The MODFLOW model was developed as part of the Oak Ridges Moraine groundwater model. The model estimated groundwater items such as the exchange of water between shallow and deeper aquifers, lateral inflows and outflows from the catchments, and groundwater discharge to streams. The groundwater model was also used (reverse particle tracking) to confirm significant groundwater recharge areas (SGRA). The groundwater model was calibrated based on measured groundwater potentials and estimated baseflows.

An important finding was that SGRAs outside of the CLOSPA watersheds contribute to streamflow within the study area. This lateral groundwater flow below surface watershed boundaries is an important component of the flow system. Particularly notable is that groundwater recharge northeast of CLOSPA flows in deep aquifers under Soper Creek before discharging to surface in Bowmanville Creek.

Three options for delineation of “the whole of the related groundwater recharge area” in CLOSPA were presented to the CTC SPC Ad Hoc Working Group. The Threshold Criteria for annual recharge (measured as millimeters of water that goes into the ground per year – mm/yr) were calculated as follows:

- Scenario 1 - Threshold Criteria calculated for individual major watersheds that drain to Lake Ontario ranged from 114 to 246 mm/yr. The SGRA areas (see Attachment 8) generally coincide with the Oak Ridges Moraine deposits, exposed sands, and Iroquois Beach deposits, although not always. For example, in the Bowmanville Creek watershed the Iroquois Beach deposits do not show as SGRAs although it is known that there is important recharge occurring in these deposits and a number of private drinking water wells that depend upon this recharge. A large proportion of the headwaters of Bowmanville Creek are in the Oak Ridges Moraine and therefore the Threshold Criteria for this watershed is dominated by the recharge rate there, which masks the importance of local recharge occurring in the Lake Iroquois deposits.
- Scenario 2 – Threshold Criteria calculated for three physiographic regions running horizontally through CLOSPA as shown in Attachment 9. The Threshold Criteria range from 149 to 390 mm/yr. With this approach several key recharge areas in the Oak Ridges Moraine do not show up as SGRAs. These are important known recharge areas for the aquifers that supply private wells as well as providing baseflow for watersheds south of the moraine. In contrast, using this approach, there are SGRAs identified in the middle zones that are not significant to drinking water supplies and baseflow to the watersheds.
- Scenario 3 - Threshold Criteria of 182 mm/yr calculated for the whole of the

CLOSPA (Attachment 10). The SGRAs delineated with this approach are consistent with the surficial geology, soils data, as well as other analyses and information (reverse particle tracking, flow path analysis, historical reporting and model results). The Oak Ridges Moraine consistently shows up as well as key outwash deposits in the north east. Additionally, several particle tracks from points of discharge in some of the small watersheds in the eastern part of the study area originate on the Iroquois Beach deposits where many private drinking water systems are located. This underlines the need to preserve recharge on the beach. Though all approaches highlight portions of the Oak Ridges Moraine, other approaches as described above produce inconsistent results for these beach deposits.

To confirm that the SGRAs are associated with significant groundwater discharge areas in CLOSPA, the following additional analyses were performed:

- key groundwater-dependent hydrological functions (e.g., key groundwater springs or areas of upwelling (coincident with cold water fisheries) that must be preserved were identified;
- particle tracking analyses of these features/processes were conducted by placing virtual particles beneath the springs/upwelling;
- the virtual particles were tracked as they travelled backwards to their point of entry to at the water table;

Another confirmatory analysis was undertaken by selecting locations of high groundwater discharge to streams as determined by the numerical groundwater model and identifying where this area where the recharge was occurring. This backward tracking was conducted from all cells that had a discharge greater than 1 litre per second per 100 meter grid cell. The areas identified as high recharge corresponded well with the SGRAs identified in the northern parts of the source protection area.

CLOSPA staff recommended using the Threshold Criteria calculated for the whole source protection area. The resultant map of SGRAs, with the “clipped” areas removed is found as Attachment 11. The reasons for recommending this approach are:

1. The jurisdictional threshold appears to capture all the areas historically documented as important for recharge;
2. It correlates well with the provincial surficial geology maps and reverse particle track analyses conducted for the study area; and
3. It identifies the beach deposits in the east part of the source protection area that are connected with local private drinking water supplies and which provides the important and large amount of recharge to the small eastern watersheds (Tooley, Darlington, Westside).

CTC-WIDE CONCLUSIONS - SGRA MAPPING

Summary Rationale for Selecting Approach to Mapping SGRAs

The recommended method is to delineate SGRAs based on the method set out in Rule 44(1) of the "Technical Rules for Preparing Assessment Reports, December 12, 2008" under the Clean Water Act, 2006. The specific application of this method (Attachment 12) is:

"An area is a significant groundwater recharge area if 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", and that "the whole of the related groundwater recharge area" be the entire source protection area for each of CVSPA, TRSPA and CLOSPA.

"Further, any such areas that are not up gradient of any known groundwater-based drinking water supplies will be filtered out".

Report prepared by: Beverley Thorpe, 416-661-6600 x5577

Emails: bthorpe@trca.on.ca

For Information contact: Don Ford, TRSPA, 416-661-6600 x5369, Kerry Mulchansingh, CVSPA, 905-670-1615, Gayle Soo-Chan, CLOSPA, 905-579-0411 x139

Date: November 09, 2009

Attachments:

Maps identified as Attachments 1 through 12 are being provided separately from this report.

Item 6.5

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Beverley Thorpe, Project Manager, CTC Region

RE: SPP Municipal Planners Meeting

KEY ISSUE

Propose meeting in February 2010 to re-engage municipal planning staff in source water protection to coincide with the expected release of the draft source protection planning regulation,

RECOMMENDATION

THAT the CTC SOURCE PROTECTION COMMITTEE (SPC) authorize the Chair to send the letter (Attachment 1) to senior municipal planning staff in all municipalities wholly or partially within the CTC to invite planning staff to begin development of a workplan and budget for source water protection planning;

AND FURTHER THAT staff report back at Meeting #1/10 to be held on January 18, 2010 on the responses received and meeting details.

BACKGROUND

In preparing Proposed Terms of Reference for each of the Source Protection Areas in the CTC Source Protection Region, description of the full costs and proposed workplans and responsibilities to undertake source protection planning tasks was deferred until the province introduced the regulation and guidance on what is to be required in a source protection plan. Each of the Terms of Reference will require amendment to layout these details, including mandatory public consultation. Further, where a municipality wishes to lead or co-lead any of these tasks, a council resolution will be required (if not previously received).

The province released a discussion document for 90 day comment period on June 26, 2009 on the Environmental Bill of Rights registry "Source Protection Plans under the *Clean Water Act, 2006: A Discussion Paper on Requirements for the Content and Preparation of Source Protection Plans (Clean Water Act, 2006, S.O. 2006, c. 22)*". The next step will be the release of a draft regulation for comment, likely in mid-January to early February 2010.

If the CTC can complete the proposed amendments to the three Terms of Reference before the mandatory public consultation on the Assessment Report notices are posted, both items could be included in the Stage 2 consultations reducing costs and providing better service to the public. See agenda Item #6.1 for further information regarding Stage 2 consultation.

Therefore staff is recommending re-engaging the municipal planning staff in discussions on source protection planning starting with a meeting in February 2010 as set out in Attachment 1. If the province is delayed in releasing the draft regulation, then the timetable to complete the revisions to the Terms of Reference will need to be adjusted.

We will reconvene the CTC SPC Municipal Liaison Terms of Reference Working Group in March 2010 to direct staff in completing the proposed revisions to the Terms of Reference. This would be after the current work pressures are eased on staff and members to complete, review and accept technical studies.

Next Steps

Staff will proceed with coordinating a meeting of municipal planning staff and report back.

Report prepared by: Beverley Thorpe, extension 5577

Emails: bthorpe@trca.on.ca

For Information contact: David Burnett, extension 5361

Emails: dburnett@trca.on.ca

Date: November 10, 2009

Attachments:

1. Invitation Letter to Municipal Planning Staff

Attachment 1 of 1: Invitation Letter to Municipal Planning Staff

Planning Director
Municipality

Re: Invitation Letter to Municipal Planning Staff

An important milestone in Source Protection Planning work will be achieved in 2010 – the completion of the Assessment Reports that identify, among other things, significant threats to drinking water. The completion of these technical studies will serve as the basis for formulating Source Protection Plans, as required under the *Clean Water Act, 2006*. The *Clean Water Act, 2006* further requires that municipal official plans and related instruments are to be amended to be in conformity with the Source Protection Plan. To that end, the Credit-Toronto-Central Lake Ontario Source Protection Committee (CTC SPC) will be seeking advice from municipal planners in the creation of planning policy recommendations to include in the Source Protection Plans.

The CTC SPC is proposing to host a meeting with municipal planners in February, 2010 to:

- Provide an update on the current status of Source Protection Assessment Reports and plans for public consultation;
- Confirm leadership, roles and responsibilities for the policy formulation component of Source Protection Plans by municipalities that have passed council resolutions to lead or co-lead this work;
- Confirm interest in participating in the policy formulation work by planners of other municipalities;
- Discuss a collaborative, facilitated process and work plan to develop model source protection plan policies for future incorporation into municipal official plans.

I am therefore asking for your response to the following two items by December 18:

1. Confirm your interest in having you or your staff attend the proposed meeting in February 2009;
2. Provide contact information for a maximum of two staff who would attend this meeting.

Please email your response by December 18 to sourcewater@trca.on.ca. Further meeting details will be sent identified participants. If you require further information, please call Beverley Thorpe, CTC Project Manager at 416-661-6600, extension 5577 or David Burnett, Senior Planner, Toronto and Region Conservation Authority at 416-661-6600, extension 5361.

Sincerely,

Susan Self
CTC SPC Chair

7. ITEMS FOR COMMITTEE INFORMATION

Item 7.1

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Beverley Thorpe, Project Manager, CTC Region

RE: Results of the 360 Review (SPC Survey)

KEY ISSUE

Review of feedback received by staff through the SPC survey

RECOMMENDATION

THAT the CTC SPC receive this report for information;

AND FURTHER THAT staff consider the feedback received through this survey as they develop future meetings, activities and communications for the CTC SPC.

BACKGROUND

At SPC Meeting #7/09 held on Tuesday, October 20, 2009 staff distributed to the CTC Source Protection Committee a 360 survey questionnaire which sought feedback regarding a number of administrative items for the SPC. These items included coordination of the SPC meetings, coordination of the Ad Hoc Working Group meetings, additional support required by the SPC, MOE/MNR/CO training and online tools. 13 SPC members completed this survey either electronically or in hard copy by the requested deadline of October 31, 2009.

SURVEY RESPONSES

The responses received by staff were positive in nature and requested that the current procedures of SPC/MOE/MNR and CO staff remain largely as they are. Below is a summary of feedback received in the 3 sections of the survey:

1. SPC Meetings

- 100% of responses found SPC meetings useful and productive
- A number of responses requested that meetings focus less time on details deemed to be irrelevant
- Although some responses requested earlier or later SPC meeting times the majority was pleased with 10:00AM - 3:00PM meetings
- Some respondents requested that the information provided in presentations and reports be "dumbed down" so a more lay audience
- A large number of respondents requested presentations:
 - related to the specific concerns of groups such municipal planners, agricultural organizations, aggregate industry as well the development and energy sectors.
 - on the connections between climate change and source water protection
 - from the Lake Ontario Collaborative
- Overall SPC members were pleased with the content of Ad Hoc WG Meetings. However, responses were received requesting background information be provided by

the local SPC member and that the options not chosen by technical leads be more fully described

- Technical Leads are encouraged to consider the end product of source protection plans when presenting technical work. Perspective of how the study findings will impact the people or homes served is suggested

2. Partner Organizations: MOE/MNR

- While the majority of responses were satisfied with the information provided by provincial partners, a number of responses identified a lack of clear understanding due to ongoing changes to the program
- A number of responses requested more clarity in the communications from the province. It is felt that more common language text would be beneficial to the understanding of committee members
- One new SPC member responded that an orientation course from the MOE would be beneficial
- Concern was expressed that MOE training sessions were made confusing by mixed messages and changing information
- Overall concern was expressed that the timelines imposed for developing assessment reports and source protection plans will result in an inferior product

3. Online Tools

- 100% of respondents found the CTC website a useful communications tool
- Although the majority of responses identified the CTC webportal as a useful tool responses also expressed that the portal was difficult to navigate
- It was expressed that some members prefer to receive documents in hard copy and do not use the webportal to access CTC SPC information
- A small minority of members would like to see the CTC making use of other online tools

NEXT STEPS

CTC staff will retain a copy of the responses to the SPC Survey and consider these when developing this and future SPC meeting agendas and presentation materials. At the upcoming meeting #8/09, staff from the Region of Peel will be making a presentation on the work of the Lake Ontario Collaborative. Also at this meeting, the staff report seeking approval of explanatory wording related to water budgets and maps of Significant Groundwater Recharge Areas (SGRAs) contains a summary of the options and technical considerations behind the recommended approach to mapping SGRAs for the record. A Plain Language Editor is being retained to work on Assessment Reports to help make them more accessible/understandable by a lay audience.

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Date: November 09, 2009

Item 7.2

TO: Chair and Members of the Source Protection Committee
Meeting #8/09, November 24, 2009

FROM: Beverley Thorpe, Project Manager, CTC Region

RE: Communications Update

RECOMMENDATION **THAT the SPC receives this report for information**

Through the months of October and November the CTC SPR staff have been involved in a number of general SWP communications activities in the CTC and surrounding area. A summary of past and upcoming general SWP communications activities is provided below. Of particular note is the Lake Ontario Evenings event hosted by TRCA on December 3, 2009. This event is being presented as a means for bringing forward updates on a number of different Lake Ontario projects to the public in a regular and consistent basis. A flyer for this event is attached (attachment 1) for your information and distribution.

SPC Item#6.1 provides an update on the Communications Outreach Working Group's recommendations for Stage 1 consultation to landowners within vulnerable areas.

Past Activities

October 24, 2009 - C2D2 Conference

- CTC staff brought the "It Starts With A Drop" mural and information poster to the Canadian Community for Dialogue and Deliberation (C2D2) Conference held in Toronto. This conference brought together diverse range of individuals to discuss how conversations can make for stronger communities and healthier democracies. The mural garnered a lot of attention from the over 400 participants in attendance. Youth4Water, who the CTC SPC partnered with in March, 2009, spoke at this conference and highlighted the important role youth can play in building strong democracies.

October 25, 2009 - 5th Annual Human River

- The "It Starts With A Drop" mural and information poster were displayed at the fifth annual Human River walk in Toronto. This event saw roughly 54 participants walk along the symbolic path of Garrison Creek from Christie Pits Park to Fort York. The mural served to raise awareness of the work of the CTC Source Protection Committee as well as strengthening partnerships with organizations and individuals with an expressed interest in protecting water in our region.

Upcoming Activities

November 18, 19 & 20 - A.D. Latornell Conservation Symposium

- CTC Communications staff has coordinated through Conservation Ontario to set up the "It Starts With A Drop" mural and information poster at the 16th annual A.D. Latornell Conservation Symposium being held November 18, 19 and 20 in Alliston. The symposium

brings together practitioners, students, academics, politicians and non-governmental organizations to discuss a broad range of conservation issues. The symposium is Ontario's most prestigious and well-attended annual conservation conference and with the mural set up for the full length of the symposium it is anticipated that many stakeholders and colleagues engaged in conservation issues will be made aware of the CTC SPC's efforts to engage local groups.

November 21 - "Toilet to Tap" - Bus Tour and Workshop to celebrate World Toilet Day

- CTC Communications staff will join a Riversides bus tour and workshop which will provide information about the history of Ashbridge's Bay, the building of the city's modern wastewater and drinking water treatment infrastructure and some older treatment systems from the past. At this bus tour CTC staff will provide a general update on SWP in the CTC region including anticipated timelines for bringing forward the TRSPA Assessment Report for public consultation. Engagement of local grassroots NGOs now is anticipated to create greater engagement of the public during the Stage 2 consultation as proposed in Item#6.1.

December 3 - Inaugural Lake Ontario Evenings

- Rodney Bouchard, Project Manager of the Lake Ontario Collaborative (LOC), will join TRCA staff from the Toronto Waterfront and Remedial Action Plan groups for an evening exploring local Lake Ontario focused projects. The evening will feature a talk from Peter Annin, author of *The Great Lakes Water Wars* as well as an opportunity to provide input on recommendations coming forward in the updated Don River Fisheries Management Plan. This meeting is being hosted by TRCA to:
 - increase public engagement by providing information in a way that decreases the demand on the public's time
 - establish a forum where public stakeholders can receive credible information and provide input to the TRCA
 - present initiatives to the public as pieces of the larger Lake Ontario picture (reflects the TRCA watershed approach)
 - integrate components of work related to Lake Ontario across groups

At this first Lake Ontario Evenings event there will be a short update on the LOC work that is underway and when the work of the LOC will be brought forward for public consultation. It is expected that this event will help to set the stage for greater engagement of the public during the Stage 2 Assessment Report consultation as proposed in Item#6.1.

Report prepared by: Nicholas Schulz, 416-661-6600 extension 5392

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Date: November 10, 2009

Attachments:

1. Flyer for TRCA Event - Lake Ontario Evenings - Thursday December 3, 2009

Lake **ONTARIO EVENINGS**

Inaugural Event

All are welcome. Doors open at 5:45 p.m.; the evening's presentations will begin at 6:30 p.m.

Thursday
DECEMBER 3, 2009

Gladstone Hotel, Toronto

1214 Queen Street West (Queen St. W. & Gladstone Ave.)
On the TTC, take the 501 Queen St. streetcar to Gladstone Ave.
or the 29 Dufferin St. bus to Queen St.



Join us for the first in a series of events addressing Lake Ontario issues and associated local initiatives. This inaugural session will feature:

6:30 p.m.

An introduction to the *Lake Ontario Evenings* (LOE) speaker series and the role of community involvement in upcoming LOE sessions

6:45 p.m.

Guest speaker Peter Annin, author of *The Great Lakes Water Wars*

7:30 p.m.

Updates and information about local projects related to source water protection, the Remedial Action Plan, and the Toronto waterfront

8:00 p.m.

An opportunity to provide input on the recommendations coming forward in the updated Don River Fisheries Management Plan

