

# Upper Thames River Source Protection Area Assessment Report

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## 1.0 Introduction and Background

Following the tragedy in Walkerton (May, 2000) when the town's drinking water became contaminated with a specific strain of *Escherichia coli* (*E. coli*) and *Campylobacter* bacteria, Justice O'Connor presided over the Walkerton Inquiry. Justice O'Connor made 121 recommendations in a two part report which recommended a multi-barrier approach to protecting Ontario's drinking water. Many of Justice O'Connor's recommendations were implemented with the introduction of the Safe Drinking Water Act, 2002 (*SDWA*). The *SDWA* dealt with the treatment, distribution and testing of drinking water as well as the training of operators and notification protocols. The Clean Water Act, 2006 (*CWA*) addressed Justice O'Connor's recommendations pertaining to the watershed-based protection of drinking water sources referred to as Drinking Water Source Protection.

The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee was to complete an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan is to contain policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.

The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (*SPR*). The Assessment Reports are to contain detailed information which identify *vulnerable* areas associated with drinking water systems, assess the level of vulnerability, identify *issues* related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess

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the risk due to threats. These Assessment Reports are being completed for the three Source Protection Areas of the Thames-Sydenham and Region *SPR* as shown in the following Map 1-1.

## **1.1. Document Overview**

This Assessment Report is modular in nature. It is comprised of several Sections and Appendices. The Sections are, in effect, a summary of various technical studies which are described later in this section. Each of the Sections is summarized in Section Summaries contained in Appendix 2. Material pertinent to a specific drinking water system is summarized in System Summaries included in Appendix 3. Maps form a large part of the content of the Assessment Report, and are contained in Appendix 1. Tabloid sized (11"x17") maps are included in this report, and may be printed on letter sized paper and remain mostly legible. The entire document is available on Compact Disk (CD) complete with the appendices to the Assessment Report.

Each Section of the Assessment Report is outlined below:

### **1.1.1.1. Introduction and Background (Section 1)**

The first section provides an overview of the process and background behind the Assessment Report. It refers to mapping products related to the extent of the Source Protection Region and Source Protection Areas as well as the municipal partners involved in developing the Source Protection Plan.

### **1.1.1.2. Watershed Characterization (Section 2)**

The Watershed Characterization Reports for the region were completed in 2008. A three volume report was produced for the Thames Watershed and Region which included the Upper Thames River Source Protection Area and the Lower Thames Valley Source Protection Area. A summary of the report was developed which included all of the mapping products used in the Watershed Characterization Report. The summary of the Thames Watershed and Region Watershed Characterization Report is included in Appendix 5. The summary and the full Watershed Characterization Reports are available in portable document format (Adobe PDF) on Compact Disk (CD).

### **1.1.1.3. Water Budget and Water Quantity Stress Assessment (Section 3)**

A Conceptual Water Budget was developed for the Thames-Sydenham and Region. This report is included as Appendix 6 of this Assessment Report. The Conceptual Water Budget compiles water quantity information from the region, such as precipitation and water takings, for use in the Tier 1 Water Budget. In the Tier 1 Water Budget, a preliminary stress assessment indicating the potential for water quantity stress in subwatersheds of the region is undertaken. The potential for stress determines whether additional work is required to refine the water budget in that *subwatershed*. If the potential stress could affect a drinking water system included in the Terms of Reference for the region (generally municipal drinking water systems), the additional refinement will be completed through a Tier 2 and potentially a Tier 3 Water Budget. If, however, the potential stress does not have an impact on the water systems in the area, the work should be undertaken through different programs. The Thames-Sydenham and Region Tier 1 Water Budget has identified a potential for stress which would affect municipal drinking water systems in the Source Protection Area, therefore Tier 2 Water Budgets are required in the Source Protection Area, which would confirm whether there is a potential for stress on drinking water systems. Further, a Tier 3 local area risk assessment and water budget will be done to study the stress at each drinking water system exhibiting a potential for stress in the Tier 2 assessment.

### **1.1.1.4. Vulnerability Assessment (Section 4)**

The Vulnerability Assessment section is a summary of the identification of the *vulnerable areas*, the assessment of vulnerability within those areas, and the *uncertainty* in that assessment as required by the Clean Water Act. The work related to this section was undertaken through a number of technical studies which were generally completed on the geographic scale of the upper tier municipalities (counties). This section summarizes the work completed on a Source Protection Area basis for each type of vulnerable area. The work is also summarized for each drinking water system in the System Summaries included in Appendix 3. A peer review of the vulnerability assessment work was undertaken.

### **1.1.1.5. Issues Evaluation (Section 5)**

The Issues Evaluation Section describes the methods applied and the findings of the drinking water quality *issues* evaluation process across the Source Protection Area. The detailed

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methodology for the *issues* evaluation process is included in Appendix 8. A table of *issues* identified is included in the Issues Evaluation section as well as a description of the impact of identifying an *issue* and additional work required to determine the activities which may be contributing to the issue. The findings reported in this section are also included in the System Summaries in Appendix 3.

## **1.1.1.6. Conditions Assessment (Section 6)**

The Conditions Assessment section of the Assessment Report includes a description of the work undertaken to assess the potential *conditions* (drinking water threats due to past activities) which have been identified to date. This is an ongoing process requiring additional work.

## **1.1.1.7. Threats and Risk Assessment (Section 7)**

The Threats and Risk Assessment section of this Assessment Report includes a list of the types of *threats* which are or would be a risk to drinking water systems in the region and the number of locations where significant threats are believed to exist. It is not the intent of this report to identify individuals who are believed to be engaged in those activities nor is it intended to identify specific properties where those activities exist. Policies developed in the Source Protection Plan will be focused on general types of activities which 'are or would be' *threats* to drinking water. This section also outlines the additional work required to investigate activities believed to be threats. An overview of this information is presented in the System Summaries included in Appendix 3.

## **1.1.1.8. Great Lakes (Section 8)**

The Great Lakes section includes the required references to other work undertaken in the region related to Great Lakes water quality and how the Assessment Report supports and complements that work and vice-versa. It identifies additional work required in this area once all the Assessment Reports for Source Protection Areas that drain into the Great Lakes are completed.

## **1.1.1.9. Data Gaps and Next Steps (Section 9)**

Data gaps and next steps are listed in this section. Data gaps such as infrequent groundwater sampling or inaccurate tile drainage network information were identified through the technical studies and have been included in this Assessment Report so that they may be considered in

the future. Many of the next steps involve work plans to fill the data gaps or additional work required to reduce the *uncertainty* related to various components of the Assessment Report. Data gaps and next steps pertaining to an individual system are listed in the System Summaries included in Appendix 3.

## **1.2. Clean Water Act Rules and Regulations**

The Clean Water Act, 2006 established the requirements to develop a Source Protection Plan and set up the framework to develop that plan. In order to define the work and enable aspects of the work to be completed, regulations and *rules* were required. The development of these *rules* and regulations was led by the Drinking Water Source Protection Branch of the Ministry of the Environment. These regulations were developed through consultation with stakeholders including the Source Protection Committee chairs and committees and the staff of the Conservation Authorities working with the Source Protection Committees. Many consultation sessions were held with sector representatives of those who may be impacted by the *rules* and regulations.

### **1.2.1. Regulations**

A regulation established Source Protection Areas and Regions (O. Reg. 284/07). This regulation established the Thames-Sydenham and Region Source Protection Region and the three Source Protection Areas described in the sections to follow. This Source Protection Region recognized in regulation a partnership established by the Conservation Authorities to prepare for the work which the Clean Water Act requires.

A regulation was introduced to establish Source Protection Committees (O. Reg. 288/07). The regulation described the make-up of the committees and also the process for establishing the committees. The regulation required that the Source Protection Authorities in the region form the committee while the chair is appointed by the Minister of the Environment.

A General Regulation (O. Reg. 287/07) provides requirements for the Terms of Reference, Assessment Reports and Source Protection Plans. The General Regulation also establishes the 21 activities which can be considered drinking water *threats*. The requirements of the Act,

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Regulation and *rules* are summarized in the Assessment Report Checklist which is included in Appendix 7. The checklist indicates where the requirements have been satisfied in this Assessment Report.

## 1.2.2. Technical Rules

In order to fully define the contents of, and methodologies used in developing Assessment Reports, the Ministry of the Environment (MOE) released *Technical Rules: Assessment Report* (December 12, 2008). During the drafting of this report, the Director (MOE) was in the process of amending those *rules* (November 2009). Time did not allow all of those amendments to be reflected in the report. Amendments not addressed in this report will need to be incorporated into an amended Assessment Report.

The *Technical Rules: Assessment Report* replaced interim guidance which was developed by MOE to guide much of the technical work initiated in 2006 and 2007. The guidance was developed in a modular manner with each module describing a specific component of the work. Much of the technical work followed those guidance modules which provided the basis for the organization of many of the technical studies. The guidance modules were detailed and descriptive. The organization of this report is partially reflective of those modules.

## 1.2.3. Local Guidance Documents

The *rules* and regulations leave room for local discretion by the Source Protection Committee and system operating authorities. In many cases, local guidance documents were required to provide consistent guidance across the region. This local guidance developed by the Thames-Sydenham and Region in consultation with municipality staff and consultants includes:

- Issues Evaluation Methodology
- Threats and Risk Assessment
- Transport Pathways Consideration

#### **1.2.4. Tables of Drinking Water Threats**

Along with the Technical Rules: Assessment Report, the province released 'Tables of Drinking Water Threats', which list the vulnerability and establish the circumstances under which threats can be considered significant, moderate or low risk. Two tables are provided which describe the activities related to chemical and pathogen threats separately. The MOE threats tables, as they are commonly called, describe specific circumstances which affect the risk level of the activity. Circumstances include such factors as the volume of contaminant, the method of release into the environment, the type of contaminant, and the area in which the activity is undertaken. The tables are organized by Prescribed Drinking Water Threats (activities) established in the General Regulation (O. Reg. 287/07). The tables are posted on the MOE website (<http://www.ene.gov.on.ca/en/water/cleanwater/cwa-technical-rules.php>).

These circumstances, along with the vulnerability assessment of the vulnerable areas, determine the level of risk associated with an activity in a particular location.

#### **1.2.5. Mapping Symbology**

Along with the *Technical Rules: Assessment Report*, the province also released and updated guidance on Assessment Report mapping standards, called the Mapping Symbology for the Clean Water Act (Version 3.0, April 2009). This guidance facilitates consistency in mapping products produced in the 19 Source Protection Regions in the province. This guidance has been used to develop the various mapping products included in this Assessment Report and the supporting studies. As the *mapping symbology* has been updated over the period that much of the work was undertaken, it is likely that not all aspects of the mapping products meet the current MOE guidance. As such, care must be taken in comparing mapping products in the Assessment Report to the Technical work from which they are sourced.

#### **1.2.6. Source Protection Plan**

Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan will contain

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policies focused on activities which are identified as threats. Although a regulation defining the scope and content of a Source Protection Plan has not yet been introduced, the province has consulted on a discussion paper which will form the basis for a Source Protection Plan regulation. The discussion paper outlines the nature of the policies which would be described in a future regulation. These policies may include:

- education and outreach programs (leading to voluntary risk reduction)
- incentive programs (leading to voluntary risk reduction)
- land-use planning approaches (e.g., official plans, zoning bylaws, site plan controls, development permits)
- new or amended provincial instruments (e.g., Certificates of Approval)
- risk management plans
- prohibition
- restricted land uses.

The discussion paper indicates that the more restrictive policies listed above would only be applied to significant drinking water threats. Similarly, the policies related to significant threats are mandatory and must be implemented, whereas the policies related to moderate and low risk drinking water threats leave some discretion to the implementer. The Source Protection Plan may also include various policies related to monitoring.

### **1.3. Source Protection Committee**

In the Thames-Sydenham and Region, the Conservation Authorities are required to form a Source Protection Committee (SPC) for the region as part of their responsibilities as Source Protection Authorities. They are also required to provide support to that committee. In order to carry out their responsibilities, each Conservation Authority meets individually as a Source Protection Authority. While many of their responsibilities can be undertaken individually, Conservation Authorities (and Source Protection Authorities, as appropriate) established various committees to undertake those items which required collective involvement.

A Management Committee was established to undertake the day-to-day administration related to the program. The Management Committee includes the General Managers of the three Conservation Authorities who meet regularly with the Source Protection Project Manager. The

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Management Committee, among other things, ensures that the Source Protection Committee has the resources to undertake their responsibilities as funded by the MOE.

A striking committee was formed to provide appointment recommendations to the Source Protection Authorities.

The Clean Water Act identifies the general make-up of the Source Protection Committee as having one third of its members representing each of the municipalities, sectors and other stakeholders. The Conservation Authorities in the region further refined the make-up of each third. A discussion paper was developed and distributed to the municipalities in the region for their input. Discussions with First Nations encouraged their participation on the Source Protection Committee. Those discussions led to the recent appointment of two of the three First Nations members on the Source Protection Committee. These two members were appointed by the London District Chief's Council to represent the eight First Nations in the region.

The make-up and representation of the Source Protection Committee are summarized in Table 1-1.

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**Table 1-1 SPC members and representation**

Chair		<a href="#">Robert Bedggood</a>
Municipalities	Chatham-Kent, Lakeshore, Leamington	<a href="#">Sheldon Parsons</a>
	Lambton	<a href="#">Darrell Randell</a>
	London	<a href="#">Patrick Donnelly</a>
	Middlesex	<a href="#">James Maudsley</a>
	Elgin	<a href="#">Brent Clutterbuck</a>
	Oxford	<a href="#">Pat Sobeski</a>
	Perth, Stratford, St. Marys, Huron	<a href="#">Joe Salter</a>
Sectors	Agriculture	<a href="#">John Van Dorp</a>
		<a href="#">Patrick Feryn</a>
		<a href="#">Don McCabe</a>
	Industry/ Commercial	<a href="#">Dean Edwardson</a>
		<a href="#">Earl Morwood</a>
Pits and Quarries	<a href="#">Paul Hymus</a>	
Oil and Gas	<a href="#">Joe Van Overberghe</a>	
Other		<a href="#">Richard Philp</a>
		<a href="#">Doug McGee</a>
		<a href="#">Joseph Kerr</a>
		<a href="#">Carl Kennes</a>
		<a href="#">Valerie M'Garry</a>
		<a href="#">Margaret Misk-Evans</a>
		<a href="#">Charles Sharina</a>
First Nations		<a href="#">Augustus Tobias</a>
		<a href="#">Kennan Johnson</a>
Liaisons	Medical Officers of Health	Jim Reffle
	Province	Teresa McLellan
	Source Protection Authority	Murray Blackie

Once established, the Source Protection Committee was required to establish rules of order and operating procedures. The Source Protection Committee's rules of order are posted on the region's web site at the address included in the footers of this report. In order to guide them through the Source Protection planning process, the Source Protection Committee developed a Mission Statement and Guiding Principles. The Source Protection Committee's guiding principles and mission statement are summarized as follows:

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**Table 1-2 SPC Mission Statement and Guiding Principles**

Mission Statement Protect sources of drinking water by developing a plan based on science and local cooperation.
Guiding Principles  We value: <ul style="list-style-type: none"><li>• Fair and reasonable solutions</li><li>• Consensus within our diverse area group</li><li>• Clarity of information</li><li>• Open communication</li><li>• Respecting diversity of opinion</li></ul>

More detail on the committee's Mission Statement and Guiding Principles are posted on the region's web site, listed in the footer of this page.

The Source Protection Committee meets regularly to review and assess work conducted for the Assessment Report, to consider amendments to the Terms of Reference, and to discuss source protection planning for the region. The meetings are open to the public. The meeting agenda and minutes are available at the region's web site.

## **1.4. Role of the Conservation Authorities**

The Conservation Authorities provide the resources to the SPC to complete their work. This includes the provision of technical and administrative staff such as hydrogeology, engineering, geographic information system and communications specialists. This team is led by the Source Protection Project Manager, Chris Tasker, and technical leads at each of the Source Protection Authorities.

## **1.5. Terms of Reference**

The first major task of the Source Protection Committee was to develop a work plan to guide the source protection planning process for the following five years. The work plan – called the Terms of Reference, was developed with input from municipalities and stakeholders.

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The Terms of Reference outlines who does what, when it will happen and how much it will cost. It guides the Source Protection Committee through the completion of the Assessment Report and the Source Protection Plan.

Two municipal working groups, for surface water and groundwater related studies, were established to help complete the work plan for the Terms of Reference. The groups were chaired by SPC members and comprised of municipal staff and water treatment plant operators, who provided technical input.

Public Open Houses on the Terms of Reference were held in September of 2008 at Ridgetown, St. Marys and Wyoming. A follow-up Public Meeting was held in London. In addition, comments were received through the posting of the Terms of Reference on the region's web site. The SPC submitted the proposed Terms of Reference to the Source Protection Authorities on December 18, 2008. Comments were received by the SPAs and submitted to the Minister of the Environment for approval. The Terms of Reference for the Upper Thames River Source Protection Area were approved by the Minister of the Environment and the notice of approval posted on the *Environmental Registry* on April 20, 2009. This approval sets the due date of this Assessment Report one year from the posting of the approval of the Terms of Reference, to be April 20, 2010. However due to an adjustment in work plans to fill several gaps and to allow for adequate consultation on the assessment report, an extension in submission of the UTRSPA assessment report was requested of the MOE. This request for a new due date of October 29, 2010 was granted by the Director, Source Protection Programs Branch, MOE.

## **1.6. Thames-Sydenham and Region Source Protection Region**

The Thames-Sydenham and Region (*TSR*) Source Protection Region (*SPR*) is located in southwestern Ontario bounded by Lake Erie in the south and by Lake Huron to the north of the western end of the region. It is surrounded by the Lake Erie Source Protection Region to the east and the Essex Region Source Protection Area to the west of its southern end. To the north and west of the northern part of the region is the Ausable-Bayfield Maitland Valley Source Protection Region. The region is shown in Map 1-1.

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The Thames-Sydenham and Region (*TSR*) is comprised of three Source Protection Areas. The Upper Thames River Source Protection Area (*UTRSPA*) is to the north and east of the region. The Lower Thames Valley Source Protection Area (*LTVSPA*) is to the south and west of the Upper Thames River Source Protection Area while the St. Clair Region Source Protection Area (*SCRSPA*) is north of the Lower Thames Valley Source Protection Area. The three Source Protection Areas are also shown in Map 1-1.

## 1.6.1. Upper Thames River Source Protection Area

The Upper Thames River Source Protection Area includes parts of the municipalities listed in Table 1-3 below.

**Table 1-3 Municipalities in the UTRSPA**

Blandford-Blenheim	Oxford
East Zorra-Tavistock	Perth East
Elgin	Perth south
Huron East	Perth
Huron	South Huron
Ingersoll	South-West Oxford
London	St. Marys
Lucan-Biddulph	Stratford
Malaide	Strathroy-Caradoc
Middlesex Centre	Thames Centre
Middlesex	West Perth
North Perth	Woodstock
Norwich	Zorra

There are no First Nations in the *UTRSPA*.

In the Upper Thames River Source Protection Area, the municipalities receive most of their drinking water from 23 municipal groundwater well supply systems located within the source protection area. The exceptions are the City of London, Delaware and Ballymotte which primarily rely on Lake Huron and Lake Erie surface water intakes located outside the source protection region. Private wells supply water to the remainder of the residents in the region. Map 1-3 shows the location of the well supply systems and surface water intakes that serve the Upper Thames River Source Protection Area.

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The largest settlement in the area is the City of London, while other significant settlements include the City of Stratford, Town of St. Marys, Ingersoll, Woodstock and Dorchester. Settlement areas are shown in Map 1-4. The approximate population of these settlement areas is indicated by the relative size of the symbol indicating the location of the settlement. These populations have been included based on available information or estimated based on the number of parcels in the settlement area.

More details on the area, its water systems and the population of the area are included in Section 2.0 - Watershed Characterization.

## **1.7. Technical Studies**

The Assessment Report is a summary and compilation of a number of technical studies including:

- Watershed Characterization
- Conceptual Water Budget
- Various levels of Water Budgets (Tier 1, 2 or 3)
- Municipal Technical Studies

The Municipal Technical Studies were completed through partnerships between the municipalities and the Conservation Authorities. Leads for each study were established. The studies were led by the Conservation Authorities (CAs) or by a municipality. Most of the municipal technical studies (such as the vulnerability assessment, issues evaluation and threats assessment studies) were organized based on the geographic extent of the upper tier municipalities (counties). Drinking water system operating authorities or municipal staff participated in the studies through steering committees for those projects which were not led by the municipalities directly. The watershed characterization and the conceptual water budget studies were led by the CAs and completed by CA staff.

Vulnerability Assessment technical reports were peer reviewed by a four member peer review committee comprised of hydrodynamic and groundwater modelling experts with experience in vulnerability assessment studies. This peer review is described in more detail in Section 4.0 – Vulnerability Assessment. The water budget work was also subject to a peer review process.

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The Ministry of Natural Resources (MNR) also participated in the peer review as well as people who have been involved in water budget work of the neighbouring Source Protection Areas. Many of these studies are still ongoing, however components from the studies have been compiled into these Assessment Reports.

## **1.8. Consultation**

Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, requires a public meeting and posting of the Assessment Report for comment. Two posting periods are required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report is then submitted to the Ministry of the Environment along with comments received in the final posting period. The Director may then approve the Assessment Report or require changes to the report.

The Source Protection Committee identified the need to undertake a more detailed and locally focused consultation on the contents of the Assessment Report. A multi-phase consultation plan was developed and is included in Appendix 4 (and on the web site). The plan identifies three consultation phases. The first two phases of consultation provide a more local focus on the vulnerable areas associated with the municipal water supplies. The first phase includes the (peer reviewed) vulnerability assessment of the areas while the second phase adds discussion on the threats and issues identified in the vulnerable areas. Both phases include individual correspondence with property owners in the proposed vulnerable areas as well as advertisements in local newspapers. Maps of the areas and fact sheets were distributed with invitations to attend the local meetings. These materials were also made available on the region's web site.

The third phase of consultation is the required public meeting and posting of the draft proposed Assessment Report, and then the proposed Assessment Report for comment. This phase is more regional in scope involving open houses in each of the Source Protection Areas.

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The draft proposed Assessment Report must be published on the Internet for a 35 day comment period, and copies made available to stakeholders including the public. A copy of the notice of the posting of the draft proposed Assessment Report must be published in newspapers and distributed to the municipal clerks in which any part of the *SPA* is located, First Nation band chiefs if any part of a reserve of a band is included in the *SPA*, landowners engaging in an activity known by the SPC that is or would be a significant threat, other SPCs listed in the Terms of Reference, persons or bodies related to Great Lakes Water Quality Agreements, Remedial Action Plans and Lake wide Management Plans for their comments. At least 21 days after publishing the draft proposed report on the Internet, the required public meeting must take place.

The proposed Assessment Report must be published on the Internet for a 30 day comment period, and copies of the report submitted to municipal clerks and band chiefs (if any part of a band reserve is in the *SPA*). There are no First Nation reserves in the *UTRSPA*.

**Table 1-4 Summary of planned LTVSPA Assessment Report Consultation**

<b>Item</b>	<b>Planned Schedule (week of)</b>
Posting draft proposed Assessment Report for comment	July 16, 2010
Public Open Houses	August 9, 2010
Close of Comment Period	August 20, 2010
Posting proposed Assessment Report for Comment	September 3, 2010
Close of the comment period	October 4, 2010
Submission of the proposed Assessment Report to MOE	October 26, 2010

Future phases will involve similar consultation on amendments and updates to the Assessment Reports.

## **1.9. Schedule**

The due date of the Assessment Report was set with the posting of the approval of the Terms of Reference for the Source Protection Area. The Clean Water Act identifies that Assessment Reports are to be submitted within one year of the posting of the approval of the Terms of Reference. As described earlier, the due date to submit the UTRSPA assessment report was extended to October 29, 2010. This allowed for some aspects of the work to be completed as

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per the recent provincial guidance. However other aspects of the work to be included in the Assessment Report were not able to be completed as a result of the complexity and quantity of work required to conform to the provincial guidance. Amendments were made to the *Technical Rules: Assessment Report*, which allow for certain data gaps provided a work plan is included to fill those data gaps. These amendments were an acknowledgement that in many cases it would not be possible to complete the Assessment Report in the time allowed by the Clean Water Act. This assessment report provides a work plan to fill data gaps. The following schedule describes at high level the work required to complete the remaining work to be included in the Assessment Report and the rest of the Source Protection Planning process.

**Figure 1-1 Source Protection planning schedule overview**

## Source Protection Timeline

	2005	2006	2007	2008	2009	2010	2011	2012	
Watershed Studies	■								
Municipal Technical Studies		■							
Terms of Reference				■					
Assessment Report(s)				■					
Source Protection Plans					■				

### **1.10. Local Acceptance, Approvals and Next Steps**

The Assessment Report consultation plan illustrates a number of review and acceptance stages in the development of the Assessment Reports for the Source Protection Areas. This ultimately culminates in the approval of the Assessment Reports by the Director of Source Protection Planning for the Ministry of the Environment.

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Local acceptance of the Assessment Reports is also included in the consultation process. Prior to inclusion in the Assessment Report the components have been reviewed and accepted by the Source Protection Committee. This review included:

- involvement of municipal operators in the technical studies;
- peer review of the work;
- presentations to the Source Protection Committee by those undertaking the work;
- review of the products from the technical studies which are to be included in the Assessment Report;
- review of summary level information included in the Assessment Report in the form of section summaries and system summaries;
- consideration of municipal and other stakeholder comments on the draft proposed Assessment Report; and
- ultimately, the acceptance of the Assessment Report by the SPC.

Municipal and other local involvement in the development of the Assessment Report has been included in many ways. Municipalities have been involved in many of the technical studies throughout the region, especially those which are focused on the sources of drinking water for their municipal systems. Operating Authority staff participated in technical steering committees on these projects. Where appropriate, operating Authority staff kept their commissions or councils up to date on the completion of the technical work. Updates on the progress of Source Protection Planning have been distributed to municipalities throughout the work stages of the Assessment Report. Municipal comments were also requested on the Watershed Characterization Reports and the Conceptual Water Budget. Representatives on the Source Protection Committee have been instrumental in keeping their representation updated on the Source Protection Planning process including organizing and attending meetings with stakeholders.

During the first two phases of the consultation, municipal staff and councils were circulated invitations to the open houses and offers were made of presentations to municipal councils. Municipal Planners were invited to attend a municipal planners forum where the materials included in the Assessment Reports were discussed.

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The third phase of consultation is comprised of two steps: consulting on the draft proposed Assessment Report, and then on the proposed Assessment Report. In the third phase of consultation, the notice of publishing of the draft proposed Assessment Report must be sent to municipal clerks in which any part of the *SPA* is located, and First Nation band chiefs if any part of a reserve of a band is included in the *SPA*. There are no First Nation reserves in the *UTRSPA*. The draft proposed Assessment Report will be distributed on Compact Disk (CD) to the municipalities for their comments. Through ongoing involvement in the Assessment Report development process as discussed above, the municipal input has been incorporated into the Assessment Report. Municipalities and other stakeholders will have 35 days from the time the notice is posted to review and provide comments on the draft proposed Assessment Report. These comments are to be considered by the Source Protection Committee in finalizing the proposed Assessment Report.

The proposed Assessment Report will be posted on the Internet for a 30 day comment period. This posting asks for comments to be submitted to the Source Protection Authority. Further, a copy of the proposed Assessment Report must be submitted to the municipal clerks.

In submitting the Assessment Report to the Ministry of the Environment, the Source Protection Authority is to include any outstanding comments including any municipal or First Nations concerns over the Assessment Reports. The Director can approve the Assessment Report as submitted or require amendments to the Assessment Report.

## **1.10.1. Engaging First Nations**

The *TSR* source protection region includes eight First Nations, seven of which have reserves as shown on Map 1-1. Caldwell First Nation, established in the area near Rondeau Bay in the *LTVSPA* currently does not have a reserve. There are no First Nations in the *UTRSPA*. Table 1-5 lists the First Nation communities in the *TSR SPR*.

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**Table 1-5 First Nations of the TSR SPR**

Bkejwanong First Nation (Walpole Island)
Caldwell First Nation
Chippewas of Aamjiwnaang (Sarnia)
Chippewas of Kettle and Stony Point First Nation
Chippewas of the Thames First Nation
Delaware Nation Council
Munsee-Delaware Nation
Oneida Nation of the Thames

Note: There are no First Nations in the UTRSPA

While the First Nations have been encouraged to participate in the development of the Assessment Reports in the Thames-Sydenham and Region in a number of ways, to date that participation has been rather limited and very informal in nature. First Nations forums were set up in 2008-2009 across the region. First Nations participation on the Source Protection Committee has recently begun with the appointment of two of the three First Nations members. Previously various staff and councillors of the First Nations and the Southern First Nations Secretariat have participated in various ways including informal participation in tours and meetings of the Source Protection Committee, forums and workshops held at various stages in the Source Protection planning process. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. Recently, interest has been expressed in the participation in some of the technical studies, however that work has yet to be initiated.

## **1.10.2. Amendments to the Assessment Report**

As there are a number of data gaps identified in the Assessment Report posted for comment, amendments to the Assessment Report, prior to the submission of the Source Protection Plan in 2012, is anticipated. The Data Gaps section of this report identifies those gaps and discusses plans to fill those gaps.

The Assessment Report can be amended at any time that the Source Protection Committee becomes aware of the need to amend the report. Many of the data gaps identified in the Data Gaps and Next Steps section of the Assessment Report will require amendments to the Assessment Report. Further, changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source

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Protection Committee. As a result of this new information or understanding, the Source Protection Committee may amend the Assessment Report. The Source Protection Committee will also need to consider amendments to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan will be established by the Minister in the approval of the Source Protection Plan.

Any amendments to the Assessment Report would require consultation of those affected by the amendments.