

Terms of Reference for Lower Thames Valley Source Protection
Area

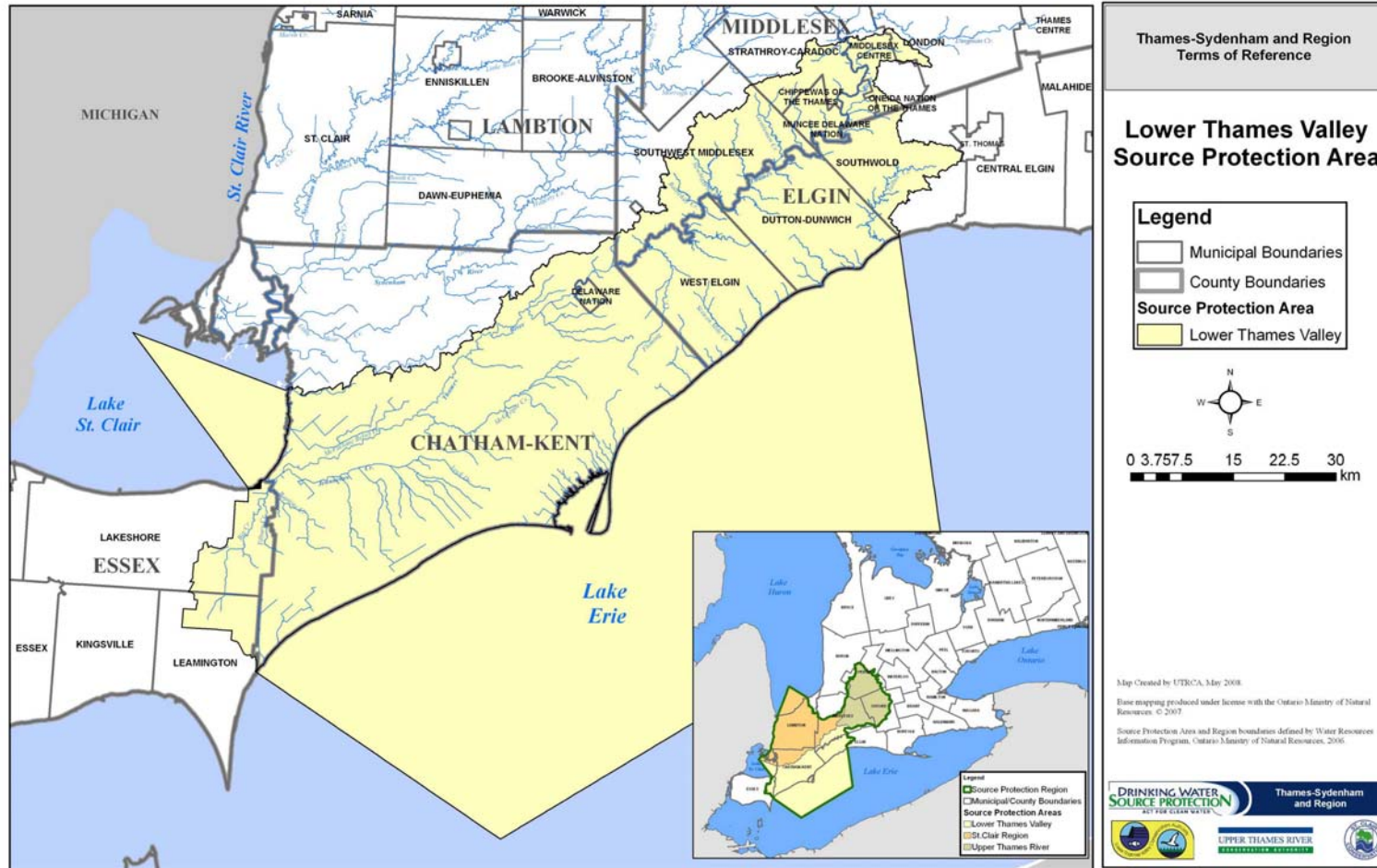
Thames-Sydenham and Region Source Protection Committee

2009-Feb-09

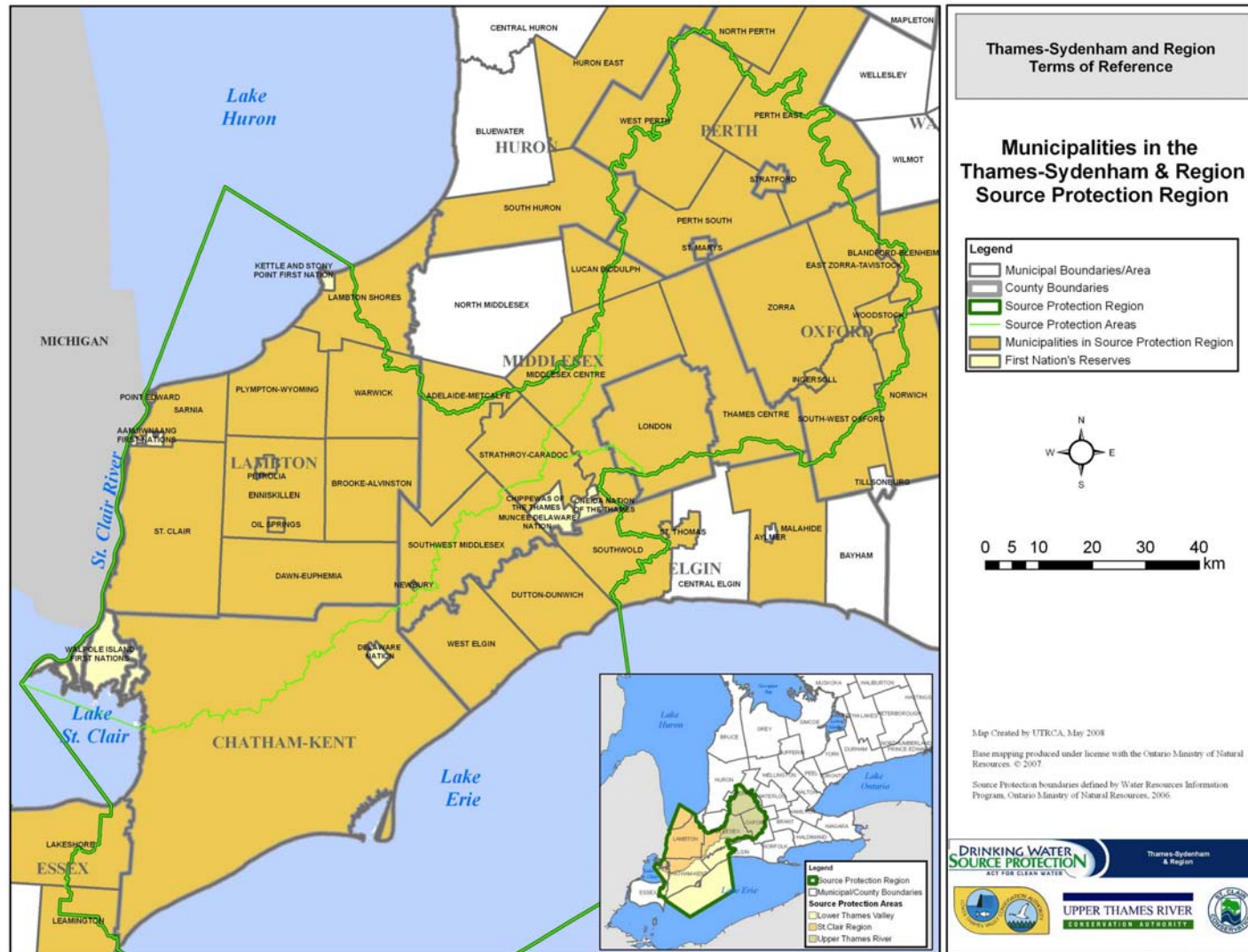
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Map of Source Protection Area



Map of Source Protection Region



List of Municipalities Located in the Lower Thames Valley Source Protection Area

Legal Name of Municipality
Chatham-Kent, Municipality of
Elgin, County of
Essex, County of
Middlesex, County of
Dutton/Dunwich, Municipality of
Southwold, Township of
St. Thomas, City of
West Elgin, Municipality of
Lakeshore, Town of
Leamington, Municipality of
London, City of
Middlesex Centre, Municipality of
Newbury, Village of
Southwest Middlesex, Municipality of
Strathroy-Caradoc, Municipality of

List of Municipal Residential Drinking Water System(s)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)
Existing	220003378	Chatham Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water
Existing	260015587	Highgate Well Supply	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface and Groundwater
Existing	220003369	Ridgetown Well Supply	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Groundwater
Existing	260024999	South Chatham-Kent Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water
Existing	220002949	West Elgin Water Treatment Plant	Municipality of West Elgin	Ontario Clean Water Agency	Surface Water
Existing	220003332	Wheatley Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water

List of Drinking Water System(s) Included by Municipal Council Resolution (Not Municipal Residential Drinking Water Systems)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)	Title of Council Resolution
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No systems included.

List of Drinking Water Systems Serving Reserve(s) (Not Municipal Residential Drinking Water Systems)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)	Regulation Reference
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No systems included.

List of Fully or Partially Exempted Municipal Residential Drinking Water System(s)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)	Title of Council Resolution
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No systems exempted.

List of Drinking Water System(s) Included by Minister of the Environment (Not Municipal Residential Drinking Water Systems)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)
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No systems included.

List of Matter(s) that Affect Other Source Protection Committees

Source Protection Committees Affected	Source Protection Area	Description of Matter
Essex Region SPC	Essex Region Source Protection Area	The Wheatley Water Treatment Plant (WTP) is situated in the Lower Thames Valley SPA of the Thames-Sydenham and Region Source Protection Region. This WTP is owned by The Municipality of Chatham-Kent and the Public Utilities Commission and serves parts of the Town of Lakeshore. However, it supplies water to parts of the Municipality of Leamington that lie in the Essex Region Source Protection Area and the IPZ extends into the Essex Region Source Protection Area. Work related to the Assessment Report and Source Protection Plan in the Wheatley IPZ will be undertaken through a collaborative approach involving both the TSR SPC and the ER SPC. It is understood that certain aspects of the work will be undertaken by ERCA who has the relevant data in the area.
Essex Region SPC	Essex Region Source Protection Area	The Town of Lakeshore and the Municipality of Leamington, although primarily within the Essex Region Source Protection Area, have areas extending into the jurisdiction of the Thames-Sydenham and Region Source Protection Region. A coordinated approach to technical studies and source protection planning policies must be considered.
Essex Region SPC	Essex Region Source Protection Area	The Stoney Point Water Treatment Plant is located in the Town of Lakeshore in the Essex Region SPA. It takes surface water from Lake St. Clair and serves the north-eastern portion of the Town of Lakeshore, including parts in the Lower Thames Valley SPA. Although the work will be undertaken by the Essex Region SPA, consultation with the Thames-Sydenham and Region SPR and the supplied municipalities within the Thames-Sydenham and Region SPR needs to be undertaken in developing the Assessment Report and Source Protection Plan as they relate to this supply.
Essex Region SPC	Essex Region Source Protection Area	The Union Water Treatment Plant is located in the Town of Kingsville, west of Leamington in the Essex Region SPA. It takes surface water from Lake Erie and serves the Town of Leamington and parts of the Town of Lakeshore including parts in the Lower Thames Valley SPA. Although the work will be undertaken by the Essex Region SPA, consultation with the Thames-Sydenham and Region SPR and the supplied municipalities within the Thames-Sydenham and Region SPR needs to be undertaken in developing the Assessment Report and Source Protection Plan as they relate to this supply.
Essex Region SPC	Essex Region Source Protection Area	The Minister may direct a Source Protection Authority to prepare and submit a report on any matter relating to the use of the Great Lakes as a source of drinking water or to assist another Source Protection Authority in preparing a report. In addition, the Minister may establish targets relating to the use of the Great Lakes as a source of drinking water for one or more source protection areas that contribute water to the Great Lakes. There will be a need to consult with the Essex Region SPA on Great Lakes issues.

Lake Erie SPC	Lake Erie Source Protection Region	The Minister may direct a Source Protection Authority to prepare and submit a report on any matter relating to the use of the Great Lakes as a source of drinking water or to assist another Source Protection Authority in preparing a report. In addition, the Minister may establish targets relating to the use of the Great Lakes as a source of drinking water for one or more source protection areas that contribute water to the Great Lakes. There will be a need to consult with the Lake Erie SPR on Great Lakes issues.
Lake Erie SPC	Lake Erie Source Protection Region	The Elgin Area Primary Water Supply System (EAPWSS) services communities in the Lower Thames Valley SPA of the Thames-Sydenham and Region SPR including the City of London, Municipality of Dutton/Dunwich and Township of Southwold. The Water Treatment Plant is located east of the village of Port Stanley in Central Elgin on Lake Erie, in the Lake Erie Source Protection Region. Although the work will be undertaken by the Lake Erie SP Region, consultation with the Thames-Sydenham and Region SPR and the supplied municipalities within the Thames-Sydenham and Region SPR needs to be undertaken in developing the Assessment Report and Source Protection Plan as they relate to this supply.
Ausable Bayfield-Maitland Valley SPC	Ausable Bayfield-Maitland Valley Source Protection Region	The Lake Huron Primary Water Supply System (LHPWSS) services the City of London and parts of the Municipalities of Middlesex Centre and Strathroy-Caradoc in the Lower Thames Valley SPA of the Thames-Sydenham and Region SPR. The Water Treatment Plant is located north of the community of Grand Bend on Lake Huron, in the Ausable Bayfield-Maitland Valley Source Protection Region. Although the work will be undertaken by the Ausable Bayfield-Maitland Valley (ABMV) SPR, consultation with the Thames-Sydenham and Region SPR and the supplied municipalities within the Thames-Sydenham and Region SPR needs to be undertaken in developing the Assessment Report and Source Protection Plan as they relate to this supply.
Essex Region SPC	Essex Region Source Protection Area	Water Budget work needs to consider groundwater flow into and out of each region. Consultation with neighbouring regions will be required to ensure that groundwater flow between regions is consistently represented in the water budget products of each region.
Lake Erie SPC	Lake Erie Source Protection Region	Water Budget work needs to consider groundwater flow into and out of each region. Consultation with neighbouring regions will be required to ensure that groundwater flow between regions is consistently represented in the water budget products of each region.
Lake Erie SPC	Lake Erie Source Protection Region	Edge matching of map products, of the Assessment Report and SP Plan, such as Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers need to be undertaken. Consultation on the methods employed and products produced will be necessary.
Essex Region SPC	Essex Region Source Protection Area	Edge matching of map products, of the Assessment Report and SP Plan, such as Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers need to be undertaken. Consultation on the methods employed and products produced will be

		necessary.
Lake Erie SPC	Lake Erie Source Protection Region	The City of London, City of St. Thomas, Township of Southwold (in Elgin County) and Municipality of Middlesex Centre (in Middlesex County) straddle the watershed divide between the Lower Thames Valley SPA of the Thames-Sydenham and Region SPR and the Lake Erie SPR. A coordinated approach to technical studies and source protection planning policies must be considered. Consultation on consistent policies within these shared municipalities needs to be considered.
Essex Region SPC	Essex Region Source Protection Area	Work related to the IPZ3 pertaining to Lake St. Clair intakes of Stoney Point, Belle river and possibly the Windsor Water treatment plant (in ER SPA) be undertaken through a collaborative approach between the TSR SPC and the ER SPC. It is understood that some aspects of the work within the TSR will be undertaken by the LTVCA, SCRCA and UTRCA who have the relevant data in the area. This work is allowed for in the task 'Delineating and applying vulnerability scores to WHPAs or IPZs' in the UTR SPA ToR, led by UTRCA (Task No. 55 in the Guide).

The Work Plan to Complete the Assessment Report

By Source Protection Area/ Drinking Water System Name	Task	Assigned Lead(s)	Estimated Completion Date	Estimated Cost
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to HVAs	Upper Thames River Conservation Authority	2008-Dec-31	
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in HVAs	Upper Thames River Conservation Authority	2009-Jun-01	
Lower Thames Valley Source Protection Area	Assessing risks in HVAs	Upper Thames River Conservation Authority	2009-Aug-01	
Lower Thames Valley Source Protection Area	Applying vulnerability scores to SGRAs	Upper Thames River Conservation Authority	2008-Dec-01	
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in SGRAs	Upper Thames River Conservation Authority	2009-Jun-01	
Lower Thames Valley Source Protection Area	Assessing risk in SGRAs	Upper Thames River Conservation Authority	2009-Aug-01	
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Essex Region Conservation Authority	2009-May-31	\$482,500
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Upper Thames River Conservation Authority	2009-Jun-01	
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Municipality of Chatham-Kent	2009-Mar-31	\$45,873
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Essex Region Conservation Authority	2009-Jun-30	\$194,000
Lower Thames	Identifying issues, inventorying threats and assessing	Municipality of Chatham-Kent	2009-Mar-31	\$74,067

Valley Source Protection Area	hazards in WHPAs or IPZs			
Lower Thames Valley Source Protection Area	Assess risk in WHPAs or IPZs	Essex Region Conservation Authority	2009-Oct-31	\$90,500
Lower Thames Valley Source Protection Area	Assess risk in WHPAs or IPZs	Municipality of Chatham-Kent	2009-Jun-30	\$89,967
Lower Thames Valley Source Protection Area	GUDI IPZ Study - Preliminary Screening, Vulnerability Assessment, Threats Inventory and Risk Assessment	Upper Thames River Conservation Authority	2009-Mar-31	
Municipal Residential Drinking Water Systems				
West Elgin Water Treatment Plant	Delineating and applying vulnerability scores to WHPAs or IPZs	Municipality of West Elgin	2009-Oct-31	\$155,500
West Elgin Water Treatment Plant	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Municipality of West Elgin	2009-Jun-30	\$66,280
West Elgin Water Treatment Plant	Assess risk in WHPAs or IPZs	Municipality of West Elgin	2009-Jun-30	\$38,900
Drinking Water Systems By Municipal Resolution				
Drinking Water Systems By Band Resolution				
Fully or Partially Exempt Drinking Water Systems				
Drinking Water Systems Included By Minister				

The Work Plan to Complete the Source Protection Plan

By Source Protection Area/ Drinking Water System Name	Task	Assigned Lead(s)	Estimated Completion Date	Estimated Cost
Lower Thames Valley Source Protection Area	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Source Protection Committee	2012-Aug-20	
Lower Thames Valley Source Protection Area	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Source Protection Committee	2012-Aug-20	
Lower Thames Valley Source Protection Area	Policy development for Great Lakes elements (where required/permissible in Act & Regs)	Source Protection Committee	2012-Aug-20	\$65,000
Lower Thames Valley Source Protection Area	Establishing timelines for policy implementation	Source Protection Committee	2012-Aug-20	
Lower Thames Valley Source Protection Area	Consultation on the overall proposed source protection plan	Source Protection Committee	2012-Jul-31	
Municipal Residential Drinking Water Systems				
Drinking Water Systems By Municipal Resolution				
Drinking Water Systems By Band Resolution				
Fully or Partially Exempt Drinking Water Systems				
Drinking Water Systems Included By Minister				

The Date the Source Protection Plan is to be Submitted to the Minister for Approval by the Lower Thames Valley Conservation Authority:

2012-Aug-20

Council Resolution(s) to Include Drinking Water System(s)

No systems included.

Council Resolution(s) to Exempt Municipal Residential Drinking Water System(s)

No systems exempted.

Detailed Information

Detailed Information on Municipal Residential Drinking Water System(s)

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260015587	Highgate Well Supply	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface and Groundwater	2
Number of Surface Water Intakes	Comments					
0						

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220003369	Ridgetown Well Supply	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Groundwater	6
Number of Surface Water Intakes	Comments					
0						

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220002949	West Elgin Water Treatment Plant	Municipality of West Elgin	Ontario Clean Water Agency	Surface Water	0
Number of Surface Water Intakes	Comments					
2	The West Elgin water treatment plant has two intakes, one of which is a near-shore emergency intake for frazzle ice conditions.					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
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Existing	220003378	Chatham Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water	0
Number of Surface Water Intakes	Comments					
1	The Chatham WTP shares an intake with the South Chatham-Kent WTP.					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260024999	South Chatham-Kent Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water	0
Number of Surface Water Intakes	Comments					
1	The Chatham WTP shares an intake with the South Chatham-Kent WTP.					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220003332	Wheatley Water Treatment Plant	Municipality of Chatham-Kent	Chatham-Kent Public Utilities Commission	Surface Water	0
Number of Surface Water Intakes	Comments					
2	The Wheatley WTP has 2 intakes, one of which is an emergency intake used when frazzle ice conditions occur.					

**Detailed Information on Drinking Water System(s) Included by Municipal Council Resolution
(Not Municipal Residential Drinking Water Systems)**

No systems included.

**Detailed Information on Drinking Water System(s) Included by Bands Serving Reserve(s)
(Not Municipal Residential Drinking Water Systems)**

No systems included.

Detailed Information on Fully or Partially Exempted Municipal Residential Drinking Water System(s)

No systems exempted.

**Detailed Information on Drinking Water System(s) Included by the Minister of the Environment
(Not Municipal Residential Drinking Water Systems)**

No systems included.

Detailed Work Plan to Complete the Assessment Report

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to HVAs	Upper Thames River Conservation Authority	2008-May-01	2008-Dec-31
Comments		Defined Geographic Area		Estimated Cost
<p>Intrinsic Susceptibility Index scores have been completed through past groundwater studies across the region. The mapping products from these separate county based studies have been compiled into a single mapping product, however there are issues with conflicting scoring at areas of overlap. This was to be expected as each study relied on the interpretation of data from within their study area. Near the edges of the study area different interpolation and extrapolations results should be expected based on the use of different data points near the boundaries. The work proposed under this task includes the mapping of ISI, based on the same methodologies employed in the groundwater studies, but utilizing a single data set across the entire region. Based on this scoring HVA will be delineated and vulnerability will be scored for these areas.</p> <p>Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$29,000.</p>		Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in HVAs	Upper Thames River Conservation Authority	2008-Oct-01	2009-Jun-01
Comments		Defined Geographic Area		Estimated Cost
<p>Once delineated these areas will be assessed for the general nature of the types of threats contained in the areas. All threats which could result in a significant risk will be inventoried. Current guidance suggests a vulnerability score of 6 for these areas. As such it is not anticipated that significant risks will be identified in these areas. General types of land use in these areas will be characterized to the extent necessary to develop appropriate policies for these types of threats in HVAs.</p>		Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA		

<p>Issues in these areas will be identified through the analysis of monitoring wells and municipal wells in the general areas as well as through discussions with the local health units who may be able to rely on interpretation of private well information.</p> <p>Issues may be considered in determining whether certain types of threats need to be inventoried in the area, however no allowance has been made in this task for a detailed inventory of such threats.</p> <p>Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$40,000.</p>		
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By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Assessing risks in HVAs	Upper Thames River Conservation Authority	2009-Apr-01	2009-Aug-01
Comments		Defined Geographic Area		Estimated Cost
<p>Based on vulnerability scores and general threats characterization in the HVAs, possible risk scores will be assessed.</p> <p>Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$42,000.</p>		Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Applying vulnerability scores to SGRAs	Upper Thames River Conservation Authority	2008-Oct-01	2008-Dec-01
Comments		Defined Geographic Area		Estimated Cost
<p>SGRAs will be defined through the Water Budget work. The vulnerability of these areas will be assessed based on Director's Rules and guidance. ISI scores are available for WHPAs as well as the regional ISI scores developed through the HVA delineation project. These results will need to be compared and the most appropriate scoring applied to the SGRA. It will be important that the vulnerability score associated with these areas be consistent with those</p>		Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA		

parts of the WHPA which are part of the SGRA.		
Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$15,000.		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in SGRAs	Upper Thames River Conservation Authority	2008-Oct-01	2009-Jun-01
Comments		Defined Geographic Area		Estimated Cost
<p>Once delineated these areas will be assessed for the general nature of the types of threats contained in the areas. All threats which could result in a significant risk will be inventoried. Current guidance suggests a vulnerability score of 6 for these areas. As such it is not anticipated that significant risks will be identified in these areas. General types of land use in these areas will be characterized to the extent necessary to develop appropriate policies for these types of threats in SGRAs.</p> <p>Issues in these areas will be identified through the analysis of monitoring wells and municipal wells in the general areas as well as through discussions with the local health units who may be able to rely on interpretation of private well information.</p> <p>Issues may be considered in determining whether certain types of threats need to be inventoried in the area, however no allowance has been made in this task for a detailed inventory of such threats.</p> <p>Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$50,000.</p>		Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Assessing risk in SGRAs	Upper Thames River Conservation Authority	2009-Apr-01	2009-Aug-01
Comments		Defined Geographic Area		Estimated Cost

Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$42,000.	Thames-Sydenham and Region Source Protection Region including the LTVSPA, SCRSPA and the UTRSPA	
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By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Essex Region Conservation Authority	2005-Apr-01	2009-May-31
Comments		Defined Geographic Area		Estimated Cost
<p>The Essex Region Conservation Authority (ERCA) led technical study includes two Lower Thames Valley (LTV) SPA surface water intakes at Wheatley and Erie Beach, and one St. Clair Region SPA intake at Wallaceburg. Stantec Consultants are conducting the study. In the LTVSPA, the intakes feed raw water to the (1) Wheatley water treatment plant (WTP), and (2) Chatham and South Chatham-Kent WTPs (shared Erie Beach intake).</p> <p>Proposed costs are estimates of the updates and further work required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.</p>		Intakes at Wheatley, Erie Beach (which supplies 2 systems - South Chatham-Kent and the Chatham Water Treatment Plants) in the LTVSPA and Wallaceburg in the SCRSPA as well as intakes in the Essex Region SPA		\$482,500

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Upper Thames River Conservation Authority	2008-Oct-01	2009-Jun-01
Comments		Defined Geographic Area		Estimated Cost
<p>It is anticipated that the Director's Rules will require the delineation, vulnerability assessment and Risk Assessment of IPZ3 (or other methodologies for assessing risks resulting from issues or concerns outside of IPZ1 &2) for intakes on Lake St Clair and the Wallaceburg intake.</p> <p>Delineation and applying vulnerability scores for IPZ3 related to the Lake St Clair and Wallaceburg intakes will be completed according to the requirements of the Director's Rules. The MISED models developed through the past work will be used to identify areas, outside of the original model scope (developed to delineate IPZ2), which can contribute risks to the intakes. The models will be</p>		Wallaceburg intake in the St. Clair Region SPA as well as intakes on Lake St. Clair within Essex Region SPA		

<p>combined and improved to include discharges from the major rivers which may contribute risks to the intakes. Watercourses available in Conservation Authority and provincial data sets will be utilized to delineate the IPZ3 within the contributing watersheds. The modelling will be used as an indicator of areas more vulnerable (more likely to contribute risks) than others within the delineated IPZ3 and vulnerability scores will be assigned accordingly.</p> <p>Costs for this task have been included in the Upper Thames Region SPA Terms of Reference (since it is the lead on this study) and also include costs for the St. Clair Region SPA. Total costs are estimated to be \$95,000.</p>		
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By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Delineating and applying vulnerability scores to WHPAs or IPZs	Municipality of Chatham-Kent	2006-Apr-01	2009-Mar-31
Comments		Defined Geographic Area		Estimated Cost
<p>Chatham-Kent Groundwater Technical Study for the Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA. Dillon Consulting is conducting the study.</p> <p>Costs shown are from two sources: (1) MOE \$26,966.67 and (2) Chatham-Kent Public Utilities Commission \$8,906.00. The PUC funding is additional and meant to offset the MOE funding shortfall for numerical modeling of the Ridgetown well supply system.</p> <p>Proposed costs are estimates of the updates and further work required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.</p>		Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA		\$45,873

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Essex Region Conservation Authority	2005-Apr-01	2009-Jun-30
Comments		Defined Geographic Area		Estimated Cost
The Essex Region Conservation Authority (ERCA) led technical study includes two Lower Thames Valley (LTV) SPA surface water intakes at Wheatley and		Intakes at Wheatley, Erie Beach (which supplies 2 systems - South Chatham-Kent and the Chatham Water Treatment Plants)		\$194,000

<p>Erie Beach, and one St. Clair Region SPA intake at Wallaceburg. Stantec Consultants are conducting the study. In the LTVSPA, the intakes feed raw water to the (1) Wheatley water treatment plant (WTP), and (2) Chatham and South Chatham-Kent WTPs (shared Erie Beach intake).</p> <p>Proposed costs are estimates of the updates and further work required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.</p>	<p>in the LTVSPA and Wallaceburg in the SCRSPA as well as intakes in the Essex Region SPA</p>	
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By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Municipality of Chatham-Kent	2006-Apr-01	2009-Mar-31
Comments		Defined Geographic Area		Estimated Cost
<p>Chatham-Kent Groundwater Technical Study for the Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA. Dillon Consulting is conducting the study.</p> <p>Proposed costs are estimates of the updates and further work required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.</p>		Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA		\$74,067

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Assess risk in WHPAs or IPZs	Essex Region Conservation Authority	2006-Apr-01	2009-Oct-31
Comments		Defined Geographic Area		Estimated Cost
<p>The Essex Region Conservation Authority (ERCA) led technical study includes two Lower Thames Valley (LTV) SPA surface water intakes at Wheatley and Erie Beach, and one St. Clair Region SPA intake at Wallaceburg. Stantec Consultants are conducting the study. In the LTVSPA, the intakes feed raw water to the (1) Wheatley water treatment plant (WTP), and (2) Chatham and South Chatham-Kent WTPs (shared Erie Beach intake).</p>		Intakes at Wheatley, Erie Beach (which supplies 2 systems - South Chatham-Kent and the Chatham Water Treatment Plants) in the LTVSPA and Wallaceburg in the SCRSPA as well as intakes in the Essex Region SPA		\$90,500

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Assess risk in WHPAs or IPZs	Municipality of Chatham-Kent	2006-Apr-01	2009-Jun-30
Comments		Defined Geographic Area		Estimated Cost
<p>Chatham-Kent Groundwater Technical Study for the Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA. Dillon Consulting is conducting the study.</p> <p>The 2008-2009 cost estimates are for individual contact with landowners where risks could be significant, and updating risk assessment based on survey results.</p>		Ridgetown and Highgate well supply systems in the Lower Thames Valley SPA		\$89,967

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	GUDI IPZ Study - Preliminary Screening, Vulnerability Assessment, Threats Inventory and Risk Assessment	Upper Thames River Conservation Authority	2008-Apr-01	2009-Mar-31
Comments		Defined Geographic Area		Estimated Cost
<p>MOE proposed rules related to Groundwater Under the Direct Influence of surface water (GUDI)- Intake Protection Zone (IPZ) studies was posted in June 2008. It is anticipated that the rules will require that IPZ type vulnerable zones will be required for GUDI wells. The preliminary screening of the systems will compile available information, delineate approximate IPZ3 based on that available information and assess the types and magnitude of potential treats in that area. Based on the preliminary screening the zones will be delineated, vulnerability assessed, threats inventoried and risks assessed.</p> <p>MOE proposed rules related to Groundwater Under the Direct Influence of surface water (GUDI)- Intake Protection Zone (IPZ) studies was posted in June 2008. It is anticipated that the rules will require that IPZ type vulnerable zones will be required for GUDI wells. Costs related to this task is included within 2 similar tasks in the UTRSPA (\$25000 for preliminary screening and \$110,000 for the vulnerability, threats and risk assessment).</p>		GUDI wells of these drinking water systems: City of London back up (Fanshawe wells), Dorchester, Kilworth Heights and Highgate systems		

By Drinking Water System Name	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
West Elgin Water Treatment Plant	Delineating and applying vulnerability scores to WHPAs or IPZs	Municipality of West Elgin	2005-Apr-01	2009-Oct-31
Comments		Defined Geographic Area		Estimated Cost
Municipality of West Elgin Surface Water Technical study is led by the Municipality of West Elgin and conducted by Stantec Consulting. The intake studied is the Lake Erie raw water intake to the West Elgin Water Treatment Plant at West Lorne. Draft report was completed in March 2008. Proposed costs are estimates of the updates required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.		The intake studied is the Lake Erie raw water intake to the West Elgin Water Treatment Plant at West Lorne		\$155,500

By Drinking Water System Name	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
West Elgin Water Treatment Plant	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Municipality of West Elgin	2006-Apr-01	2009-Jun-30
Comments		Defined Geographic Area		Estimated Cost
Municipality of West Elgin Surface Water Technical study is lead by the Municipality of West Elgin and conducted by Stantec Consulting. The intake studied is the Lake Erie raw water intake to the West Elgin Water Treatment Plant at West Lorne. Work is yet to be completed. Proposed costs are estimates of the updates required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.		West Elgin Water Treatment Plant at West Lorne in the Lower Thames Valley SPA		\$66,280

By Drinking Water System Name	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
West Elgin Water Treatment Plant	Assess risk in WHPAs or IPZs	Municipality of West Elgin	2006-Apr-01	2009-Jun-30
Comments		Defined Geographic Area		Estimated Cost
Municipality of West Elgin Surface Water Technical study is lead by the Municipality of West Elgin and conducted by Stantec Consulting. The intake		West Elgin Water Treatment Plant at West Lorne in the Lower Thames Valley SPA		\$38,900

<p>studied is the Lake Erie raw water intake to the West Elgin Water Treatment Plant at West Lorne. Work is yet to be completed.</p> <p>Proposed costs are estimates of the updates and further work required to ensure the technical studies meet the Director's Technical Rules posted on the Ministry of Environment Environmental Bill of Rights Registry in June 2008. The scope of this task may change as a result of changes to the rules from those posted.</p>		
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Detailed Work Plan to Complete the Source Protection Plan

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Source Protection Committee	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
<p>In considering policies to include in the Source Protection Plan the SPC will consider the Clean Water Act and its Regulations, Rules and other provincial guidance. The SPC will also consider the types of policies being implemented in neighbouring regions. Criteria will be developed by the SPC to compare risk management measures and policies to be included in the Source Protection Plan. These criteria will be consistent with the SPC's mission statement and guiding principles including the principal of being "fair and reasonable". In developing these policies, the SPC will have regard for the financial impact on those affected including normal business or standard practices and expectations for existing situations. The policies may also consider the cost of the change, any ongoing or repetitive costs, long term impacts and any impacts on productive capacity or competitive advantage. Both existing and new programs, opportunities, financial instruments, and education and outreach policies and programs will be considered. Where there are water quantity threats to drinking water sources included in the ToR the SPC will need to consider policies to address those threats. More general policies related to water conservation may also be considered by the SPC in developing the policies to be included in the Source Protection Plan.</p> <p>The staff and SPC costs associated with this task are included with the task related to coordinating and supporting projects associated with the Source Protection Plan. This task will require extensive consultation with stakeholder groups which has been included in the task related to undertaking communications initiatives for the Source Protection Plan.</p>		All three Source Protection Areas (SPAs) of the Thames-Sydenham and Region Source Protection Region: Upper Thames River SPA, Lower Thames Valley SPA and St. Clair Region SPA		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Policy development for monitoring (where required, advisable and/or permissible in Act &	Source Protection Committee	2009-Apr-01	2012-Aug-20

	Regs)		
Comments		Defined Geographic Area	
<p>The SPC will consider existing monitoring programs of the CAs, municipalities, province and stakeholder groups and develop specific monitoring programs for the Source Protection Plan. These monitoring programs should include programs which will monitor the effectiveness of the plan on issues identified in the Assessment Report as well as emerging issues related to drinking water sources, and Great Lakes Targets. Monitoring programs will be considered to evaluate compliance with the Source Protection Plan including Risk Management Plans and Municipal Planning alignment with the policies included in the Source Protection Plan. Municipal monitoring and reporting programs will be considered to ensure that the municipalities within the region with regard to their implementation of the Plan. The monitoring programs included in the Source Protection Plan will facilitate the requirement in the Clean Water and Regulations to report to the Province on the source protection planning.</p>		<p>All three Source Protection Areas (SPAs) of the Thames-Sydenham and Region Source Protection Region: Upper Thames River SPA, Lower Thames Valley SPA and St. Clair Region SPA</p>	
		Estimated Cost	

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Policy development for Great Lakes elements (where required/permissible in Act & Regs)	Source Protection Committee	2009-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
<p>The Clean Water Act includes the ability of the Minister of the Environment to set Great Lakes targets for watershed. The Source Protection Plan must assist in achieving those Great Lakes targets. Further guidance from the MOE is expected. It is also required that the Source Protection Plan consider Great Lakes Agreements. It is assumed that consultation with other regions draining into each of the Great Lakes that the watershed of the TSR drain into will be required. As well, consultation will be required with Provincial and Federal organizations with responsibilities under the Great Lakes Agreements.</p> <p>Although the scope of the work associated with this task is largely unknown, an allowance for work associated with this task, for both staff and SPC, are included with the task related to coordinating and supporting projects associated with the Source Protection Plan. The estimated cost included in this tasks and a similar task in the SCRSPA include the additional cost of consultation.</p>		<p>All three Source Protection Areas (SPAs) of the Thames-Sydenham and Region Source Protection Region: Upper Thames River SPA, Lower Thames Valley SPA and St. Clair Region SPA</p>		<p>\$65,000</p>

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Establishing timelines for policy implementation	Source Protection Committee	2009-Apr-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
<p>The staff and SPC costs associated with this task are included with the task related to coordinating and supporting projects associated with the Source Protection Plan.</p> <p>In developing policies for the Source Protection Plan timelines for the implementation of those policies must be established. In developing these timelines the SPC will consult with the municipalities and other stakeholders. The SPC will apply its guiding principles, including the principal of being fair and reasonable, to establishing those timelines. In establishing the timelines the SPC also needs to meet the requirements of the Act and its Rules and Regulations.</p>		<p>All three Source Protection Areas (SPAs) of the Thames-Sydenham and Region Source Protection Region: Upper Thames River SPA, Lower Thames Valley SPA and St. Clair Region SPA</p>		

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Lower Thames Valley Source Protection Area	Consultation on the overall proposed source protection plan	Source Protection Committee	2012-Jan-01	2012-Jul-31
Comments		Defined Geographic Area		Estimated Cost
<p>It is anticipated that the Source Protection Plan Rules and Regulations will have specific requirements to consult on the proposed Source Protection Plan. It is expected that these requirements will be similar to the requirements for the consultation on the proposed Terms of Reference and the proposed requirements for consultation on the Assessment Report (included in the proposed Regulation and Rules on the Assessment Report which have been posted for comments). As the requirements for this consultation are yet unknown the planned activities included in this task will need to be re-evaluated once the Rules and Regulations are in place.</p> <p>It is anticipated that the SPC will be required to post a draft and publish a notice. Advertising costs related to this are included in this task. Although it is expected that a single meeting will be required we have included in this task holding a series of open houses and forums in addition an anticipated</p>		<p>All three Source Protection Areas (SPAs) of the Thames-Sydenham and Region Source Protection Region: Upper Thames River SPA, Lower Thames Valley SPA and St. Clair Region SPA</p>		

<p>requirement to hold a public meeting. Initiatives included on the task related to undertaking communications initiatives related to the Source Protection Plan complement the proposed consultation included in this task.</p> <p>Staff time related to this task has been allowed for in the task related to coordinating and supporting projects for the Source Protection Plan.</p>		
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Summary of Financial Statistics

	Tasks Done by Source Protection Area or Drinking Water System	Estimated Costs for Tasks Under the Assessment Report	Estimated Costs for Tasks Under the Source Protection Plan	Subtotal
Municipal Residential Drinking Water Systems				
	Chatham Water Treatment Plant			
	Highgate Well Supply			
	Ridgetown Well Supply			
	South Chatham-Kent Water Treatment Plant			
	West Elgin Water Treatment Plant	\$260,680		\$260,680
	Wheatley Water Treatment Plant			
Drinking Water Systems By Municipal Resolution				
Drinking Water Systems By Band Resolutions				
Drinking Water Systems Included By Minister				
Total Estimated Costs		\$1,237,586	\$65,000	\$1,302,586

Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Policy development for Great Lakes elements (where required/permissible in Act & Regs)	\$0	\$0	\$0	\$0	\$25,000	\$10,000	\$10,000	\$10,000	\$10,000
	Establishing timelines for policy implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Consultation on the overall proposed source protection plan	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal Residential Drinking Water Systems										
	Delineating and applying vulnerability scores to WHPAs or IPZs	\$0	\$117,000	\$0	\$0	\$38,500	\$0	\$0	\$0	\$0
	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	\$0	\$0	\$46,280	\$0	\$20,000	\$0	\$0	\$0	\$0
	Assess risk in WHPAs or IPZs	\$0	\$0	\$17,400	\$0	\$21,500	\$0	\$0	\$0	\$0
Drinking Water Systems By Municipal Resolution										
Drinking Water Systems by Band Resolution										
Drinking Water Systems Included by Minister										
Fiscal Year Total		\$0	\$300,000	\$553,586	\$0	\$409,000	\$10,000	\$10,000	\$10,000	\$10,000

Process Checklist

Regulatory Process	Completion Date	Done By
Give a copy of the comments on proposed terms of reference to the source protection committee.	2008-Oct-03	SPAuthority
Give copy of draft proposed ToR to groups created pursuant to Great Lakes Water Quality Agreement & involved in developing/implementing RAPs & LaMPs.	2008-Aug-15	SPCommittee
Make provisions to consider Great Lakes Agreements.	2008-Aug-15	SPCommittee
Make the draft proposed terms of reference available at other locations.	2008-Aug-18	SPCommittee
Make the proposed terms of reference available at other locations.	2008-Oct-17	SPCommittee
Municipal council resolutions have been passed agreeing upon work.	2008-Sep-23	SPCommittee
Notice for consultation on draft proposed ToR includes information on public meeting scheduled at least 21 days after newspaper notice is published.	2008-Aug-15	SPCommittee
Notice for consultation on draft proposed ToR includes requests for comments submitted within 35 days of notice published in the newspaper.	2008-Aug-15	SPCommittee
Notify band Chiefs on the commencement of the terms of reference.	2008-Feb-05	SPCommittee
Notify municipal clerks on the commencement of the terms of reference.	2008-Jan-31	SPCommittee
Post draft proposed terms of reference on Internet.	2008-Aug-15	SPCommittee
Post proposed terms of reference on the Internet for 30 days.	2008-Oct-17	SPCommittee
Provide a copy of draft proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Aug-15	SPCommittee
Provide a copy of draft to the chiefs of bands whose reserves are located in the source protection area.	2008-Aug-15	SPCommittee
Provide a copy of proposed terms of reference to the chiefs of bands whose reserves are located in the source protection area.	2008-Oct-17	SPCommittee
Provide a copy of proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Oct-17	SPCommittee
Provide a copy of proposed terms of reference to the source protection authority.	2008-Oct-15	SPCommittee
Provide any unresolved comments from municipalities and bands to the Minister as part of the approval package for the proposed terms of reference.	2008-Dec-17	SPAuthority
Provide any unresolved comments from municipalities and bands to the source protection authority on the draft proposed terms of reference.	2008-Oct-17	SPCommittee
Provide copy of draft proposed ToR to chairs of SPCs who have been listed in table that describes matters that affect other source protection areas.	2008-Aug-15	SPCommittee
Publish newspaper notice to publicly view draft proposed ToR on Internet and at other locations (as determined by the source protection committee).	2008-Aug-15	SPCommittee
Receive comments from the 30 day Internet posting from the public, municipalities, bands, and other stakeholders.	2008-Nov-17	SPAuthority

Appendix: Full Task Descriptions

Subject Area	Task Name	Full Task Description
Assessment Report Preparation	Coordinating and supporting projects for the assessment report	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the assessment report components and direct support to the source protection committee.
Assessment Report Preparation	Undertaking communications initiatives for the assessment report	Local area engagement, outreach and creation of communications products that support the assessment report process.
Assessment Report Preparation	Information management for the assessment report preparation	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.
Assessment Report Preparation	Undertaking a watershed characterization	Identifying and describing watersheds in the source protection area. May include water quality analysis and peer review for water quality analysis. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Conducting a conceptual water budget	Describing the overall flow system dynamics for each watershed in the source protection area taking into consideration surface water and groundwater features, land cover (e.g. proportion of urban vs. rural uses), human-made structures (e.g. dams, channel diversions, water crossings), and water takings. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Conducting a tier 1 water budget analysis and stress assessment	Conducting a tier 1 water budget analysis, stress assessment, and delineation of significant groundwater recharge areas. May also include the identification of water quantity concerns and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Conducting a tier 2 water budget analysis and stress assessment	If determined necessary from a tier 1 water budget analysis and stress assessment, conducting a tier 2 water budget analysis and stress assessment, and refining the delineation of significant groundwater recharge areas. May also include the identification of water quantity concerns and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Conducting a tier 3 water budget analysis and water quantity risk assessment	If determined necessary from a tier 2 water budget analysis and stress assessment, conducting a tier 3 water budget analysis and water quantity risk assessment. May include identifying significant, moderate and low water quantity threats. May also include consultation with property owners/residents/stakeholders impacted by a significant drinking water threat scoring and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Delineating and applying vulnerability scores to HVAs	Delineating the location and extent of highly vulnerable aquifers in the source protection area and applying vulnerability scores. An uncertainty analysis may be included in this task. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.

Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in HVAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the highly vulnerable aquifers. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assessing risks in HVAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in highly vulnerable aquifers. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Applying vulnerability scores to SGRAs	Applying vulnerability scores to significant groundwater recharge areas in the source protection area (delineated in the water budget process). Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in SGRAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the significant groundwater recharge areas. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assessing risk in SGRAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in significant groundwater recharge areas. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Delineating and applying vulnerability scores to WHPAs or IPZs	Delineating the location and extent of the vulnerable area around a drinking water system (wellhead protection areas for drinking water systems using groundwater or intake protection zones for drinking water systems withdrawing from surface water) in the source protection area and applying a vulnerability score. Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these two vulnerable areas may be required. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in WHPAs or IPZs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in wellhead protection areas and/or intake protection zones. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assess risk in WHPAs or IPZs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in wellhead protection areas or intake protection zones. Consultation may be required with stakeholders impacted by significant drinking water threats scoring. Consultation with adjacent source protection areas or regions may also be required for shared Great Lakes drinking water issues. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report		If required, add other tasks to complete the assessment report. Describe in detail.

Preparation		
Source Protection Plan Preparation	Coordinating and supporting projects for the source protection plan (SPP)	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the source protection plan components and direct support to the source protection committee.
Source Protection Plan Preparation	Undertaking communications initiatives for the source protection plan	Local area engagement, outreach and creation of communications products that support the source protection plan process.
Source Protection Plan Preparation	Information management for source protection plan preparation	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.
Source Protection Plan Preparation	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Policy development to address drinking water threats (where required and/or permissible in the Act and source protection plan regulation). Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.
Source Protection Plan Preparation	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Policy development for monitoring activities (where required, advisable and/or permissible in the Act and source protection plan regulation), including determining who is responsible for implementing these policies. Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.
Source Protection Plan Preparation	Policy development for Great Lakes elements (where required/permissible in Act & Regs)	Policy development for Great Lakes associated elements (where directed by the Minister and required or permissible in the Act and source protection plan regulation), including monitoring policies to assist in implementing and determining the effectiveness of achieving Great Lake target(s) policies, determining who is responsible for implementing those policies, and determining the need to identify any of these policies as "designated Great Lakes policies". Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.
Source Protection Plan Preparation	Establishing timelines for policy implementation	Establishing timelines for policy implementation after all policies for the SPP are developed, giving consideration to the policies developed, key players affected, capacity for implementation, the assessed risks, and natural, social, and economic considerations, including local community interests/needs. Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.
Source Protection Plan Preparation	Consultation on the overall proposed source protection plan	Consultation and submission process of the overall proposed source protection plan. Details on how to conduct the consultations on the overall proposed source protection plan will be provided in the Source Protection Plan regulation and guidance document when they are developed.
Source Protection Plan Preparation		If required, add other tasks to complete the source protection plan. Describe in detail.