

Grand River Source Protection Area

APPROVED TERMS OF REFERENCE v1.2

Work Plan for Development of the Assessment Report and Source Protection Plan

*Prepared by:
Lake Erie Region Source Protection Committee*

*Under the Clean Water Act, 2006
(Ontario Regulation 287/07)*

July 13, 2009

EXECUTIVE SUMMARY

Why should you read this document?

These Terms of Reference are a requirement of the *Clean Water Act, 2006* (CWA) and *Ontario Regulation 287/07*, both of which came into effect on July 3, 2007. This is your opportunity to provide advice and comment on the work being planned to complete the Assessment Report and Source Protection Plan.

The Assessment Report will identify the location and nature of potential risks to sources of municipal drinking water, and non-municipal drinking water where other such systems are added. These risks include things that are impacting, or could adversely impact the water quality or quantity of groundwater or surface water sources.

The Source Protection Plan will identify the actions required to reduce, manage or eliminate current risks to municipal drinking water sources as well as avoid future risks. The Plan will also set out requirements for regular monitoring and reporting on the progress on implementation of the Plan. When the Plan is approved, the Minister of the Environment will set the date by which the Plan must be reviewed and updated as necessary.

These Terms of Reference describe the tasks to be undertaken to prepare the Source Protection Plan but do not include details for these tasks. When the Ministry of the Environment provides the regulation and further guidance on the Source Protection Plan requirements, the Terms of Reference will be amended to include these details.

The Terms of Reference includes:

- A description of the Source Protection Planning process;
- Maps of the Source Protection Area and Region;
- Description of the Source Protection Area;
- List of Members of the Source Protection Committee;
- List of municipalities wholly or partially within the Source Protection Area;
- List of existing and planned municipal drinking water systems in the Source Protection Area;
- A list of matters that affect other source protection regions; and,
- High level cost estimates, schedules and assignment of responsibility for tasks.

The public comment period on the Terms of Reference began on September 5, 2008. Written and verbal comments were made up to October 10, 2008. In addition, the Source Protection Committee held public meetings in late-September and early October 2008 to provide more information and answer questions and receive comment. Details of the public consultation process for the Terms of Reference are outlined in Section 3.

What happens after you make comments?

The Source Protection Committee reviewed and reconsidered the draft Terms of Reference after consideration of all comments received on or before October 10, 2008.

The Source Protection Committee will send the final Terms of Reference, along with a summary of comments and issues raised, to the Grand River Source Protection Authority for their review within the required timelines. Another opportunity for the public to make written comments will be available at that time (30 days).

All concerns that have been raised and the comments received by the Source Protection Authority will be sent, along with the Terms of Reference as prepared by the Source Protection Committee, to the Minister of the Environment.

The Minister of the Environment may approve the Terms of Reference or direct the Source Protection Authority to amend the Terms of Reference.

Table of Contents

Executive Summary	i
1.0 Introduction	1
1.1 Objectives and Outcomes.....	1
1.2 Legislation.....	2
1.3 Financial Assistance	2
1.4 Source Protection Planning Process	2
1.5 Study Area	3
1.6 Partners in the Process.....	3
1.7 Scope of Work	4
1.7.1 Assessment Report	4
1.7.2 Source Protection Plan.....	6
2.0 Terms of Reference	7
2.1 Organization.....	7
2.2 Water Systems.....	7
2.3 Methodology	7
2.4 Task Leads	7
2.5 Timelines.....	7
2.6 Budget.....	8
2.7 Matters Affecting Other Areas and Regions	8
3.0 Public Comment	9

Appendix A: Terms of Reference Work Plan

A.1	Grand River Source Protection Area.....	A-1
A.2	Lake Erie Source Protection Region	A-3
A.3	List of Municipalities Located in the Grand River Source Protection Area	A-5
A.3.1	Municipal Leads for the Assessment Report	A-5
A.3.2	Municipal Leads for the Source Protection Plan.....	A-6
A.4	Lists of Drinking Water Systems.....	A-6
A.4.1	List of Existing Municipal Residential Drinking Water Systems.....	A-6
A.4.2	List of Planned Municipal Residential Drinking Water Systems	A-7
A.4.3	List of Drinking Water System(s) Included by Municipal Council Resolution	A-7
A.4.4	List of Drinking Water Systems Serving First Nations Reserves.....	A-8
A.4.5	List of Fully or Partially Exempted Municipal Residential Drinking Water System(s)	A-8
A.4.6	List of Drinking Water Systems Included by the Minister of the Environment.....	A-8
A.5	List of Matter(s) that Affect Other Source Protection Committees	A-8
A.6	Work Plans	A-11
A.6.1	Watershed-wide Work Plan to Complete the Assessment Report and Source Protection Plan	A-11
A.6.1.1	Watershed-wide Work Plan to Complete the Assessment Report	A-11
A.6.1.2	Watershed-wide Work Plan to Complete the Source Protection Plan.....	A-15
A.6.2	Municipal Work Plans to Complete the Assessment Report and Source Protection Plan	A-17
A.6.2.1	Township of Southgate	A-17
A.6.2.2	Township of Amaranth	A-20
A.6.2.3	Township of East Luther Grand Valley	A-23
A.6.2.4	Township of East Garafraxa	A-26
A.6.2.5	Township of Wellington North	A-29
A.6.2.6	Township of Centre Wellington	A-32
A.6.2.7	Township of Mapleton.....	A-35
A.6.2.8	Township of Guelph-Eramosa	A-38
A.6.2.9	City of Guelph	A-41
A.6.2.10	Regional Municipality of Waterloo.....	A-44
A.6.2.11	Township of Perth East.....	A-46
A.6.2.12	County of Oxford.....	A-49
A.6.2.13	City of Hamilton (Lynden)	A-52
A.6.2.14	County of Brant	A-54
A.6.2.15	City of Brantford	A-57
A.6.2.16	County of Haldimand	A-60
A.6.3	First Nations Work Plans to Complete the Assessment Report and Source Protection Plan	A-63
A.6.3.1	Six Nations of the Grand River (<i>Tentative pending Ontario regulation.</i>).....	A-63
Appendix B:	Full Task Descriptions	
Appendix C:	Summary of Estimated Costs for Municipal and Watershed-wide Tasks	
Appendix D:	Task Timeline	
Appendix E:	Process Checklist	
Appendix F:	Municipal Resolutions	
Appendix G:	First Nations Resolutions	

1.0 INTRODUCTION

These Draft Terms of Reference have been prepared in accordance with the *Clean Water Act, 2006 (the Act)* and *Terms of Reference Regulation (O.Reg. 287/07)*, with input from municipal staff regarding the status of relevant technical work. The Terms of Reference include a work plan that outlines who will be responsible for specific components of the Assessment Report and Source Protection Plan development, how the work will be conducted, when various tasks/projects will be finished, and the estimated costs. The costs and responsibility assignments for the Source Protection Plan policy development are tentative and will be determined in more detail when the Ministry of the Environment (MOE) provides the regulation and further guidance required to complete the Source Protection Plan.

Where a municipality has been identified as the lead for a task, a resolution of the municipal council is required, agreeing to undertake the task and complete it within the time and budget limits.

Municipalities may also decide to designate non-municipal drinking water systems under the Act. In some cases, municipalities may identify municipal systems that will be taken out of service in the near future. These systems will not need to be included in the Assessment Report or Source Protection Plan.

The Ministry of the Environment has proposed additional regulations under the Clean Water Act that will outline the requirements for the Assessment Report and the Source Protection Plan. These regulations may require amendments to be made to this Terms of Reference since it was developed prior to the enactment of the Assessment Report and Source Protection Plan regulations.

1.1 Objectives and Outcomes

The key objectives of this process are the completion of locally-developed, science-based Assessment Reports and Source Protection Plans, in accordance with the Act, that protect current and future sources of drinking water.

The Assessment Report will summarize the technical studies that identify the nature and location of potential current and future risks to the quality or quantity of municipal drinking water sources. The sources of drinking water include groundwater and surface water, including Lake Erie, the Grand River and Eramosa River.

The province is providing technical rules on the content of the Assessment Report technical studies, matters to be considered and the assessment of relative risks. Technical studies began in 2005 with funding from the province and have progressed substantially to date. Both municipalities and conservation authorities have received funding for specified work.

The Assessment Report must be submitted to MOE for approval within 14 months of approval of the Terms of Reference. Informal and formal public consultation opportunities will be available to review and comment on the assessment Report before it is approved.

The Source Protection Plan will contain policies to address drinking water threats that are identified in the Assessment Report. It will also contain policies for monitoring, policies to protect Great Lakes water sources, timelines for implementation and persons responsible for undertaking tasks. Public consultation will be carried out during the development of the Source Protection Plan.

The Source Protection Plan must be submitted to the Minister of the Environment by August 20, 2012 for approval. In addition, the MOE may appoint a hearing officer to deal with issues arising from the proposed Source Protection Plan. The MOE has advised that they will release a Source

Protection Plan discussion paper in the Fall of 2008. These Terms of Reference will need to be amended to confirm cost estimates, schedules and assignment of responsibilities for the remaining tasks to develop the Source Protection Plan in accordance with this guidance.

After approval of the Source Protection Plan, annual monitoring reports and reports on progress on implementation will be required. Municipalities will be primarily responsible for the implementation and enforcement of the Source Protection Plan using existing powers, including those under the *Planning Act* and *Municipal Act*, as well as new powers under the Clean Water Act, 2006.

1.2 Legislation

The Act was introduced by the Ontario Government in 2006. In July 2007, the Act, along with the first five associated regulations, came into effect. The intent of this legislation is to ensure communities are able to protect their municipal drinking water supplies, as well as non-municipal supplies where added by municipalities or the Minister, now and in the future from overuse and contamination, through locally developed science-based source protection plans. The Act substantially implements the drinking water source protection recommendations made by Justice Dennis O'Connor in Part II of the Walkerton Inquiry Report.

1.3 Financial Assistance

Section 97 of the Act establishes the Ontario Drinking Water Stewardship Program. The purpose of the program is to provide financial assistance to those whose activities and properties may be affected by the implementation of the Source Protection Plan. The program also provides for outreach and education programs to raise awareness of the importance and opportunities for individuals to take actions to protect sources of drinking water. Ontario Regulation 286/07 (Miscellaneous) was amended in July 2008 to further clarify the details of the Ontario Drinking Water Stewardship Program. Early Action Programs funded by the Ministry of the Environment have already been directing grants to landowners within close proximity to municipal wells or surface water intakes to undertake projects to reduce existing potential contamination sources, along with communications and outreach efforts to persons and businesses in these areas. The program currently has funding through 2011 to provide grants to undertake early actions close to municipal drinking water systems, in advance of approved source protection plans. The Lake Erie Region Source Protection Committee will continue to request that the province funds the program beyond 2011 in order to provide financial assistance to property owners affected by new policies and risk reduction strategies that may result from approved source protection plans.

1.4 Source Protection Planning Process

The Source Protection Committee will identify the potential risks to local water sources to reduce or eliminate these risks. The task of plan development will involve residents working with municipalities, conservation authorities, property owners, farmers, industry, health officials, community groups and others. The Act allows for other water systems to be considered, including clusters of private wells, communal systems, and other non-municipal supplies. Only municipalities or the Minister of the Environment have the power to add additional systems.

The overall objective of the Lake Erie Region Source Protection Committee, in partnership with local communities and the Ontario government, is to protect the quality and quantity of present and future sources of municipal drinking water in the Lake Erie Source Protection Region. We will work with others to gather technical and traditional (local and aboriginal) knowledge on which well-informed, consensus-based decisions can be made in an open and consultative manner. In developing the Source Protection Plan, the Lake Erie Region Source Protection Committee intends to propose policies that are environmentally protective, effective, economical, and fair to local communities. The committee will strive to develop policies that are practical and implementable, and that focus limited resources on areas that net the greatest benefit, while recognizing that the plan must address significant threats so that they cease to exist. Where

possible, the committee will strive to develop policies and programs that also provide a benefit to broader protection of water quality and quantity. The process to assess drinking water threats and issues will be based on the best available science, and where there is uncertainty we will strive to follow the precautionary approach.

1.5 Study Area

The province has organized the Source Protection Program using watershed boundaries, rather than municipal jurisdictions. This is appropriate for water management, since both groundwater and surface water flow across municipal boundaries.

These Terms of Reference are for the Grand River Source Protection Area. For the purposes of source protection, the Grand River Source Protection Area is partnered with the Catfish Creek Source Protection Area, Kettle Creek Source Protection Area and Long Point Region Source Protection Area to create the Lake Erie Source Protection Region. The Lake Erie Source Protection Region is one of 19 regions established across the province. A map showing the boundaries of the Grand River Source Protection Area is presented in **Appendix A.1**. A second map showing the geographic extent of this region is shown in **Appendix A.2**

Municipalities within the Grand River Source Protection Area are listed in **Appendix A.3**.

1.6 Partners in the Process

The source protection planning process is being directed by a group of 24 local stakeholders and a Chair, referred to in regulations as the Source Protection Committee. The committee members (**Table 1**) are municipal, First Nations, business, and public representatives that act as a Steering Committee and are responsible for the development of the Terms of Reference, technical Assessment Reports, and ultimately the Source Protection Plans for all four Source Protection Areas within the Lake Erie Source Protection Region.

Table 1: Members of the Lake Erie Region Source Protection Committee

Name	Seat Held	
Craig Ashbaugh	Chair	Appointed by the Minister of the Environment
Marguerite Ceschi-Smith	Public Interest	
Howard Cornwell	Municipal	Perth, Oxford
Paul General	First Nations	Six Nations of the Grand River
Mark Goldberg	Public Interest	
Roy Haggart	Municipal	Brant, Brantford, Hamilton
John Harrison	Public Interest	
Andrew Henry	Public Interest	Elgin Area Primary Water Board
Ken Hunsberger	Agriculture	
Ralph Krueger	Business and Industry	
Bryan LaForme	First Nations	Mississaugas of the New Credit
Janet Laird	Municipal	City of Guelph
Ian MacDonald	Business and Industry	
Chris Martin	First Nations	Six Nations of the Grand River
Dale Murray	Municipal	Grey, Dufferin, Halton, Wellington
Jim Oliver	Municipal	Haldimand, Norfolk
David Parker	Agriculture	
Lloyd Perrin	Municipal	Elgin, Middlesex, London
Geoff Rae	Public Interest	Nanticoke Grand Valley Water Supply
Thomas Schmidt	Municipal	Waterloo Region

Table 1: Members of the Lake Erie Region Source Protection Committee

Name	Seat Held	
Richard Seibel	Aggregate Industry	
Bill Ungar	Business and Industry	
Mark Wales	Agriculture	
Don Woolcott	Public Interest	
Wendy Wright-Cascaden	Public Interest	

Each task within the process must have an assigned lead. The assigned leads are either municipalities or the Conservation Authority on behalf of the Source Protection Authority. No matter which party takes the lead for undertaking a particular task, the Lake Erie Region Source Protection Committee has the decision-making authority regarding the acceptability of the work or findings to be included in the Assessment Report and Source Protection Plan to be submitted, through the Source Protection Authority, to the Minister of the Environment for final approval.

Where municipalities intend to take the lead on a task, a municipal council resolution will be required to assume the responsibility to undertake the task. Reassignment of leads to undertake the source protection plan policy development tasks, where necessary, will require amendment of the Terms of Reference.

Public involvement and consultation will be a key component of the work throughout the preparation of both the Assessment Report and Source Protection Plan. The local residents are key partners in the implementation of the Source Protection Plan and need to have a role in the development.

Funding for the Assessment Report and Source Protection Plan development tasks is being provided by the Province of Ontario. The province has provided funding since 2005 to municipalities and conservation authorities to undertake technical studies in advance of the legislation through March of 2008. Funds for new work will be provided by the province to the Grand River Conservation Authority on behalf of the lead source protection authority (Grand River Source Protection Authority). The Grand River Source Protection Authority has responsibility for fiscal management with parties undertaking tasks in the Lake Erie Region. Where a municipality is taking on the lead for tasks for future work, a Memorandum of Agreement between the Grand River Conservation Authority and the municipality will be required, setting out the legal and financial obligations, technical deliverables and schedules.

1.7 Scope of Work

Municipal drinking water supplies within this Source Protection Area include both surface water (river and Lake Erie) and groundwater (a series of municipal wells). The scope of work described below covers all sources of municipal drinking water within the study area.

1.7.1 Assessment Report

The Assessment Report will be assembled in the following modules:

- Watershed Characterization;
- Groundwater Vulnerability Analysis;
- Surface Water Vulnerability Analysis;
- Issues Evaluation, Threats Inventory, Water Quality Risk Assessment; and
- Water Budget and Water Quantity Risk Assessment.

The **Watershed Characterization** contains descriptions of natural features, population size and distribution, land use and human-made influences, water quality (surface and groundwater), and water use. A preliminary list of land use activities that are known to pose a threat to the quality or quantity of drinking water and a summary of the issues and concerns that exist in the watershed.

The **Groundwater Vulnerability** module will identify wellhead protection areas around municipal drinking water supply wells, highly vulnerable aquifers, significant groundwater recharge areas, and future municipal supply areas. The relative vulnerability within each of these areas will be characterized as high, medium or low. The categorization is intended to reflect the susceptibility of the aquifer(s) in the vulnerable areas to surface (or near surface) sources of contamination. Vulnerable areas will be delineated and given intrinsic vulnerability scores and the level of uncertainty associated with each score – as required for the Water Quality Risk Assessment process.

The **Surface Water Vulnerability** module will identify Intake Protection Zones IPZ-1 (one kilometre radius for Great Lake intakes, 200 metres for river intakes), IPZ-2 (minimum two hour time of travel), IPZ-3 (the area that contributes water to the intake under specified conditions) for Lake Erie and riverine water supplies; assign a vulnerability score for each of the zones referring to the comparative likelihood of a contaminant of concern reaching an intake; and, analyze potential human-made pathways that may allow contaminants of concern to enter the water directly, such as storm sewers, sanitary sewers, combined sewers, cooling water discharge sewers, and open drainage ditches. Contaminants of concern reaching an intake in significant quantities would likely be associated with storm events, spills or upset conditions such as extended power outages or pipes rupturing where they cross water courses.

The Intake Protection Zones will be delineated and assigned vulnerability scores, obtained by multiplying the source vulnerability factor with the zone vulnerability factor and the level of certainty associated with each score. The Intake Protection Zones will be considered as vulnerable areas in the Water Quality Risk Assessment, and the vulnerability scoring will be used to rank threats to drinking water in the surface water quality risk assessment.

Following the above assessments, there will be an evaluation of risks, which will facilitate development of the assessment report and ultimately the Source Protection Plan. The objective will be to identify and evaluate threats and issues as they relate to the quality of drinking water in each vulnerable area. The **Threats Inventory and Issues Evaluation** will include the areas around each drinking water intake, wellhead, highly vulnerable aquifer, groundwater recharge area, and future municipal supply. A hazard rating associated with the inventoried drinking water threats will rate the likelihood of a chemical or pathogenic contamination of a drinking water source, as well as the potential severity of its impact. An inventory of pathways that contaminants can travel to a drinking water intake will be mapped and each threat will be categorized as significant, moderate or low, based on the qualitative assessments in the vulnerable areas. Because of uncertainties in the scope of the work plan details and work, the costs for these tasks should be considered as preliminary estimates.

The **Water Quality Risk Assessment** will identify the risk of specific threats (existing or future activity, or existing condition that results from a past activity) entering drinking water supplies. Potential threats inventoried within other vulnerable areas, such as highly vulnerable aquifer areas and significant recharge areas will also be assessed for risks.

The **Water Budget and Water Quantity Risk Assessment** process will:

- Estimate the quantity of water flowing through a watershed;
- Describe the pertinent processes and pathways water follows; and
- Assess the reliability and availability of current and future water supply sources from a quantity perspective.

The work will be completed in up to four stages, beginning with a conceptual water budget, and proceeding to a more detailed Tier 1, 2, or 3 studies in specific areas that may experience stress. Subwatersheds identified as "potentially stressed" in the Tier 2 process, may require localized Tier 3 studies using complex numerical models.

The overall goals of this assessment are to identify watershed communities where the reliability of municipal water supplies is questionable, and to highlight key factors that may limit the reliability, such that appropriate risk management activities can be completed.

1.7.2 Source Protection Plan

The Source Protection Plan is a document that sets out the policies to protect sources of drinking water against threats identified in the Assessment Report. The Plan will set out how drinking water threats will be reduced, eliminated or monitored, who is responsible for taking action, timelines, and how progress will be measured.

Implementation of the Source Protection Plan, once it has been approved by the Minister of the Environment, will be led by municipalities in most cases. In some cases, conservation authorities, public health units, or other organizations may be involved in implementing Source Protection Plans. The implementers will be able to use a range of programs and tools, including instruments or mechanisms such as zoning by-laws, and amendments to the Official Plans, or voluntary initiatives, if appropriate. Actions will be mandatory for significant risks. Risk management plans may be required for some activities and land uses within designated municipal wellhead protection areas deemed to be significant threats, in order to reduce their risk to the municipal drinking water source.

2.0 TERMS OF REFERENCE

2.1 Organization

These draft Terms of Reference outline the following items:

- The municipal drinking water systems covered by this Terms of Reference;
- The technical, planning and communications tasks relevant to the completion of the Assessment Report and Source Protection Plan;
- How the task will be completed;
- Who will be taking the lead on task coordination;
- Estimated timelines for completion of the various tasks; and,
- Estimated costs associated with each of the tasks.

2.2 Water Systems

These Terms of Reference were developed for all municipal drinking water supplies in the Grand River Source Protection Area. At present, there are 44 drinking water systems using groundwater supplies, four (4) systems drawing water from the river including (tentatively) the Six Nations Grand River Supply System at Ohsweken, and one (1) system using Lake Erie water. A complete list of these systems is provided in **Appendix A.4**.

2.3 Methodology

The province introduced a proposed Assessment Report Regulation and draft Technical Rules in June 2008. The Rules provide direction, and a level of standardization and consistency for the development of the technical studies to complete the Assessment Report.

Appendix A.6 includes detailed task cost estimates, timelines, descriptions, and leads for all watershed-wide tasks and municipal tasks. Additional details pertaining to the tasks included in this Terms of Reference are provided in **Appendix B** and **Appendix C**.

2.4 Task Leads

As the lead authority in the Lake Erie Source Protection Region, the Grand River Conservation Authority will lead the watershed-wide tasks, as indicated on the task sheets in **Appendix A.6**. Municipalities who have stated their intention to lead tasks for the Assessment Report include the City of Guelph, the Regional Municipality of Waterloo, Oxford County, the City of Brantford, and Haldimand County. Municipalities who have stated their intention to lead tasks for the development of the Source Protection Plan include Wellington County, the Township of Centre Wellington, the City of Guelph, the Regional Municipality of Waterloo, Perth County, Oxford County, the County of Brant, the City of Brantford, and Haldimand County. The municipal task leads are also listed in **Appendix A.6**.

2.5 Timelines

The timelines for the tasks mentioned above are detailed on the work plans in **Appendix A.6** and are summarized in **Appendix D**.

The timelines are based on the following assumptions: the Assessment Report requirements (regulations and rules) will be finalized in November 2008; the technical studies that meet the

minimum requirements for the Assessment Report can be completed for the most part by September 2009 and assembled by December 2009 to support the completion of a basic Assessment Report by August 2010; more detailed technical studies to reduce uncertainty will continue until September 2011 for inclusion with the Source Protection Plan; plan development initiatives will begin in January 2010 when the first draft of the basic Assessment Report has been completed and the Source Protection Plan requirements (plan regulations and rules and risk management requirements) are finalized; plan development initiatives continue until January 2012 to support the completion of the Source Protection Plan by August 2012.

2.6 Budget

Detailed cost estimates are also provided for each task in **Appendix A.6**. **Appendix C** summarizes past and future costs for each task.

The costs for past expenditures are derived from municipal and conservation authority funding received up to March 31, 2008. The estimates for committed spending in 2008-09 are based on the provincially approved business plan for the Lake Erie Source Protection Region. The estimates for future costs beyond March 2009 are based on unapproved projections in the Lake Erie Region's business plan to August 20, 2012.

All of the project costs to March 31, 2008 have been funded by the province. The province has approved the 2008-2009 costs in the Lake Erie Region business plan, and funds were received in early July. The province has indicated that it will pay for the future costs to August 20, 2012 based on the approved Terms of Reference.

2.7 Matters Affecting Other Areas and Regions

There are a number of issues that affect other Source Protection Committees outside of the Lake Erie Source Protection Region. These are listed in **Appendix A.5**. These matters are ones that will require consultation with the affected Source Protection Region(s) staff and Source Protection Committee(s) in undertaking and completing the development of the Assessment Report and Source Protection Plans.

3.0 PUBLIC COMMENT

The public was invited to review and comment on the draft Terms of Reference on September 5, 2008. A 35-day public comment period ended on October 10, 2008, and included three public meetings in Brantford (October 1), Cambridge (October 2), and Fergus (October 6).

At the October 16 and November 6 Source Protection Committee meetings, the committee reviewed and considered all of the comments received during the public consultation period. The committee's responses to the comments are reflected in this Terms of Reference.

The Committee submitted the Terms of Reference to the Grand River Source Protection Authority on November 6, 2008, and released the document for an additional 30-day **public comment period starting on November 7**, which closes on **December 6, 2008**. Please forward written comments to:

Source Protection Program
Grand River Conservation Authority
400 Clyde Road, P.O. 729
Cambridge, ON N1R 5W6

Comments can also be:

Faxed to 519-621-4945 (Attention: Source Protection Program)

OR

E-mailed to comments@sourcewater.ca.

Information on how to comment on the Proposed Terms of Reference will be posted at www.sourcewater.ca, and in newspapers across the watershed. Formal comments received will be submitted to the Minister of the Environment with the Proposed Terms of Reference by the Grand River Source Protection Authority no later than December 20, 2008.

This page left blank intentionally.

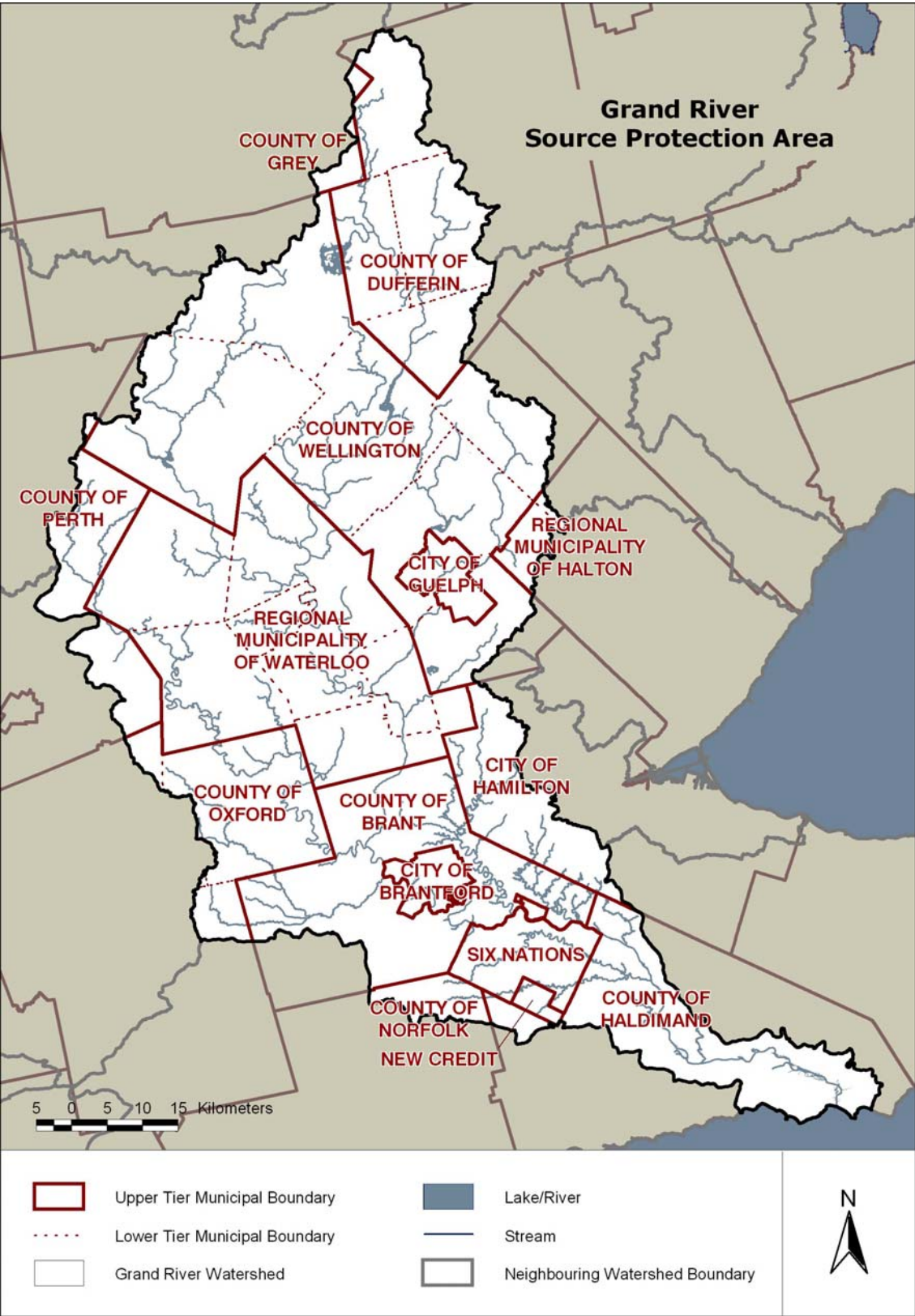
APPENDIX A

APPROVED TERMS OF REFERENCE (WORK PLAN)

Grand River Source Protection Area

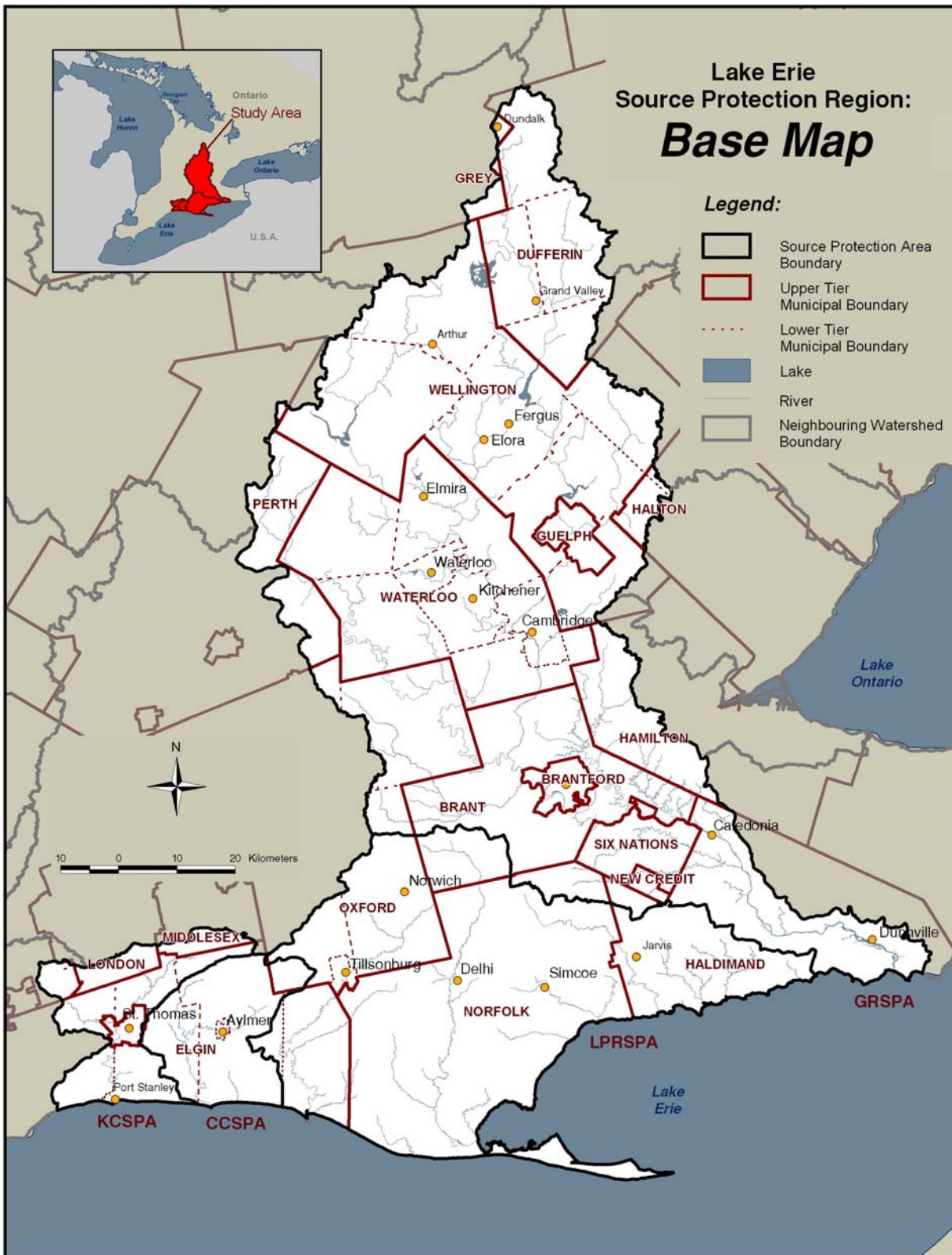
The following pages constitute the formatted version of the Terms of Reference/Workplan that was generated using the provincial template.

A.1 Grand River Source Protection Area



This page left blank intentionally.

A.2 Lake Erie Source Protection Region



This page left blank intentionally.

A.3 List of Municipalities Located in the Grand River Source Protection Area

1	County of Grey	Upper Tier
2	Township of Southgate	Lower Tier
3	County of Dufferin	Upper Tier
4	Township of Melancthon	Lower Tier
5	Township of Amaranth	Lower Tier
6	Township of East Luther Grand Valley	Lower Tier
7	Township of East Garafraxa	Lower Tier
8	County of Wellington	Upper Tier
9	Township of Wellington North	Lower Tier
10	Township of Mapleton	Lower Tier
11	Township of Centre Wellington	Lower Tier
12	Town of Erin	Lower Tier
13	Township of Guelph-Eramosa	Lower Tier
14	Township of Puslinch	Lower Tier
15	City of Guelph	Single Tier
16	Regional Municipality of Waterloo	Upper Tier
17	Township of Woolwich	Lower Tier
18	Township of Wilmot	Lower Tier
19	Township of Wellesley	Lower Tier
20	Township of North Dumfries	Lower Tier
21	City of Waterloo	Lower Tier
22	City of Kitchener	Lower Tier
23	City of Cambridge	Lower Tier
24	Regional Municipality of Halton	Upper Tier
25	Town of Halton Hills	Lower Tier
26	Town of Milton	Lower Tier
27	City of Hamilton	Single Tier
28	County of Brant	Single Tier
29	City of Brantford	Single Tier
30	County of Perth	Upper Tier
31	Municipality of North Perth	Lower Tier
32	Township of Perth East	Lower Tier
33	County of Oxford	Upper Tier
34	Township of East Zorra – Tavistock	Lower Tier
35	Township of Blandford-Blenheim	Lower Tier
36	Township of Norwich	Lower Tier
37	City of Woodstock	Lower Tier
38	Haldimand County	Single Tier
39	Norfolk County	Single Tier

A.3.1 Municipal Leads for the Assessment Report

Municipality	Resolution (Y/N)	Comments
City of Guelph	Y	Council Resolution accepting lead, received November 28, 2008
Regional Municipality of Waterloo	Y	Council Resolution accepting lead, received December 2, 2008
Oxford County	Y	Council Resolution accepting lead, received September 17, 2008
City of Brantford	Y	Council Resolution accepting lead, received October 7, 2008
Haldimand County	Y	Council Resolution accepting lead, received October 3, 2008

A.3.2 Municipal Leads for the Source Protection Plan

Municipality	Resolution (Y/N)	Comments
Wellington County	Y	Council Resolution accepting lead, received November 6, 2008
City of Guelph	Y	Council Resolution accepting lead, received November 28, 2008
Regional Municipality of Waterloo	Y	Council Resolution accepting lead, received December 2, 2008
Perth County	Y	Council Resolution accepting lead, received January 26, 2009
Oxford County	Y	Council Resolution accepting lead, received September 17, 2008
City of Brantford	Y	Council Resolution accepting lead, received October 7, 2008
Haldimand County	Y	Council Resolution accepting lead, received October 3, 2008

A.4 Lists of Drinking Water Systems

A.4.1 List of Existing Municipal Residential Drinking Water Systems

Owner	DWS Number	DWS Name	Operating Authority	GW or SW
Southgate Township	220001753	Dundalk Well Supply	Corporation of the Township of Southgate	GW
Amaranth Township	220013553	Waldemar Water Supply	Dufferin Water Co. Ltd.	GW
East Luther - Grand Valley	220007016	East Luther Grand Valley Well Supply	Corporation of the Township of East Luther Grand Valley	GW
East Garafraxa	210002183	Marsville Well Supply	Dufferin Water Co. Ltd.	GW
Township of Wellington North	220000040	Arthur Well Supply	Township of Wellington North	GW
Centre Wellington Township	220000086	Centre Wellington Well Supply	Township of Centre Wellington	GW
Township of Mapleton	220004064	Drayton Well Supply	OCWA	GW
Township of Mapleton	260069732	Moorefield Well Supply	OCWA	GW
Township of Guelph-Eramosa	220005599	Rockwood Water Supply System	Ontario Clean Water Agency	GW
Township of Guelph-Eramosa	220009194	Hamilton Drive Water Supply System	Ontario Clean Water Agency	GW
City of Guelph	220000095	Guelph Waterworks	City of Guelph	GW/SW
Region of Waterloo	220000166	Cambridge Wells	Region of Waterloo	GW
Region of Waterloo	220003092	Kitchener Wells	Region of Waterloo	GW
Region of Waterloo	260002668	Mannheim Village Wells	Region of Waterloo	GW
Region of Waterloo	220006981	Mannheim (Kitchener) WTP	Region of Waterloo	SW/GW
Region of Waterloo	260002707	Shingletown Wells	Region of Waterloo	GW
Region of Waterloo	220000157	Waterloo Wells	Region of Waterloo	GW
Region of Waterloo	220004199	Ayr Wells and Distribution	Region of Waterloo	GW
Region of Waterloo	260002538	Branchton Wells and Distribution	Region of Waterloo	GW
Region of Waterloo	220007301	Roseville Wells and Distribution	Region of Waterloo	GW
Region of Waterloo	220007310	Heidelberg Wells and (Wellesley Side) Distribution	Region of Waterloo	GW
Region of Waterloo	220000102	Linwood/Easgate Meadows Wells and Distribution	Region of Waterloo	GW
Region of Waterloo	220005811	St. Clements Wells and Distribution	Region of Waterloo	GW

Owner	DWS Number	DWS Name	Operating Authority	GW or SW
Region of Waterloo	220004215	Wellesley Wells and Distribution	Region of Waterloo	GW
Region of Waterloo	220009210	Foxboro Wells	Region of Waterloo	GW
Region of Waterloo	220004180	New Dundee Wells	Region of Waterloo	GW
Region of Waterloo	220006990	St. Agatha - (SA3R, SA4R, SA20T) Wells	Region of Waterloo	GW
Region of Waterloo	260004228	St. Agatha - Swartzentruber (SA5)	Region of Waterloo	GW
Region of Waterloo	260004241	St. Agatha - Sararas (SA6)	Region of Waterloo	GW
Region of Waterloo	220000111	New Hamburg/Baden Wells	Region of Waterloo	GW
Region of Waterloo	260001994	Conestoga Golf Wells	Region of Waterloo	GW
Region of Waterloo	260002772	Conestoga Plains Wells	Region of Waterloo	GW
Region of Waterloo	220004171	Maryhill Wells	Region of Waterloo	GW
Region of Waterloo	260007413	Maryhill Heights Wells	Region of Waterloo	GW
Region of Waterloo	220007007	West Montrose Wells	Region of Waterloo	GW
Region of Waterloo		Elmira	Region of Waterloo	GW
Region of Waterloo		Baden	Region of Waterloo	GW
Region of Waterloo		Lancaster	Region of Waterloo	GW
Perth East Township	220000503	Milverton Water Supply System	American Water Canada Corporation	GW
Oxford County	220007515	Drumbo	Oxford County	GW
Oxford County	220009050	Bright	Oxford County	GW
Oxford County	210001291	Plattsville	Oxford County	GW
City of Hamilton	250001830	Lynden Communal Well System FDL01	City of Hamilton	GW
County of Brant	220002743	Airport Well Supply	County of Brant	GW
County of Brant	210000069	Mount Peasant Well Supply	County of Brant	GW
County of Brant	220002734	St. George Well Supply	County of Brant	GW
County of Brant	220002752	Paris Well Supply	County of Brant	GW
City of Brantford	220003564	Holmedale Water Treatment Plant	City of Brantford	SW
Haldimand County	220003555	Dunnville Water Treatment Plant Waterworks System	OCWA	SW

A.4.2 List of Planned Municipal Residential Drinking Water Systems

Owner	DWS Number	DWS Name	Operating Authority	GW or SW
County of Oxford	220007515	Drumbo	Oxford County	GW

A.4.3 List of Drinking Water System(s) Included by Municipal Council Resolution

None identified at this time.

A.4.4 List of Drinking Water Systems Serving First Nations Reserves

Owner	DWS Number	Name	Operating Authority	GW or SW
Six Nations of the Grand River (tentative pending Ontario regulation)	None identified	Ohsweken Water Treatment Plant	Six Nations of the Grand River	SW

A.4.5 List of Fully or Partially Exempted Municipal Residential Drinking Water System(s)

Owner	DWS Number	Name	Operating Authority	GW or SW
Haldimand County	220003555	Dunnville (Grand River Emergency Intake)	OCWA	SW

A.4.6 List of Drinking Water Systems Included by the Minister of the Environment

None identified at this time.

A.5 List of Matter(s) that Affect Other Source Protection Committees

Source Protection Committees Affected	Source Protection Area	Description of Matter
Thames-Sydenham and Region	Upper Thames River	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
		The Village of Princeton in Oxford County receives drinking water from the City of Woodstock in the Upper Thames Source Protection Area. Ensure that consultation takes place to develop policies acceptable to both source protection committees and that technical work and communication are aligned.
Ausable Bayfield Maitland Valley	Ausable Bayfield	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
Ausable Bayfield Maitland Valley	Maitland Valley	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products

Source Protection Committees Affected	Source Protection Area	Description of Matter
Saugeen, Grey Sable, North Bruce Peninsula	Saugeen Valley	Southgate Township's Dundalk well supply well head protection area extends into the Saugeen Valley Source Protection Area. Ensure that consultation takes place to develop policies acceptable to both source protection committees and that technical work and communication are aligned.
		Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
South Georgian Bay-Lake Simcoe	Nottawasaga Valley	Shelburne well supply well head protection area extends into the Grand River Source Protection Area. Ensure that consultation takes place to develop policies acceptable to both source protection committees and that technical work and communication are aligned.
		Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
CTC	Credit Valley	Orangeville well supply well head protection area extends into the Grand River Source Protection Area. Ensure that consultation takes place to develop policies acceptable to both source protection committees and that technical work and communication are aligned.
		Guelph-Eramosa Township's Rockwood well supply wellhead protection area extends into the Credit Valley Source Protection Area. Ensure consultation takes place to develop policies acceptable to both source protection committees and technical work & communications are aligned.
		City of Guelph well supply well head protection(s) area may extend into the Credit Valley Source Protection Area. Ensure that consultation takes place to develop policies acceptable to both source protection committees and that technical work and communications are aligned.
		Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
Halton-Hamilton	Halton Region	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.

Source Protection Committees Affected	Source Protection Area	Description of Matter
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
Halton-Hamilton	Hamilton Region	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products
Halton-Hamilton	Hamilton Region	Caledonia and Cayuga water is supplied from the Hamilton (Woodward) Water Treatment Plant in Hamilton, Ontario. Ensure consultation takes place to develop policies acceptable to both source protection committees.
Niagara Peninsula	Niagara Peninsula	Significant recharge areas – Consultation regarding methods to ensure products are similar and allow edge matching for mapping products.
		Highly vulnerable aquifers – Consultation regarding policies to ensure that they are in place and acceptable to both source protection committees as well as allow for edge matching of map products

A.6 Work Plans

A.6.1 Watershed-wide Work Plan to Complete the Assessment Report and Source Protection Plan

This section presents the components of the Assessment Report and Source Protection Plan that will be carried out on a watershed-wide basis and led by the Grand River Conservation Authority. The tasks, costs for work completed or in progress, estimated costs for remaining work, start date, and estimated completion date are presented below.

The costs are estimated and may need to be revised following the enactment of the Assessment Report regulation. "Work Completed or In Progress" was funded by the Ministry of Natural Resources under Memoranda of Agreement with the Conservation Authorities over the period 2005 through March, 2008. Additional funding for "Remaining Work" will be provided by the Ministry of Natural Resources to the Grand River Conservation Authority under a new Partnership Agreement.

A.6.1.1 Watershed-wide Work Plan to Complete the Assessment Report

Assigned Lead: Grand River Conservation Authority

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Coordinating and supporting projects for the assessment report	\$1,604,500	\$1,633,200	2005-Jan-01 to 2010-Aug-20	- 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.
Undertaking communications initiatives for the assessment report	\$15,000	\$39,800	2005-Jan-01 to 2010-Aug-20	- Local area engagement, outreach and creation of communications products that support the assessment report process. (CA staff resource costs are included in 'Coordinating and supporting projects'.)
Information management for the assessment report preparation	\$169,300	\$41,800	2005-Jan-01 to 2010-Aug-20	- Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance. (CA staff resource costs are included in 'Coordinating and supporting projects'.)

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Undertaking a watershed characterization	\$21,800	\$0	2005-Jan-01 to 2010-Jan-20	<ul style="list-style-type: none"> - Draft report, <i>Grand River Watershed Characterization Report, Jan 2008</i>, has been peer evaluated and posted on the website for public input and comment. (CA staff resource costs for further updates are included in 'Coordinating and supporting projects'.)
Conducting a conceptual water budget	\$190,400	\$0	2005-Jan-01 to 2007-Dec-31	<ul style="list-style-type: none"> - The overall flow system dynamics for the watershed including surface water and groundwater features, land cover, structures (e.g. dams) and water takings are described in the <i>Integrated Water Budget Report – Grand River Watershed, Jan 2008</i>.
Conducting a Tier 1 water budget analysis	\$0	\$0		<ul style="list-style-type: none"> - Because of the advanced status of water quantity knowledge and studies in the Lake Erie Region, water budget studies proceeded directly from conceptual to Tier 2 water budget analysis. No Tier 1 water budget analysis has been conducted or is planned.
Conducting a Tier 2 water budget analysis	\$811,300	\$0	2006-Jul-01 to 2009-Jun-30	<ul style="list-style-type: none"> - Studies in progress to quantify available water supply & demand using numerical groundwater & surface water models and consultation with water users, and assess the potential for water quantity stress under existing, future & drought conditions. Each phase of work is peer reviewed by a team of qualified third-party professionals - Significant recharge areas will be estimated using modeling tools developed as part of the Tier 2 water budget studies and refined where Tier 3 assessments are carried out, using methods described in the Assessment Report Regulation & Rules. - Peer review of Significant Groundwater Recharge Areas is included in Tier 2 and 3 water budget study peer review.

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Conducting a tier 3 water budget analysis and water quantity risk assessment	\$3,200,000	\$0	2008-Feb-01 to 2011-Sep-30	<ul style="list-style-type: none"> Pilot studies in progress to refine water supply, demand & reserve, and assess water quantity risk to Waterloo Region and Guelph municipal supplies. The Region of Waterloo and City of Guelph are undertaking the work to complete the pilot studies for their respective systems. Each phase of work is peer reviewed by a team of qualified third-party professionals
Delineating and applying vulnerability scores to Highly Vulnerable Aquifer areas	\$34,300	\$1,900	2007-Jul-01 to 2010-Jan-20	<ul style="list-style-type: none"> The Aquifer vulnerability index method will be applied to delineate vulnerable areas with consideration of hydraulic setting. Vulnerability ranking to be completed using methods described in the Assessment Report Regulation and Rules. Peer review of Highly Vulnerable Aquifers will be carried out by a qualified independent professional. (CA staff resource costs are included in 'Coordinating and supporting projects'.)
Identifying issues, inventorying threats and assessing hazards in Highly Vulnerable Aquifer Areas	\$0	\$0	2008-Oct-01 to 2010-Jan-20	<ul style="list-style-type: none"> Known issues will be listed and described. Hazards will be assessed using existing threats data (from municipal, provincial, and federal sources of information) and methods described in the Assessment Report Regulation and Rules. (CA staff resource costs are included in 'Coordinating and supporting projects'.)
Assessing risks in Highly Vulnerable Aquifer Areas	\$0	\$0	2008-Oct-01 to 2011-Sep-30	<ul style="list-style-type: none"> Identification of significant and moderate threats, issues evaluation, and uncertainty analysis as set out in the Assessment Report Regulation and Rules. (CA staff resource costs are included in 'Coordinating and supporting projects'.)

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Peer review on vulnerability analysis, issue analysis, hazard analysis, and water quality risk assessment for WHPA and IPZ	\$6,000	\$267,000	2008-Mar-31 to 2011-Sep-30	<ul style="list-style-type: none"> - Vulnerability analysis for WHPA and IPZ has been peer reviewed by qualified GRCA staff as municipal technical studies have been completed. Where GRCA is administering studies on behalf of municipalities, a qualified independent professional has been retained to peer review vulnerability analysis. - The water quality peer review team has been engaged and is preparing to peer review hazard analysis, issues analysis, and water quality risk assessment for wells and intakes as the municipal studies reports become available in late 2008 (Tier 1). The peer review team will continue through 2009 as risk assessment information is refined (Tier 2).
Assessment Report Compilation	\$0	\$100,000	2009-Jan-20 to 2010-Jan-20	<ul style="list-style-type: none"> - Preparation of draft and final reports, as required.
Consultation on the overall proposed assessment report	\$0	\$0	2009-Jan-20 to 2010-Aug-20	<ul style="list-style-type: none"> - Consultation on vulnerability analysis in early 2009 and hazards/issues analysis and risk assessment in late 2009. (CA staff resource costs are included in 'Coordinating and supporting projects'.)
TOTAL	\$6,052,600	\$2,083,700		

A.6.1.2 Watershed-wide Work Plan to Complete the Source Protection Plan

Assigned Lead: Grand River Conservation Authority

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Coordinating and supporting projects for the Source Protection Plan (SPP)	\$0	\$2,284,700	2010-Jan-20 to 2012-Aug-20	– 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.
Undertaking communications initiatives for the Source Protection Plan	\$0	\$53,200	2010-Jan-20 to 2012-Aug-20	– Local area engagement, outreach and creation of communications products that support the source protection planning process. (CA staff resource costs are included in ‘Coordinating and supporting projects’.)
Information management for source protection plan preparation	\$0	\$56,000	2010-Jan-20 to 2012-Aug-20	– Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance. (CA staff resource costs are included in ‘Coordinating and supporting projects’.)
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$321,400	2010-Jan-20 to 2012-Jan-20	– To assist with local choices, prepare Region-wide discussion papers analyzing various policy approaches to reduce and prevent risk, including assessment of financial impacts. Task scope will be refined when more information and direction are available. (CA staff resource costs are included in ‘Coordinating and supporting projects’.) – Includes establishing evaluation criteria for selecting policies.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$120,500	2010-Jan-20 to 2012-Jan -20	– Prepare Region-wide discussion papers analyzing various policy approaches to monitor threats. Task scope will be refined when more information and direction are available. (CA staff resource costs are included in ‘Coordinating and supporting projects’.)
Policy development for Great Lakes elements (where required/ permissible in Act & Regs)	\$0	\$0	2010-Jan-20 to 2012-Jan -20	– Task scope will be refined when more information and direction are available. Staff resource costs and SPC costs are included in ‘Coordinating and supporting projects’.

Task	Costs for Work Completed or In Progress	Estimated Costs for Remaining Work	Start Date & Estimated Completion Date	Comments
Establishing timelines for policy implementation	\$0	\$0	2010-Jan-20 to 2012-Jan-20	- Staff resource costs are included in Coordinating and supporting projects.
Source Protection Plan Compilation	\$0	\$0	2010-Jan-20 to 2012-Aug-20	- Assembly and preparation of draft and final source protection plan documents including establishing timelines for policy implementation. (CA staff resource costs are included in 'Coordinating and supporting projects'.)
Consultation on the overall proposed source protection plan	\$0	\$0	2012-May-01 to 2012-Aug-20	- Consultation on the draft source protection plan as per upcoming regulations. Staff resource costs and SPC costs are included in Coordinating and supporting projects. Disbursements included in Undertaking communications initiatives.
TOTAL	\$0	\$2,835,800		

A.6.2 Municipal Work Plans to Complete the Assessment Report and Source Protection Plan

This section presents the components of the Assessment Report and Source Protection Plan that are municipality-specific. The tasks, costs for work completed or in progress, estimated costs for remaining work, start date and estimated completion date and assigned lead are presented below. The costs are estimated and may need to be revised following the enactment of the Assessment Report and Source Protection Plan regulation. Completed work and work-in-progress has been funded through two rounds of grants from the Ministry of the Environment to municipalities and Conservation Authorities. Additional funding for remaining work was provided by the Ministry of the Environment in April 2008. Where municipalities have been identified as the task lead, associated municipal resolutions accepting the lead for the tasks are provided in Appendix F.

A.6.2.1 Township of Southgate

A.6.2.1.1 Township of Southgate Assessment Report

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$32,700	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - The numerical groundwater model (MODFLOW) from the Grey and Bruce Counties Groundwater Study (WHI, 2003) was used to delineate Wellhead Protection Areas as part of Round 1 studies. The model was adjusted to reflect the addition of two new municipal wells and the decommissioning of two older municipal wells. The pumping rates reflect the 20% increase in pumping applied to Well D3 to account for anticipated increase in demand over five years. Preferential pathways have been investigated and identified. There are no planned wells, GUDI wells, or systems that have been elevated. - Vulnerability was calculated using the Intrinsic Susceptibility Index combined with field identification of highly vulnerable areas (e.g. karst features). - Vulnerability scoring was completed with consideration for preferential pathways. - Includes local area engagement re vulnerability

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
					assessment, outreach and creation of communications products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$18,000	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. - Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.
Assess risk in Wellhead Protection Areas	\$7,400	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> - Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. - Includes local area engagement re water quality risk assessment, outreach and creation of communications products.
TOTAL	\$58,100	\$37,000			

A.6.2.1.2 Township of Southgate Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Dundalk WHPA crosses into the Township of Melancthon within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$35,000			

A.6.2.2 Township of Amaranth*A.6.2.2.1 Township of Amaranth Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$24,500	\$16,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - The numerical groundwater model (MODFLOW) from the Orangeville and Surrounding Areas (WH1, 2001) was used to delineate Wellhead Protection Areas. PW3 installed in 2002 and modeled as part of Groundwater Under the Direct Influence of Surface Water Study (Burnside), 2003). PW1 and PW2 were modelled using existing pumping rates (2001). - Vulnerability was calculated using the Intrinsic Susceptibility Index combined with field identification of highly vulnerable areas (e.g. karst features). Preferential pathways were investigated and identified but the vulnerability was not adjusted as part of this work. Preference pathways need to be re-evaluated to see if vulnerability should be modified. - Includes local area engagement regarding vulnerability assessment, outreach and creation of communications products. - There are no planned wells or systems that have been elevated.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$39,400	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.
Assess risk in Wellhead Protection Areas	\$5,000	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> – Where risk in wellhead protection areas are identified but uncertainty associated with either the hazard or vulnerability score exists, refinement of the risk assessment will be undertaken according to methods described in Regulation and Director's Rules on the Assessment Report. The revised vulnerability score and hazard rankings will be combined to calculate the risk to municipal drinking water using methods described in Regulation and Director's Rules on the Assessment Report. – Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$68,900	\$42,000			

A.6.2.2.2 Township of Amaranth Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats. – CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats. – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.3 Township of East Luther Grand Valley*A.6.2.3.1 Township of East Luther Grand Valley Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$19,200	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - The numerical groundwater model (MODFLOW) from the Orangeville and Surrounding Areas (WH1, 2001) was used to delineate Wellhead Protection Areas. modelled using existing pumping rates (2001). Work has been revised to address peer review comments. There are no planned wells or systems that have been elevated. No additional work is required for this task at present. - Includes local area engagement regarding vulnerability assessment, outreach and creation of communications products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$33,600	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. - Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$3,300	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where risk in wellhead protection areas are identified but uncertainty associated with either the hazard or vulnerability score exists, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in the Assessment Report Regulations and technical rules. The revised vulnerability score and hazard rankings will be combined to calculate the risk to municipal drinking water using methods described in Regulation and Director's Rules on the Assessment Report. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$56,100	\$37,000			

A.6.2.3.2 Township of East Luther Grand Valley Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches to address drinking water threats. - Includes local area engagement, outreach and creation of communications products that support the source protection plan process. - CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' - Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches for monitoring drinking water threats. - Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.4 Township of East Garafraxa*A.6.2.4.1 Township of East Garafraxa Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$14,200	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – The numerical groundwater model (MODFLOW) from the Orangeville and Surrounding Areas (WH1, 2001) was used to delineate Wellhead Protection Areas. Modelled using existing pumping rates (2001), to be updated to planned rates. Work has been revised to address peer review comments. There are no planned wells or systems that have been elevated. – Includes local area engagement regarding vulnerability assessment, outreach and creation of communications products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$18,900	\$12,000	2007-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$1,700	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where risks in wellhead protection areas are identified but uncertainty associated with either the hazard or vulnerability score exists, refinement of the risk assessment will be undertaken according to methods described in Regulation and Director's Rules on the Assessment Report. The revised vulnerability score and hazard rankings will be combined to calculate the risk to municipal drinking water using methods described in Regulation and Director's Rules on the Assessment Report. Includes local area engagement, outreach and creation of communication products that support the Assessment Report process.
TOTAL	\$34,800	\$37,000			

A.6.2.4.2 Township of East Garafraxa Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches to address drinking water threats. - Includes local area engagement, outreach and creation of communications products that support the source protection plan process. - CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' - Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches for monitoring drinking water threats. - Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.5 Township of Wellington North*A.6.2.5.1 Township of Wellington North Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$12,200	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – The numerical groundwater (MODFLOW) from the county of Wellington Groundwater Study (Golder, 2006) was used to delineate Wellhead Protection Areas. Modelled using forecast rate per Wellington Official Plan. – Vulnerability was calculated for each aquifer using a modified version of the Intrinsic Susceptibility Index. Vulnerability scoring was completed with consideration for preferential pathways. – Includes local area engagement, outreach and creation of communication products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$32,100	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$0	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where significant threats in wellhead protection area and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$44,300	\$37,000			

A.6.2.5.2 Township of Wellington North Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats. – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Arthur WHPAs cross into the Township of Mapleton within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$35,000			

A.6.2.6 Township of Centre Wellington*A.6.2.6.1 Township of Centre Wellington Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$17,900	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – The numerical groundwater (MODFLOW) from the county of Wellington Groundwater Study (Golder, 2006) was used to delineate Wellhead Protection Areas. Modelled using forecast rate per Wellington Official Plan. – Vulnerability was calculated for each aquifer using a modified version of the Intrinsic Susceptibility Index. Vulnerability scoring was completed with consideration for preferential pathways. – Includes local area engagement, outreach and creation of communication products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$43,900	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$0	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where significant threats in wellhead protection area and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$61,800	\$37,000			

A.6.2.6.2 Township of Centre Wellington Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – CA staff resource costs are included in watershed-wide ‘Coordinating and supporting projects’ – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Fergus and Elora WHPAs cross into the Township of Wellington North within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Elora WHPAs cross into the Township of Mapleton within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$35,000			

A.6.2.7 Township of Mapleton*A.6.2.7.1 Township of Mapleton Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$25,000	\$11,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – The numerical groundwater (MODFLOW) from the county of Wellington Groundwater Study (Golder, 2006) was used to delineate Wellhead Protection Areas. Modelled using forecast rate per Wellington Official Plan. – Vulnerability was calculated for each aquifer using a modified version of the Intrinsic Susceptibility Index. Vulnerability scoring was completed with consideration for preferential pathways. – Includes local area engagement, outreach and creation of communication products.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$44,900	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$4,300	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$74,200	\$37,000			

A.6.2.7.2 Township of Mapleton Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.8 Township of Guelph-Eramosa*A.6.2.8.1 Township of Guelph-Eramosa Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$28,000	\$41,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Wellhead Protection Areas were delineated using a numerical groundwater model (FEFLOW). Vulnerability was calculated for each aquifer using a modified version of the Intrinsic Susceptibility Index. Preferential pathways have been investigated and identified. Two GUDI wells will require additional work to delineate WHPA Zone E – Includes local area engagement, outreach and creation of communication products that support the Assessment Report process.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$57,800	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$10,700	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	– Where risk in wellhead protection areas are identified but uncertainty associated with either the hazard or vulnerability score exists, refinement of the risk assessment will be undertaken according to methods described in Regulation and Director's Rules on the Assessment Report. The revised vulnerability score and hazard rankings will be combined to calculate the risk to municipal drinking water using methods described in Assessment Regulation and Technical Rules.
TOTAL	\$96,500	\$67,000			

A.6.2.8.2 Township of Guelph-Eramosa Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects' – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Wellington County	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Rockwood WHPAs cross into the Town of Erin within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Hamilton Drive WHPAs cross into the Township of Centre Wellington within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$35,000			

A.6.2.9 City of Guelph*A.6.2.9.1 City of Guelph Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to Intake Protection Zones	\$165,500	\$20,800	2007-Jun-01 to 2010-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Revise characterization of Eramosa River Intake to be consistent with other surface water intakes within Lake Erie Region. – Finalize scoring for IPZs – Early consultation on vulnerable area delineation and scoring.
Delineating and applying vulnerability scores to all Wellhead Protection Areas		\$55,300	2007-Jun-01 to 2010-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Wellhead Protection Areas were delineated using a numerical groundwater model (FEFLOW). Vulnerability was calculated using a modified version of the Intrinsic Susceptibility Index and vulnerability scoring was completed with consideration for preferential pathways. – Delineate WHPA Zone E for Carter Well (GUDI). – Finalize scoring for WHPAs – Early consultation on vulnerable area delineation and scoring.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas and Intake Protection Zones	\$166,900	\$313,200	2007-Jun-01 to 2010-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. – Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas and Intake Protection Zones	\$35,900	\$297,200	2007-Jun-01 to 2011-Sep-30	City of Guelph	<ul style="list-style-type: none"> Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules: synthesizing information from MOE District files; land owner surveys; site investigations to confirm significant threats (activities & conditions). Includes local area engagement, outreach and creation of communication products that support the Assessment Report process.
TOTAL	\$368,300	\$686,500			

A.6.2.9.2 City of Guelph Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$207,400	2010-Jan-20 to 2012-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$19,500	2010-Jan-20 to 2012-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	City of Guelph	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Guelph WHPAs cross into the Township of Guelph-Eramosa within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Guelph WHPAs cross into the Township of Puslinch within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$226,900			

A.6.2.10 Regional Municipality of Waterloo*A.6.2.10.1 Regional Municipality of Waterloo Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to Intake Protection Zones	\$152,900	\$11,000	2007-Jun-01 to 2010-Jan-20	RM Waterloo	<ul style="list-style-type: none"> - Delineation of WHPA Zone E for GUDI wells. - Early consultation on vulnerable area delineation and scoring.
Delineating and applying vulnerability scores to all Wellhead Protection Areas		\$620,600	2007-Jun-01 to 2010-Jan-20	RM Waterloo	
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas and Intake Protection Zones	\$375,600	\$578,000	2008-Mar-31 to 2010-Jan-20	RM Waterloo	<ul style="list-style-type: none"> - Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. - Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.
Assess risk in Wellhead Protection Areas and Intake Protection Zones	\$12,600	\$546,000	2006-Oct-01 to 2011-Sep-30	RM Waterloo	<ul style="list-style-type: none"> - Where risk in wellhead protection areas are identified but uncertainty associated with either the hazard or vulnerability score exists, refinement of the risk assessment will be undertaken according to methods described in Regulation and Director's Rules on the Assessment Report. - Includes local area engagement, outreach and creation of communication products that support the Assessment Report process.
TOTAL	\$541,100	\$1,755,600			

A.6.2.10.2 Regional Municipality of Waterloo Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$507,000	2010-Jan-20 to 2012-Jan-20	RM Waterloo	<ul style="list-style-type: none"> – Investigate local choices for risk-reduction policy and program approaches, to address drinking water threats, that recognize local needs. – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$190,000	2010-Jan-20 to 2012-Jan-20	RM Waterloo	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sept-01 to 2012-Jan-20	RM Waterloo	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Region of Waterloo WHPAs cross into the Township of Puslinch within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$697,000			

A.6.2.11 Township of Perth East*A.6.2.11.1 Township of Perth East (Milverton) Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$3,400	\$5,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> Wellhead Protection Areas were delineated using a numerical groundwater model (MODFLOW). Vulnerability was calculated using an aquifer-specific Intrinsic Susceptibility Index. Vulnerability scoring was completed with consideration for preferential pathways. Early consultation on vulnerable areas delineation and vulnerability scoring.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$33,700	\$12,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$0	\$11,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules: synthesizing information from MOE District files; land owner surveys; site investigations to confirm significant threats (activities & conditions). Includes local area engagement, outreach and creation of communication products.
TOTAL	\$37,100	\$28,000			

A.6.2.11.2 Township of Perth East (Milverton) Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	Perth County	<ul style="list-style-type: none"> Investigate local choices for policy approaches to address drinking water threats. Task scope will be refined when more information and direction are available. Includes local area engagement, outreach and creation of communications products that support the source protection plan process. CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects'
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Perth County	<ul style="list-style-type: none"> Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Perth County	<ul style="list-style-type: none"> Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.12 County of Oxford*A.6.2.12.1 County of Oxford Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$3,800	\$11,100	2007-Jun-01 to 2010-Jan-20	Oxford	<ul style="list-style-type: none"> - Additional work for new well in Drumbo. - Includes local area engagement, outreach and creation of communications products that support the Assessment Report process.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$19,300	\$21,500	2007-Jun-01 to 2010-Jan-20	Oxford	<ul style="list-style-type: none"> - Additional work for new well in Drumbo. - Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$7,600	\$2,500	2006-Oct-01 to 2011-Sep-30	Oxford	<ul style="list-style-type: none"> - Additional work for new well in Drumbo. - Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products. Synthesizing information from MOE District files. Land owner surveys. Site investigations to confirm significant threats (activities & conditions). - Early consultation on vulnerable areas delineation and vulnerability scoring.
TOTAL	\$30,700	\$35,100			

A.6.2.12.2 County of Oxford Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$8,100	2010-Jan-20 to 2012-Jan-20	Oxford	<ul style="list-style-type: none"> Investigate local choices for policy approaches to address drinking water threats. Policy development for existing significant DW threats. Policy development regarding prescribed activities that would be significant threats. Includes local area engagement, outreach and creation of communications products that support the source protection plan process. Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$6,600	2010-Jan-20 to 2012-Jan-20	Oxford	<ul style="list-style-type: none"> Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction area available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Oxford	<ul style="list-style-type: none"> Task scope will be refined when detailed requirements and guidance are available
TOTAL	\$0	\$14,700			

A.6.2.13 City of Hamilton (Lynden)*A.6.2.13.1 City of Hamilton (Lynden) Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas		\$5,000	2007-Jun-01 to 2010-Jan-20	GRCA	– Early consultation on vulnerable areas delineation and vulnerability scoring.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas		\$12,000	2007-Jun-01 to 2010-Jan-20	GRCA	– Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.
Assess risk in Wellhead Protection Areas		\$11,000	2006-Oct-01 to 2011-Sep-30	GRCA	– Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. – Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL		\$28,000			

A.6.2.13.2 City of Hamilton (Lynden) Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address existing drinking water threats and risks	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches to address drinking water threats. Task scope will be refined when more information and direction are available. - Includes local area engagement, outreach and creation of communications products that support the source protection plan process. CA staff resource costs are included in watershed-wide 'Coordinating and supporting projects'
Policy development for managing vulnerable areas establishing timelines for policy implementation	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Task scope will be refined when detailed requirements and guidance are available.
TOTAL	\$0	\$35,000			

A.6.2.14 County of Brant*A.6.2.14.1 County of Brant Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$105,300	\$77,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - The numerical groundwater (MODFLOW) from the County of Brant Municipal Groundwater Study (2005) was used to delineate Wellhead Protection Areas. Modelled using actual pumping rate, to be updated for planned rates. - Delineation of WHPA – E and F for GUDI wells. Status of GUDI wells will require further verification. Further modifications to Vulnerability Scoring, Threats Assessments and Preferential Pathways may be required. - Vulnerability was calculated for each aquifer using a modified version of the Intrinsic Susceptibility Index. Vulnerability scoring was completed with consideration for preferential pathways. - Early consultation on vulnerable areas delineation and vulnerability scoring.
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$258,000	\$14,000	2005-Jun-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> - Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Wellhead Protection Areas	\$0	\$14,000	2006-Oct-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> Where significant threats in wellhead protection areas and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products. Synthesizing information from MOE District files. Land owner surveys. Site investigations to confirm significant threats (activities & conditions). Includes local area engagement, outreach and creation of communication products.
TOTAL	\$363,300	\$105,000			

A.6.2.14.2 County of Brant Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> Investigate local choices for policy approaches to address drinking water threats. Task scope will be refined when more information and direction are available. Includes local area engagement, outreach and creation of communications products that support the source protection plan process. CA staff resource costs are included in watershed-wide Coordinating and supporting projects
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan Preparation Task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> Paris WHPAs cross into the Region of Waterloo (Township of North Dumfries) within the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality.
TOTAL	\$0	\$35,000			

A.6.2.15 City of Brantford*A.6.2.15.1 City of Brantford Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to Intake Protection Zones	\$50,000	\$3,000	2005-Jan-01 to 2010-Jan-20	Brantford	<ul style="list-style-type: none"> – Travel time was determined by conducting a dye tracer study from the Paris sewage treatment plant outfall to the Brantford intake under high flow conditions in the Grand River. (This work built on a dye tracer study that was conducted in 2004 under typical flow conditions). Intake protection zones 1 and 2 were delineated. Site-specific conditions were analyzed to determine vulnerable areas. The impact of preferential pathways within Brantford and levels of uncertainty were determined. Maps were prepared of Intake Protection Zones (IPZs). Vulnerability scores were assigned for current water supply and data gaps were identified that were necessary to complete the vulnerability analysis. – Delineation of the intake protection zone 3 and applying vulnerability scores will be led by the Grand River Conservation Authority – Early consultation on vulnerable areas delineation and vulnerability scoring.
Identifying issues, inventorying threats and assessing Hazards in Intake Protection Zones	\$42,800	\$80,000	2005-Jan-01 to 2010-Jan-20	Brantford	<ul style="list-style-type: none"> – Water quality trends and issues were assessed. Updating list based on new definition and thresholds. Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
					<p>Assessment Report.</p> <ul style="list-style-type: none"> Identifying issues, threats and assessing hazards in IPZ 3 will be led by the Grand River Conservation Authority.
Assess risk in Intake Protection Zones	\$15,000	\$41,000	2005-Jan-01 to 2011-Sep-30	Brantford	<ul style="list-style-type: none"> Where significant threats in intake protection zones and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules: synthesizing information from MOE District files, land owner surveys, site investigations to confirm significant threats (activities & conditions). Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products. Assessing the risks in the IPZ 3 will be led by the Grand River Conservation Authority.
TOTAL	\$107,800	\$124,000			

A.6.2.15.2 City of Brantford Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$70,000	2010-Jan-20 to 2012-Jan-20	Brantford	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats. Task scope will be refined when more information and direction are available. – Includes local area engagement, outreach and creation of communications products that support the source protection plan process. – Grand River Conservation Authority will take the lead in policy development to address drinking water threats in the IPZ 3.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$40,000	2010-Jan-20 to 2012-Jan-20	Brantford	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction are available. – Grand River Conservation Authority will take the lead in policy development for monitoring drinking water threats or issues in the IPZ 3.
Establishing timelines for policy implementation	\$0	\$10,000	2011-Sep-01 to 2012-Jan-20	Brantford	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available. – Grand River Conservation Authority will take the lead in establishing timelines for policy implementation in the IPZ 3.
TOTAL	\$0	\$120,000			

A.6.2.16 County of Haldimand*A.6.2.16.1 County of Haldimand Assessment Report*

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to Intake Protection Zones	\$57,600	\$13,000	2005-Jun-01 to 2010-Jan-20	Haldimand	<ul style="list-style-type: none"> – IPZs were delineated in accordance with the Oct 2006 guidance module 4. More specifically the in-water portion of IPZ2 for the Great Lakes Intakes was delineated using a hydrodynamic model and the up-tributary extents were delineated using back-full flow time of travel calculations. Vulnerability scores have been assigned and were based on attributes of the source water, characteristics of the intake area, possible local influences and the raw water quality – Early consultation on vulnerable areas delineation and vulnerability scoring.
Identifying issues, inventorying threats and assessing Hazards in Intake Protection Zones	\$69,900	\$61,000	2005-Jun-01 to 2010-Jan-20	Haldimand	<ul style="list-style-type: none"> – Issues have been identified in a draft report through a review of the raw water chemical and microbiological data A threats inventory has been completed through a windshield survey and consultation of existing land use activity datasets. – Issues may need to be re-investigated based on the Assessment Report regulations and technical rules. Land use activities that are or would be drinking water threats will be listed. Activities and conditions that are significant drinking water threats will be identified based on the technical rules for the Assessment Report.

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Assess risk in Intake Protection Zones		\$8,500	2006-Jun-01 to 2011-Sep-30	Haldimand	<ul style="list-style-type: none"> Where significant threats in IPZ and other vulnerable areas are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. Includes local area engagement regarding water quality risk assessment, outreach and creation of communications products.
TOTAL	\$127,500	\$82,500			

A.6.2.16.2 County of Haldimand Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$17,500	2010-Jan-20 to 2012-Jan-20	Haldimand	<ul style="list-style-type: none"> – Investigate local choices for policy approaches to address drinking water threats. Policy development for existing significant DW threats – Policy development regarding prescribed activities that would be significant threats. – Local area engagement, outreach and creation of communications products that support the source protection plan process. – Task scope will be refined when more information and direction are available.
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	Haldimand	<ul style="list-style-type: none"> – Investigate local choices for policy approaches for monitoring drinking water threats. Task scope will be refined when more information and direction area available. Based on number and range of significant threats. – Task scope will be refined when more information and direction are available.
Establishing timelines for policy implementation	\$0	\$0	2011-Sep-01 to 2012-Jan-20	Haldimand	<ul style="list-style-type: none"> – Task scope will be refined when detailed requirements and guidance are available.
Other Source Protection Plan preparation task	\$0	\$0	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> – Nanticoke Water Treatment Plant services Hagersville and Mississaugas of the New Credit Reserve in the Grand River SP Area. Ensure that consultation takes place to develop policies acceptable to each municipality, First Nations community and Source Protection Area.
TOTAL	\$0	\$27,500			

A.6.3 First Nations Work Plans to Complete the Assessment Report and Source Protection Plan

This section presents the components of the Assessment Report and Source Protection Plan that are specific to First Nations drinking water systems. The tasks, costs for work completed or in progress, estimated costs for remaining work, start date and estimated completion date and assigned lead are presented below. The costs are estimated and may need to be revised following the enactment of the Assessment Report and Source Protection Plan regulation.

A.6.3.1 Six Nations of the Grand River *(Tentative pending Ontario regulation.)*

A.6.3.1.1 Six Nations of the Grand River Assessment Report

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Delineating and applying vulnerability scores to Intake Protection Zones	\$0	\$75,000	2009-Jan-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> Travel time will be determined by conducting a dye tracer study and hydraulics survey from the Cockshutt bridge in Brantford to the Ohsweken intake under high flow conditions in the Grand River, and in Fairchild Creek. Intake protection zones 1, 2 and 3 will be delineated and site-specific conditions will be analyzed to determine vulnerable areas. The impact of preferential pathways and levels of uncertainty will be determined. Maps will be prepared of Intake Protection Zones (IPZs). Vulnerability scores will be assigned for current water supply and data gaps will be identified as necessary to complete the vulnerability analysis. Includes local area engagement regarding vulnerability assessment, outreach and creation of communications products.
Identifying issues, inventorying threats and assessing Hazards in Intake Protection Zones (off-reserve)	\$0	\$40,000	2009-Jan-01 to 2010-Jan-20	GRCA	<ul style="list-style-type: none"> Water quality trends and issues will be identified and described. Off-reserve land use activities that are or would be drinking water threats will be listed. Off-reserve activities and conditions that are significant drinking water threats will be identified based on the technical

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
					<p>rules for the Assessment Report.</p> <ul style="list-style-type: none"> – (Six Nations Band Council plans to investigate on-reserve threats and risks in a separate but parallel initiative.)
Assess risk in Intake Protection Zones (off-reserve)	\$0	\$20,000	2009-Jan-01 to 2011-Sep-30	GRCA	<ul style="list-style-type: none"> – Where significant threats in intake protection zones and other vulnerable areas off-reserve are identified but there is uncertainty associated with either the hazard or vulnerability score, refinement of the risk assessment will be undertaken, to the extent that time and available resources permit and in accordance with methods described in Assessment Report regulations and technical rules. – Includes local area engagement re water quality risk assessment, outreach and creation of communications products.
TOTAL	\$0	\$135,000			

A.6.3.1.2 Six Nations of the Grand River Source Protection Plan

Task	Costs for work completed or In Progress	Estimated Costs for remaining work	Start Date & Estimated Completion Date	Assigned Lead	Comments
Policy development to address (off-reserve) drinking water threats	\$0	\$25,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches to address off-reserve drinking water threats - Task scope will be refined when more information and direction are available. - Includes local area engagement off-reserve, outreach and creation of communications products that support the source protection plan process.
Policy development for monitoring issues and (off-reserve) drinking water threats	\$0	\$10,000	2010-Jan-20 to 2012-Jan-20	GRCA	<ul style="list-style-type: none"> - Investigate local choices for policy approaches for monitoring issues and off-reserve drinking water threats - Task scope will be refined when more information and direction are available.
TOTAL	\$0	\$35,000			

This page left blank intentionally.

APPENDIX B

FULL TASK DESCRIPTIONS

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.

Subject Area	Task Name	Full Task Description
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.

Subject Area	Task Name	Full Task Description
Assessment Report Preparation	Delineating and applying vulnerability scores to WHPAs	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	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	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 Preparation	Other Assessment Report Preparation Task:	If required, add other tasks to complete the assessment report. Describe in detail.
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.

Subject Area	Task Name	Full Task Description
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	Other Source Protection Plan Preparation Task:	If required, add other tasks to complete the source protection plan. Describe in detail.

APPENDIX C

SUMMARY OF ESTIMATED COSTS FOR MUNICIPAL AND WATERSHED-WIDE TASKS

Grand River Source Protection Area

Summary of Estimated Costs for Municipal and Watershed-wide Tasks

Watershed Wide			
Task	Costs of Work Completed or In Progress	Costs of Work Remaining	Total
Coordinating and supporting projects for the assessment report	\$1,604,500.00	\$1,633,200.00	\$3,237,700.00
Undertaking communications initiatives for the assessment report	\$15,000.00	\$39,800.00	\$54,800.00
Information management for the assessment report preparation	\$169,300.00	\$41,800.00	\$211,100.00
Undertaking a watershed characterization	\$21,800.00	\$0.00	\$21,800.00
Conducting a conceptual water budget	\$190,400.00	\$0.00	\$190,400.00
Conducting a Tier 1 water budget analysis	\$0.00	\$0.00	\$0.00
Conducting a Tier 2 water budget analysis	\$811,300.00	\$0.00	\$811,300.00
Conducting a tier 3 water budget analysis and water quantity risk assessment	\$3,200,000.00	\$0.00	\$3,200,000.00
Delineating and applying vulnerability scores to Highly Vulnerable Aquifer areas	\$34,300.00	\$1,900.00	\$36,200.00
Identifying issues, inventorying threats and assessing hazards in Highly Vulnerable Aquifer Areas	\$0.00	\$0.00	\$0.00
Assessing risks in Highly Vulnerable Aquifer Areas	\$0.00	\$0.00	\$0.00
Peer review on vulnerability analysis, issue analysis, hazard analysis, and water quality risk assessment for WHPA and IPZ	\$6,000.00	\$267,000.00	\$273,000.00
Assessment Report Compilation	\$0.00	\$100,000.00	\$100,000.00
Consultation on the overall proposed assessment report	\$0.00	\$0.00	\$0.00
Coordinating and supporting projects for the source protection plan (SPP)	\$0.00	\$2,284,700.00	\$2,284,700.00
Undertaking communications initiatives for the source protection plan	\$0.00	\$53,200.00	\$53,200.00
Information management for source protection plan preparation	\$0.00	\$56,000.00	\$56,000.00
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0.00	\$321,400.00	\$321,400.00
Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	\$0.00	\$120,500.00	\$120,500.00
Policy development for Great Lakes elements (where required/permissible in Act & Regs)	\$0.00	\$0.00	\$0.00
Establishing timelines for policy implementation	\$0.00	\$0.00	\$0.00
Source Protection Plan Compilation	\$0.00	\$0.00	\$0.00
Consultation on the overall proposed source protection plan	\$0.00	\$0.00	\$0.00
TOTAL	\$6,052,600.00	\$4,919,500.00	\$10,972,000.00

Municipal and First Nations			
Task	Costs of Work Completed or In Progress	Costs of Work Remaining	Total
Delineating and applying vulnerability scores to all Wellhead Protection Areas	\$712,200.00	\$1,019,800.00	\$1,762,000.00
Identifying issues, inventorying threats and assessing Hazards in Wellhead Protection Areas	\$1,254,800.00	\$1,275,100.00	\$2,529,900.00
Assess risk in Wellhead Protection Areas	\$103,500.00	\$1,063,200.00	\$1,166,700.00
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0.00	\$1,110,000.00	\$1,110,000.00
Policy development for monitoring drinking water threats or issues (where required, advisable and/or permissible in Act & Regs)	\$0.00	\$386,100.00	\$386,100.00
Establishing timelines for policy implementation	\$0.00	\$10,000.00	\$10,000.00
Other Source Protection Plan Preparation Task: Cross-Municipal Boundary Matters	\$0.00	\$0.00	\$0.00
TOTAL	\$2,070,500.00	\$4,864,200.00	\$6,934,700.00

APPENDIX D

TASK TIMELINE

TASK TIMELINES																																				
Tasks	2004/2005				2005/2006				2006/2007				2007/2008				2008/2009				2009/2010				2010/2011				2011/2012				2012/2013			
	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar				
Terms of Reference Development																																				
Submission of Terms of Reference to Minister																																				
Submission of Assessment Report to Director																																				
Submission of Source Water Protection Plan to Minister																																				
Coordinating and supporting projects for the assessment report																																				
Undertaking communications initiatives for the assessment report																																				
Information management for the assessment report preparation																																				
Undertaking a watershed characterization																																				
Conducting a conceptual water budget																																				
Conducting a Tier 2 water budget analysis																																				
Conducting a Tier 3 water budget analysis and water quantity risk assessment																																				
Delineating and applying vulnerability scores (WHPAs, IPZs)																																				
Delineating and applying vulnerability scores (HVAs)																																				
Identifying issues, inventorying threats and assessing hazards (WHPAs, IPZs)																																				
Identifying issues, inventorying threats and assessing hazards (HVAs)																																				
Risk Assessment (WHPAs, IPZs)																																				
Risk Assessment (HVAs)																																				
Peer review on vulnerability analysis, issue analysis, hazard analysis, and water quality risk assessment for WHPA and IPZ																																				
Assessment Report Compilation																																				
Consultation on the overall proposed assessment report																																				
Coordinating and supporting projects for the Source Protection Plan																																				
Undertaking communications initiatives for the source protection plan																																				
Information management for source protection plan preparation																																				
Policy development to address drinking water threats																																				
Policy development for monitoring drinking water threats or issues																																				
Policy development for Great Lakes elements																																				
Establishing timelines for policy implementation																																				
Source Protection Plan Compilation																																				
Consultation on the overall proposed source protection plan																																				
Cross-Municipal Boundary Matters																																				

APPENDIX E

PROCESS CHECKLIST

Process Checklist

Regulatory Process	Completion Date	Done By
Notify municipal clerks on the commencement of the terms of reference.	2008-Feb-27	SP Committee
Notify band Chiefs on the commencement of the terms of reference.	2008-Mar-20	SP Committee
Give copy of draft proposed ToR to groups created pursuant to Great Lakes Water Quality Agreement & involved in developing/implementing RAPs & LaMPs.	2008-Sep-05	SP Committee
Make the draft proposed terms of reference available at other locations.	2008-Sep-05	SP Committee
Notice for consultation on draft proposed ToR includes information on public meeting scheduled at least 21 days after newspaper notice is published.	2008-Sep-05	SP Committee
Notice for consultation on draft proposed ToR includes requests for comments submitted within 35 days of notice published in the newspaper.	2008-Sep-05	SP Committee
Post draft proposed terms of reference on Internet.	2008-Sep-05	SP Committee
Provide a copy of draft proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Sep-05	SP Committee
Provide a copy of draft to the chiefs of bands whose reserves are located in the source protection area.	2008-Sep-05	SP Committee
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-Sep-05	SP Committee
Publish newspaper notice to publicly view draft proposed ToR on Internet and at other locations (as determined by the source protection committee).	2008-Sep-05	SP Committee
Make provisions to consider Great Lakes Agreements.	2008-Nov-05	SP Committee
Municipal council resolutions have been passed agreeing upon work.	2008-Nov-05	SP Committee
Make the proposed terms of reference available at other locations.	2008-Nov-07	SP Committee
Post proposed terms of reference on the Internet for 30 days.	2008-Nov-07	SP Committee
Provide a copy of proposed terms of reference to the chiefs of bands whose reserves are located in the source protection area.	2008-Nov-07	SP Committee
Provide a copy of proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Nov-07	SP Committee
Provide a copy of proposed terms of reference to the source protection authority.	2008-Nov-07	SP Committee
Provide any unresolved comments from municipalities and bands to the source protection authority on the draft proposed terms of reference.	2008-Nov-07	SP Committee
Receive comments from the 30 day Internet posting from the public, municipalities, bands, and other stakeholders.	2008-Nov-07	SP Authority
Give a copy of the comments on proposed terms of reference to the source protection committee.	2008-Dec-08	SP Authority
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-20	SP Authority

APPENDIX F

MUNICIPAL RESOLUTIONS



COUNTY OF WELLINGTON

PLANNING AND DEVELOPMENT DEPARTMENT
GARY A. COUSINS, M.C.I.P., DIRECTOR
TEL: (519) 837-2600
FAX: (519) 823-1694
1-800-663-0750

ADMINISTRATION CENTRE
74 WOOLWICH STREET
GUELPH, ONTARIO
N1H 3T9

RECEIVED
NOV 14 2008

November 6, 2008

TO: All Conservation Authorities
Wellington County

FROM: Gary Cousins, MCIP
Director of Planning & Development

SUBJECT: **Source Water Protection
Policy Development Land**

At its October 31, 2008 Council meeting, Wellington County Council approved the following:

THAT the County of Wellington advise Conservation Authorities of its willingness to take the lead in developing policy on Source Water Protection for the County but request additional information on how inter-municipal and inter-regional issues will be addressed.

Gary Cousins, MCIP
Director of Planning & Development

GC/pmv

November 28, 2008

Dr. J. Laird
Director of Environmental Services

Dear Dr. Laird:

At a meeting of Guelph City Council held November 28, 2008,
the following resolution was adopted:

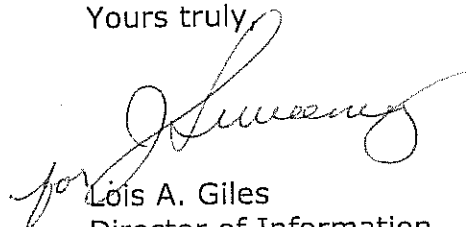
"THAT Council direct Waterworks staff to continue to coordinate drinking water source protection projects with respect to the City's water supply systems, subject to the provision of sufficient and sustainable funding from the MOE to the City to complete all the work outlined in the Terms of Reference;

AND THAT Council not "elevate" (i.e. include) other drinking water systems into the scope of source protection planning, at this time;

AND THAT Council not exempt municipal residential drinking water systems, wells, or intakes within Guelph;

AND THAT Council requests that the following wells be included in the drinking water source protection plan: Arkell 14, Arkell 15, Scout Camp, Edinburgh, Smallfield, and Sacco."

Yours truly,


Lois A. Giles

Director of Information
Services/ City Clerk

LAG: db

City Hall
1 Carden St
Guelph, ON
Canada
N1H 3A1

T 519-822-1260
TTY 519-826-9771

guelph.ca



REGIONAL MUNICIPALITY OF WATERLOO

OFFICE OF THE REGIONAL CLERK

P.O. Box 9051 – Station C
150 Frederick Street, Kitchener, Ontario N2G 4J3
Telephone: 519-575-4400
Fax: 519-575-4481
www.region.waterloo.on.ca

December 2, 2008

Craig Ashbaugh, Chair
Lake Erie Source Protection Committee
c/o Grand River Conservation Authority
P.O. Box 729, 400 Clyde Road
Cambridge, ON N1R 5W6

Dear Mr. Ashbaugh:

Re: Responsibility for Tasks in Lake Erie Source Protection Region Terms of Reference

This letter is to inform you that the Council of the Regional Municipality of Waterloo at their meeting held on November 26, 2008 passed the following resolution:

THAT the Regional Municipality of Waterloo:

- **be designated as task “lead” for implementing initiatives within the Region of Waterloo identified in the Lake Erie Source Protection Region (LESPR) Terms of Reference (TOR) as discussed in E08-079.1;**
- **request that the Lake Erie Region Source Protection Authority (SPA) and Source Protection Committee (SPC) identify that insufficient funds have been allocated or promised by the Ministry of Environment (MOE) to complete the tasks in the TOR when it is submitted to the MOE for approval, and request that the MOE confirm whether additional funds will be provided to cover the full costs of developing the source protection plan;**
- **provide a copy of this report to the Minister of Environment and request that the Minister confirm whether the additional funds are to be provided to cover the costs of developing the source protection plan outlined in the Lake Erie Source Protection Region TOR; and**
- **provide copies of this report to the Grand River Conservation Authority and Clerks of area municipalities.**

This letter is for information purposes only. A copy of the report is enclosed. If you have any questions please contact Eric Hodgins, Manager, Water Resources Protection at (519) 575-4434.

Please forward any written correspondence to Kris Fletcher, Director Council and Administrative Services/Regional Clerk

Yours Truly,

A handwritten signature in black ink, appearing to read 'Mike Grivicic', followed by a long horizontal line.

Mike Grivicic
Council/Committee Support Specialist

MG/jd

cc: T. Schmidt, Commissioner, Transportation and Environmental Services
E. Hodgins, Manager Water Resources Protection



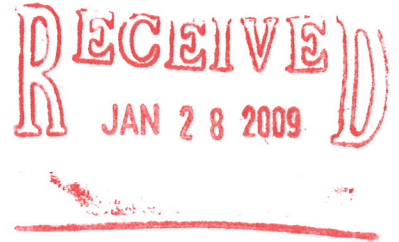
Corporation of the County of Perth

Planning & Development Department

Court House, 1 Huron Street, Stratford Ontario N5A 5S4

Tel: (519) 271-0531

Fax: (519) 273-5967



January 26, 2009

Mr. Simon Glauser
Source Protection Program Coordinator
Grand River Conservation Authority
400 Clyde Road
Cambridge, Ontario
N1R 2W6

RE: Task Lead for Policy Development – Milverton Water Supply

Dear Mr. Simon Glauser:

This is to confirm that Perth County Council passed the following resolution at its meeting on January 22, 2009:

Resolution # 2009-18

That the County of Perth agrees to take the lead for the following tasks listed in the work plan for the Township of Perth East in the proposed Grand River Source protection Area terms of Reference – policy development to address drinking water threats; policy development for monitoring drinking water threats or issues; and establishing timelines for policy implementation;

And further that the County's decision to take this lead and it's work on the policy development issue in no way obligates the County or the Township of Perth East in respect to financial obligations for the implementation of the policies that are developed.

Should you have any questions, please do not hesitate to contact me.

Regards,

Dave Hanly,
Director, Planning and Development
519-271-0531 Ext. 410

cc. Carol Zimmer, Kerri Ann O'Rourke, Bud Markham



Community and Strategic Planning

P. O. Box 1614, 21 Reeve Street

Woodstock Ontario N4S 7Y3

Phone: 519-539-9800 • Fax: 519-421-4712

Web site: www.county.oxford.on.ca

Our File:

September 17, 2008

via email: comments@sourcewater.ca

Ms. Lorrie Minshall
Source Protection Program Director
Lake Erie Source Protection Region
c/o Grand River Conservation Authority
400 Clyde Road
Cambridge, ON N1R 5W6

Dear Ms. Minshall:

Re: Source Water Protection Terms of Reference for the Lake Erie Region

Please find enclosed Report 2008-71 which constitutes comments from the County of Oxford regarding the Terms of Reference consultation. Oxford County Council adopted the following resolution at its meeting of September 10, 2008:

"That Report No. D-1 2008-71 be adopted by County Council and be forwarded to the Lake Erie Source Protection Region in response to Terms of Reference consultation; and that County Council approve the work plans set out in the Terms of Reference for each Source Protection Area of the Lake Erie Source Protection Region with jurisdiction in the County of Oxford particularly as it applies to the tasks and funding allocated to Oxford County."

If you have any questions regarding the above, please do not hesitate to contact me.

Yours Truly,

../lb
encl.

Margaret Misek-Evans
Corporate Manager

cc - D. Goudreau, County Public Works

COUNTY OF OXFORD
REPORT NO. D-1 2008-71
PUBLIC WORKS
SEPTEMBER 10, 2008

RECOMMENDATION CONTAINED IN REPORT NO. D-1 2008-71:

"That Report No. D-1 2008-71 be adopted by County Council and be forwarded to the Lake Erie Source Protection Region in response to Terms of Reference consultation; and that County Council approve the work plans set out in the Terms of Reference for each Source Protection Area of the Lake Erie Source Protection Region with jurisdiction in the County of Oxford particularly as it applies to the tasks and funding allocated to Oxford County."

11.

MUNICIPAL COUNCIL OF THE COUNTY OF OXFORD

Doan!

Moved by:

Ronald Doan

Woodstock, Ontario

Seconded by:

Pat Doan

September 10, 2008

Resolved: That the recommendation contained in Report No. D-1 2008-71, titled "Source Water Protection Terms of Reference for the Lake Erie Region", be adopted.

Carried - Yes

The recommendation contained in Report No. D-1 2008-71 of the Department of Public Works, dated September 10, 2008, was adopted by Oxford County Council Resolution No. 11, dated September 10, 2008.

I, Brenda J. Tabor, Deputy Clerk of the County of Oxford, do hereby certify that the foregoing is a true copy of Resolution No. 11, dated September 10, 2008, passed by Oxford County Council on September 10, 2008.

Brenda J. Tabor
Brenda J. Tabor, Deputy Clerk

The following was added as a friendly amendment:

- C. THAT staff BE DIRECTED to attend all public meetings respecting the Brantford to Cambridge Transportation Corridor – Draft Environmental Assessment Terms of Reference to articulate the City of Brantford's position that the preferred location of the highway is Garden Avenue (first choice) or Wayne Gretzky Parkway (second choice) and to take every opportunity to promote GO Transit in this transportation corridor.

Moved by Councillor Calnan
Seconded by Councillor Martin

THAT Committee CALL the question on the motion as amended.
CARRIED

The item, with the friendly amendment, was voted on and approved.

3.1.3 Draft Terms of Reference for the Development of the Assessment Report and Source Protection Plan for the Grand River Source Protection Area (EN2008-178)

Moved by Councillor Ceschi-Smith
Seconded by Councillor Littell

WHEREAS the Lake Erie Region Source Protection Committee (Committee) has prepared the draft proposed Terms of Reference (TOR) for the Grand River Source Protection Area; and

WHEREAS the Committee requested comments be submitted by October 10, 2008 on the TOR; and

THEREFORE BE IT RESOLVED THAT the Corporation of the City of Brantford agrees to be the "lead" for developing the Assessment Report and the Source Protection Plan for Brantford and undertake the tasks listed in the Brantford work plan within the time and budget limits as outlined in the TOR; and

FURTHER THAT the City requests the Grand River Conservation Authority to undertake the following tasks related to Brantford's intake protection zone 3 (Grand River watershed upstream of Brantford) as per the Clean Water Act regulations and technical rules:

- Delineating and applying vulnerability scores

- Identifying issues, inventorying threats and assessing hazards
- Assess and prioritize risks
- Policy development to address threats and issues
- Policy development for monitoring threats and issues
- Establishing timelines for policy implementation

CARRIED

S. Kongara provided details of a public meeting to be held on October 1, 2008 at the Best Western in Brantford from 5:00 – 8:00 p.m. on the Source Protection Plan.

3.1.4 Review of Practices for Changing Traffic Control and Signal Operation at City Intersections (EN2008-145)

Moved by Councillor Martin

Seconded by Councillor Littell

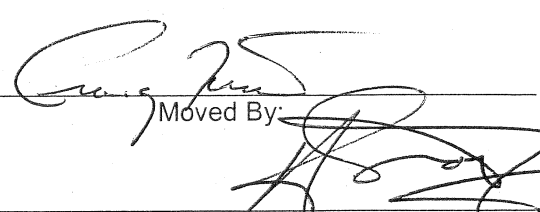
- A. THAT Council ADOPT the revised warrants for assessing the need for all-way stop controls, as noted in Appendix A of Report EN2008-145; and
- B. THAT Council ADOPT the revised warrants for assessing the need for Intersection Pedestrian Signals (IPS) and Mid-block Pedestrian Signals (MPS) as noted in Appendix B of Report EN2008-145; and
- C. THAT Council ADOPT the revised warrants for assessing the need for the installation of Traffic Signals as noted in Appendix C of Report EN2008-145; and
- D. THAT the General Manager of Engineering and Operational Services BE DIRECTED to prepare information to the public on the procedure for changing traffic controls at a particular intersection; and
- E. THAT the General Manager of Engineering and Operational Services BE DIRECTED to provide information to the public and Council on the warrants for changing traffic signal operations; and
- F. THAT the General Manager of Engineering and Operational Service BE DIRECTED to advise Ward Councillors when traffic signal phasing changes take place in their wards, including staff initiated changes.

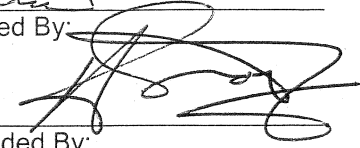
Recommendation No. E 11
Date: September 22, 2008

THE CORPORATION OF
HALDIMAND COUNTY

COUNCIL IN COMMITTEE RECOMMENDATION

- ☐ Community Services
☐ Corporate Services
☐ Joint Services
☒ Physical Services
☐ Planning & Economic Development

Moved By: 

Seconded By: 

-
1. THAT Report PS-EI-07-2008 Re: Lake Erie Source Protection Planning - Questions Requiring Resolutions by Council dated September 11, 2008 be received;
 2. AND THAT Council approve the responses drafted by Staff to questions asked by the Lake Erie Source Protection Authority concerning source protection planning;
 3. AND THAT Council direct Staff to submit approved responses to the Lake Erie Source Protection Authority.

Defeated

(Unanimously _____)
(_____ , _____)


Carried

(Unanimously ✓)
(6 , 0)



HALDIMAND COUNTY

Report PS-EI-07-2008
of the General Manager of Physical Services
for Consideration by Council in Committee

**RE: Lake Erie Source Protection Planning –
Questions Requiring Resolutions by Council**

OBJECTIVE: To obtain approval from Council on staff responses to questions asked by the Lake Erie Source Protection Authority concerning source protection planning.

RECOMMENDATIONS:

1. THAT Report PS-EI-07-2008 Re: Lake Erie Source Protection Planning - Questions Requiring Resolutions by Council dated September 11, 2008 be received;
2. AND THAT Council approve the responses drafted by Staff to questions asked by the Lake Erie Source Protection Authority concerning source protection planning;
3. AND THAT Council direct Staff to submit approved responses to the Lake Erie Source Protection Authority.

Prepared by:

PH Phil Wilson
Supervisor, Water & Wastewater Capital Projects
Date: September 11, 2008

Reviewed by:

TH Tyson Haedrich, M. Eng., P. Eng.
Manager, Engineering & Infrastructure

Respectfully submitted:

Geoff Rae, M.B.A., P. Eng.
General Manager
Physical Services Department

Approved:

Donald G. Boyle
Chief Administrative Officer

Source Protection Plans will also impact servicing strategies related to wastewater treatment. The Caledonia, Cayuga, and Dunnville Water Pollution Control Plants will certainly be impacted. Future plant expansions will require implementing costly, advanced technologies to meet increasingly stringent effluent limits. The recently adopted Haldimand County – Caledonia to Nanticoke Highway 6 Corridor Servicing Strategy, acknowledges this impact potential.

CONCLUSION:

Staff recommend the following responses to the four questions being asked by the Lake Erie Source Protection Authority concerning source protection planning:

Question #1: To what level does your municipality wish to participate in future technical studies and/or source protection planning work?

Response: Haldimand County agrees to assume the lead for the tasks that are related to the completion of the assessment report and source protection plan in each of the Grand River Source Protection Area and the Long Point Region Source Protection Area draft Terms of Reference. Haldimand County recognizes that the costs identified in the draft Terms of Reference are estimates only. Once the scope of work is finalized, the costs and agreement will be negotiated with the lead Source Protection Authority in the Source Protection Region.

Question #2: Does your Council wish to pass a resolution that would "elevate" other drinking water systems into the scope of source protection planning?

Response: Haldimand County does not wish to "elevate" or incorporate any other drinking water systems other than the two (2) municipal drinking water systems owned by the County into the scope of source protection planning within the Lake Erie Region.

Question #3: Does your Council wish to pass a resolution requesting exemption for existing municipal residential drinking water systems, wells, or intakes within your municipality that will be decommissioned within the next five years?

Response: Haldimand County wishes to identify the Dunnville emergency intake as a component of the Dunnville municipal residential drinking water system that will be decommissioned within the next five years.

Question #4: Are there planned municipal residential drinking water systems within your municipality that should be addressed in source protection planning?

Response: There are no planned municipal residential drinking water systems within Haldimand County at this time that should be addressed in source protection planning with the exception of the upgrade and expansion to the Nanticoke Water Treatment Plant that is already recognized by the Lake Erie Source Protection Authority.