DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Approved Source Protection Plan

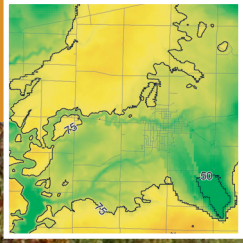
September 19, 2014

Catfish Creek

Source Protection Area

Prepared on behalf of the Lake Erie Region
Source Protection Committee

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



www.sourcewater.ca

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Approved Source Protection Plan for the Catfish Creek Source Protection Area within the Lake Erie Source Protection Region

The Minister has approved this plan. The effective date is January 1, 2015.

September 19, 2014

This project has been made possible through funding support from the Government of Ontario.

Additional copies of this Source Protection Plan may be obtained by contacting:

Grand River Conservation Authority
400 Clyde Road, P.O. Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761

For more information on the *Clean Water* Act, *2006* and how you can play a role in protecting drinking water sources in the Lake Erie Source Protection Region, please visit our website: www.sourcewater.ca

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VOLUME II

Catfish Creek Source Protection Area

APPROVED
SOURCE PROTECTION PLAN

VOLUME I

Prepared on behalf of:
Lake Erie Region Source Protection Committee

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

September 19, 2014

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EXECUTIVE SUMMARY

A Plan to Protect Drinking Water in the Catfish Creek Watershed

The *Clean Water Act,* 2006 provides a framework for the development and implementation of local, watershed-based Source Protection Plans, and is intended to implement the drinking water source protection recommendations made by Justice Dennis O'Connor in Part II of the Walkerton Inquiry Report.

The key objectives of the source protection planning process are to complete science-based Assessment Reports that identify the risks to municipal drinking water sources, and to develop local Source Protection Plans that put policies in place to reduce the risks to protect current and future sources of drinking water.

The Catfish Creek Source Protection Plan sets out policies to protect sources of drinking water.

The first volume (Volume I) of the Catfish Creek Source Protection Plan provides the context for the overall Plan, including a brief history of source protection planning and the *Clean Water Act, 2006*, Source Protection Plan objectives, and a description of the watershed/source protection area. This volume also includes a description of plan components, key steps in the planning process, public consultation, interaction with other Source Protection Regions, source water threats, guidance on how to read the Plan, and details on Plan implementation and enforcement.

The second volume (Volume II) of the Catfish Creek Source Protection Plan contains the County of Oxford Source Protection Plan policies and policies Addressing Prescribed Drinking Water Threats within County of Oxford. These policies address the existing and future drinking water threats.

How the Source Protection Plan was Developed

The Source Protection Planning process is being led by a multi-stakeholder steering committee called the Lake Erie Region Source Protection Committee. The Committee was formed in November 2007, and is responsible for directing the development of the Assessment Reports and Source Protection Plans for each of the four Source Protection Areas in the Lake Erie Region.

Consultation with the public and stakeholders is key to developing a locally derived Source Protection Plan and is required under the *Clean Water Act, 2006* at each key point in the planning process. Broad public consultation was conducted throughout the development of the Source Protection Plan, involving municipalities, conservation authorities, property owners, farmers, industry, businesses, community groups, public health officials, and First Nations. Key consultation mechanisms included stakeholder workshops, public meetings and open houses, and opportunities to comment on discussion papers and via the project website.

Public Consultation on the Catfish Creek Source Protection Plan

The *Clean Water Act, 2006* requires two formal rounds of consultation with the public and stakeholders. The Draft Catfish Creek Source Protection Plan was posted for a 35 day comment period beginning on August 20, 2012 and ending on September 24, 2012, with one (1) public meeting in Brownsville on September 18, 2012. This was an opportunity for the public and stakeholders to comment on the Draft Source Protection Plan. All comments received during this first round of consultation were provided to the Source Protection Committee for their consideration.

An additional 30 day comment period followed from November 2 until December 3, 2012 to provide the public and stakeholders with an opportunity to review and comment on revisions before the Proposed Source Protection Plan was submitted to the Minister of the Environment for final approval. The comments and feedback received during this final comment period were submitted in their entirety as part of the Proposed Source Protection Plan to the Minister of the Environment. The Catfish Creek Source Protection Authority submitted the Proposed Source Protection Plan to the Minister on December 13, 2012.

As part of the plan review process, the Ministry of Environment formally provided recommended revisions and comments on December 13, 2013. These comments have been addressed and the proposed changes are included in this Approved Source Protection Plan.

The Draft Amended Catfish Creek Source Protection Plan was posted for public consultation for a 30 day comment period beginning on January 13, 2014. Comments could be sent to Martin Keller, Program Manager, until February 11, 2014:

comments@sourcewater.ca

Martin Keller, M.Sc.
Source Protection Program Manager
Lake Erie Source Protection Region
c/o Grand River Conservation Authority
Box 729
400 Clyde Road, Cambridge N1R 5W6
Fax: 519-621-4945

Any comments received during the comment period were reviewed by the Source Protection Committee and considered in the finalization of the Proposed Amended Source Protection Plan. The Proposed Amended Source Protection Plan was submitted to the Minister of the Environment after the Source Protection Authority meeting on April 10, 2014.

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These maps are for information purposes only. Therefore, the Catfish Creek Conservation Authority and the Grand River Conservation Authority take no responsibility for, nor guarantee, the accuracy of all the information contained within these maps.

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1.0 INTRODUCTION

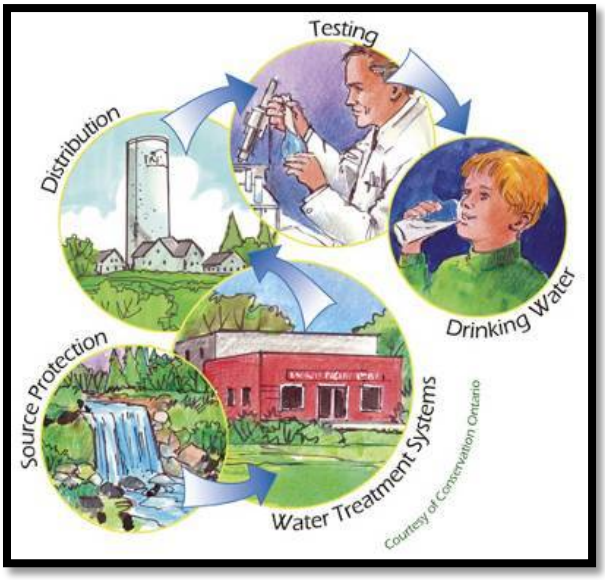
1.1 Protecting Our Drinking Water

Following the public inquiry into the Walkerton drinking water crisis in May 2000, Justice Dennis O'Connor released a report in 2002 containing 121 recommendations for the protection of drinking water in Ontario. Since the release of the recommendations, the Government of Ontario has introduced legislation to safeguard drinking water from the source to the tap, including the *Clean Water Act* in 2006. The *Clean Water Act*, 2006 provides a framework for the development and implementation of local, watershed-based source protection plans, and is intended to implement the drinking water source protection recommendations made by Justice Dennis O'Connor in Part II of the Walkerton Inquiry Report. The *Clean Water Act*, 2006 came into effect in July 2007, along with the first five associated regulations.

The intent of the *Clean Water Act, 2006* is to ensure that communities are able to protect their municipal drinking water supplies now and in the future from overuse and contamination. It sets out a risk-based process on a watershed basis to identify vulnerable areas and associated drinking water threats and issues. It requires the development of policies and programs to reduce or eliminate the risk posed by significant threats to sources of municipal drinking water through science-based Source Protection Plans.

The *Clean Water Act, 2006* and Drinking Water Source Protection are one component of a multi-barrier approach to protecting drinking water supplies in Ontario. The five steps in the multi-barrier approach include:

- **Source water protection**
- Adequate treatment
- Secure distribution system
- Monitoring and warning systems
- Well thought-out responses to adverse conditions



After the Walkerton Inquiry, the Government of Ontario enacted the *Safe Drinking Water Act*, *2002* which provides new requirements and rules for the treatment, distribution and testing of municipal drinking water supplies. Together, the *Clean Water Act, 2006* and *Safe Drinking Water Act*, *2002*, along with their associated regulations, provide the legislative and regulatory framework to implement the multi-barrier approach to municipal drinking water protection in Ontario.

The protection of municipal drinking water supplies through the *Clean Water Act, 2006* is one piece of a much broader environmental protection framework in Ontario. Water resources in Ontario are protected directly and indirectly through the federal and provincial governments, municipalities, conservation authorities and public health units.

Source Protection Planning Process

The key objectives of the source protection planning process are to complete science-based Assessment Reports that identify the risks to municipal drinking water sources, and to develop local Source Protection Plans that put policies in place to reduce the risks to current and future sources of drinking water.

Since 2005, municipalities and conservation authorities have been undertaking studies to delineate areas around municipal drinking water sources that are most vulnerable to contamination and overuse. Within these vulnerable areas, technical studies have identified historical, existing, and possible future land use activities that are or could pose a threat to municipal water sources. The Catfish Creek Assessment Report for the Catfish Creek Source Protection Area was approved by the Ministry of the Environment on September 2, 2014 and is available online at www.sourcewater.ca.

The Proposed Source Protection Plan was submitted to the Minister of the Environment on December 13, 2012 for review and approval. As part of the plan review process, the Ministry of Environment formally provided recommended revisions and comments on December 13, 2013. These comments were addressed and the proposed changes included in a Proposed Amended Source Protection Plan.

The Draft Amended Catfish Creek Source Protection Plan was posted for public consultation for a 30 day comment period beginning on January 13, 2014. Comments could be sent to Martin Keller, Program Manager, until February 11, 2014:

comments@sourcewater.ca

Martin Keller, M.Sc.
Source Protection Program Manager
Lake Erie Source Protection Region
c/o Grand River Conservation Authority
Box 729
400 Clyde Road, Cambridge N1R 5W6
Fax: 519-621-4945

Any comments received during the comment period were reviewed by the Source Protection Committee and considered in the finalization of the Proposed Amended Source Protection Plan. The Proposed Amended Source Protection Plan was submitted to the Minister of the Environment after the Source Protection Authority meeting on April 10, 2014.

The Source Protection Plan is a document that sets out policies to protect sources of drinking water against a list of prescribed drinking water threats identified by the Ministry of the Environment and Climate Change.

Public input and consultation played a significant role throughout the process of developing the Source Protection Plan. The task of Source Protection Plan development involved

municipalities, conservation authorities, property and business owners, farmers, industry, health officials, community groups and others working together to develop a fair, practical, and implementable Source Protection Plan.

After approval of the Source Protection Plan, annual progress reports on implementation will be required. Implementation of the Source Protection Plan will be led by municipalities in most cases. The provincial government, as well as conservation authorities, public health units and other organizations also have roles in implementing policies in the Source Protection Plans. The agencies identified in the Source Protection Plan will use a range of voluntary and regulatory programs and tools, including outreach and education, incentive programs, land use planning (zoning by-laws and Official Plans) new or amended provincial instruments, risk management plans and prohibition.

Public Consultation on the Source Protection Plan

Consultation with the public and stakeholders was key to developing a locally derived Source Protection Plan. Consultation is required under the *Clean Water Act, 2006* at each key point in the source protection planning process.

Public consultation was conducted using the following methods:

- Distribution of factsheets, brochures, and pamphlets: samples available online at www.sourcewater.ca ;
- Property specific mailings to landowners affected by the Source Protection Process;
- Stakeholder workshops on policy options;
- Public open houses on the technical work, policy development and the three major documents under the Source Protection Program: the Terms of Reference, Assessment Report and Source Protection Plan;
- Early engagement of the public on draft Assessment Reports technical work and Source Protection Plan policy options;
- Formal public consultation on the Terms of Reference, Assessment Reports and Source Protection Plan;
- Pre-consultation and formal consultation with Municipal Councils and First Nations; and
- Availability of hard copies of Source Protection Plan materials and the Assessment Report at Conservation Authority and municipal administrative offices.

In preparing the Catfish Creek Terms of Reference, the Assessment Report and Source Protection Plan, the Source Protection Committee considered all feedback received from the public and stakeholders during consultation. For a complete summary of the consultation activities carried out for the preparation of the Terms of Reference, the Assessment Report and the Source Protection Plan please refer to **Section 5.2.3**.

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2.0 SOURCE PROTECTION PLAN OBJECTIVES

The Catfish Creek Source Protection Plan is a document that sets out the policies to protect sources of municipal drinking water against potential existing and future drinking water threats. The objectives of the Source Protection Plan are detailed in the *Clean Water Act, 2006* (O. Reg. 287/07. s.22) and are described below.

22. (1) Every source protection plan shall set out the following as objectives of the plan:

1. To protect existing and future drinking water sources in the source protection area.
2. To ensure that, for every area identified in an assessment report as an area where an activity is or would be a significant drinking water threat,
   i. the activity never becomes a significant drinking water threat, or
   ii. if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat. O. Reg. 246/10, s. 12.

(2) If a source protection plan sets out policies relating to conditions resulting from past activities, the plan shall set out that an objective of the plan is to ensure that for every area identified in the assessment report as an area where a condition that results from a past activity is a significant drinking water threat, the condition ceases to be a significant drinking water threat. O. Reg. 246/10, s. 12.

(3) If, under subsection 85 (6) of the Act, the Minister has directed that a report be prepared and submitted that recommends policies that should be set out in the source protection plan for the source protection area to assist in achieving a Great Lakes target, the plan shall set out that an objective of the plan is to achieve the target for the source protection area. O. Reg. 246/10, s. 12.

(4) No objectives other than the objectives set out in subsections (1) to (3) shall be contained in a source protection plan. O. Reg. 246/10, s. 12.

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3.0 COMPONENTS AND SUPPORTING DOCUMENTS

The Source Protection Plan is divided into two volumes, including appendices and supporting documents.

3.1 Volume I

The first volume of the Catfish Creek Source Protection Plan provides the context for the overall Plan, including a brief history of source protection planning, Source Protection Plan objectives under the *Clean Water Act*, *2006*, and a description of the watershed/source protection area. This volume also includes a description of Plan components, key steps in the planning process, public consultation, interaction with other Source Protection Regions, drinking water threats, guidance on how to read the Plan, and details on Plan implementation and enforcement.

The Catfish Creek Source Protection Area Assessment Report is another key component of the Source Protection Plan. Since 2005, numerous technical studies have been completed and are summarized in the Catfish Creek Source Protection Area Assessment Report. This Assessment Report examined and identified:

- The vulnerable areas around municipal-residential drinking water sources;
- Intrinsic susceptibility to contamination;
- Where potential threats to water quality and quantity may exist in each vulnerable area;
- The activities that pose drinking water threats to human health; and
- How significant the risks of these drinking water threats are to contaminating or depleting the water supply.

Based on this analysis, significant drinking water threats were identified. The information contained in the Assessment Report was used to prepare the Source Protection Plan. For this reason, and based on the requirements under section 22 (2) of the *Clean Water Act*, *2006,* the Assessment Report is included as part of the submission of this Source Protection Plan to the Ministry of the Environment and Climate Change. The Assessment Report is available online at www.sourcewater.ca.

Maps: Volume I of the Source Protection Plan contains 3 maps:

- Map A: Lake Erie Source Protection Region
- Map B: Catfish Creek Source Protection Area
- Map C: Adjacent Source Protection Regions and Municipalities

Appendices: The appendices associated with this Volume include:

- APPENDIX A: DEFINITIONS
- APPENDIX B: DRINKING WATER THREATS AND OPTIONAL CONTENT FOR LAKE ERIE SOURCE PROTECTION REGION
- APPENDIX C: LEGAL EFFECT MATRIX
- APPENDIX D: REFERENCES

3.2 Volume II

The second volume of the Catfish Creek Source Protection Plan contains the Source Protection Plan policies. These policies address both existing (where applicable) and future drinking water threats. Volume II includes policies for significant drinking water threats, and optional content. Future updates to the Source Protection Plan may include policies for moderate and low drinking water threats.

Sections 1 and 2 of Volume II contain information about the legal effect of the Source Protection Plan policies, as well as guidance on how to read the Plan. The source protection policies for the Catfish Creek Source Protection Area are included in Section 3 of Volume II. This section includes the following:

- A description of where the Source Protection Plan policies apply;
- Definitions specific to the identified municipality (i.e., existing and future);
- Source Protection Plan policies;
- Required Appendices as per section 34 of O.Reg. 287/07; and
- Maps showing where the Source Protection Plan policies apply.

Appendices: The appendices associated with Volume II include information as required by section 34 of O.Reg. 287/07:

- Appendix A – A list of policies as per section 34 of O.Reg. 287/07
- Appendix B – Prescribed Instrument and Policy Summary Tables

3.3 Explanatory Document

Before publishing the Source Protection Plan under section 41 of O. Reg. 287/07, the Source Protection Committee prepares an Explanatory Document.

This document contains the following, as described in the regulation, to aid in the review of the Source Protection Policies:

1. An explanation of the Source Protection Committee's reasons for each policy set out in the Source Protection Plan.

2. An explanation of the Source Protection Committee's reasons for designating an activity under paragraph 1 of subsection 22 (3) of the *Clean Water Act, 2006*, including the reasons relied on by the Committee to form the opinion that the activity must be prohibited in order to ensure that it ceases to be a significant drinking water threat.

3. A summary of the comments received under sections 35 to 39 and an explanation of how the comments affected the development of the policies set out in the Source Protection Plan.

4. An explanation of how the summary referred to in paragraph 7 of subsection 13 (1) affected the development of the policies set out in the Source Protection Plan.

5. A summary of how the consideration of the potential financial implications for persons and bodies who would be implementing or affected by the Source Protection Plan influenced the development of the policies set out in the Plan.

6. If a policy described in subsection 22 (7) of the *Clean Water Act, 2006* or paragraph 1 of section 26 of this Regulation is the only policy set out in a source protection plan to deal with an activity that has been identified as a significant drinking water threat, a statement that the Source Protection Committee is of the opinion that,

    i. the policy, if implemented, will promote the achievement of the objectives of the plan in accordance with paragraph 2 of subsection 22 (2) of the Act, and

    ii. a policy to regulate or prohibit the activity is not necessary to achieve those objectives. O. Reg. 246/10, s. 12.

Throughout the development of the Source Protection Plan, the Source Protection Committee resolved that this first version of the Source Protection Plan not consider any drinking water threats not identified as such under the *Clean Water Act, 2006.* However, a number of activities that currently are not considered drinking water threats were also discussed. Section 2.2 of the Explanatory Document seeks to provide clarification on issues and concerns raised throughout the Source Protection Plan development process by either the Lake Erie Source Protection Committee, other interested bodies and/or the general public.

The Source Protection Committee felt that it was important to provide clarification as to why certain activities that the public or other agencies may expect to be included in the Source Protection Plan have not been included.

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4.0 THE LAKE ERIE SOURCE PROTECTION REGION

In an effort to share knowledge and resources for the purposes of developing Source Protection Plans, a partnership was formed in 2004 between the Grand River, Long Point Region, Catfish Creek and Kettle Creek Conservation Authorities to create the Lake Erie Source Protection Region. The partnership was formalized in 2007 by Ontario Regulation 284/07 (Source Protection Areas and Regions) under the *Clean Water Act, 2006*. The Grand River Conservation Authority, referred to in the regulation as the Grand River Source Protection Authority, acts as the lead source protection authority for the region. **Map A** presents the territory covered by the Lake Erie Source Protection Region, including municipal boundaries and main rivers and tributaries.

The four Source Protection Authorities agreed to jointly undertake research, public education, and watershed planning and management for the advancement of drinking water source protection for the respective watersheds. The watersheds have a long history of partnership and cooperation, and also have a natural association by containing the majority of inland rivers and streams flowing from Ontario directly into Lake Erie.

Combined, the Lake Erie Source Protection Region represents a diverse area, ranging from intense agricultural production to large and rapidly expanding urban areas. The region spans an area from the City of St. Thomas in the west, to Dunnville / Port Maitland to the east, and as far north as Dundalk. The area includes 52 upper, lower and single tier municipalities, as well as two First Nations reserves.

The Lake Erie Region Source Protection Committee

The Source Protection Planning process is being led by a multi-stakeholder steering committee called the Lake Erie Region Source Protection Committee. The Committee was formed in November 2007, and is responsible for directing the development of the Assessment Reports and Source Protection Plans for each of the four Source Protection Areas in the Lake Erie Source Protection Region. The list of members as of the date this Source Protection Plan was published is summarized in **Table 4-1.**

Table 4-1: Members of the Lake Erie Region Source Protection Committee

Name	Seat Held	Nomination/Appointment	Appointed	Resigned
Craig Ashbaugh	Chair	Minister of the Environment	November, 2007	-
Peter Busatto	Municipal	City of Guelph	November, 2012	September, 2013
Marguerite Ceschi-Smith	Public Interest	Grand River Source Protection Authority	November, 2007	-
Howard Cornwell	Municipal	Perth, Oxford	November, 2007	-
Alan Dale	Public Interest	Grand River Source Protection Authority	January 2012	-
Paul General	First Nations	Six Nations of the Grand River	November, 2007	-
Mark Goldberg	Public Interest	Grand River Source Protection Authority	November, 2007	November, 2011
Roy Haggart	Municipal	Brant, Brantford, Hamilton	November, 2007	-
John Harrison	Public Interest	Grand River Source Protection Authority	November, 2007	June, 2012

Table 4-1: Members of the Lake Erie Region Source Protection Committee				
Name	**Seat Held**	**Nomination/Appointment**	**Appointed**	**Resigned**
Andrew Henry	Public Interest	Elgin Area Primary Water Board	November, 2007	-
Darryl Hill	First Nations	Six Nations of the Grand River	April, 2012	-
Ken Hunsberger	Agriculture	Agricultural Community	November, 2007	-
Robert E. Johnson	First Nations	Six Nations of the Grand River	March, 2011	April, 2011
Ralph Krueger	Business and Industry	Grand River Source Protection Authority	November, 2007	-
Clynt King	First Nations	Mississaugas of the New Credit	March, 2011	-
Bryan LaForme	First Nations	Mississaugas of the New Credit	November, 2007	March, 2011
Janet Laird	Municipal	City of Guelph	November, 2007	November 2012
Ian MacDonald	Business and Industry	Grand River Source Protection Authority	November, 2007	-
Chris Martin	First Nations	Six Nations of the Grand River	November, 2007	November, 2010
George Montour	First Nations	Six Nations of the Grand River	April, 2011	January, 2012
Dale Murray	Municipal	Grey, Dufferin, Halton, Wellington	November, 2007	-
Jim Oliver	Municipal	Haldimand, Norfolk	November, 2007	-
David Parker	Agriculture	Agricultural Community	November, 2007	-
Lloyd Perrin	Municipal	Elgin, Middlesex, London	November, 2007	-
Geoff Rae	Public Interest	Nanticoke Grand Valley Water Supply	November, 2007	July 2010
Peter Rider	Municipal	Guelph	October, 2013	-
Phil Wilson	Public Interest	Nanticoke Grand Valley Water Supply	January, 2011	-
Richard Seibel	Aggregate Industry	Ontario Stone, Sand & Gravel Assoc.	November, 2007	August, 2011
Thomas Schmidt	Municipal	Waterloo Region	November, 2007	-
George Schneider	Aggregate Industry	Ontario Stone, Sand & Gravel Assoc.	October, 2011	-
Bill Strauss	Public Interest	Grand River Source Protection Authority	July, 2012	-
Bill Ungar	Business and Industry	Grand River Source Protection Authority	November, 2007	-
Mark Wales	Agriculture	Agricultural Community	November, 2007	-
Don Woolcott	Public Interest	Grand River Source Protection Authority	November, 2007	-
Wendy Wright-Cascaden	Public Interest	Grand River Source Protection Authority	November, 2007	-

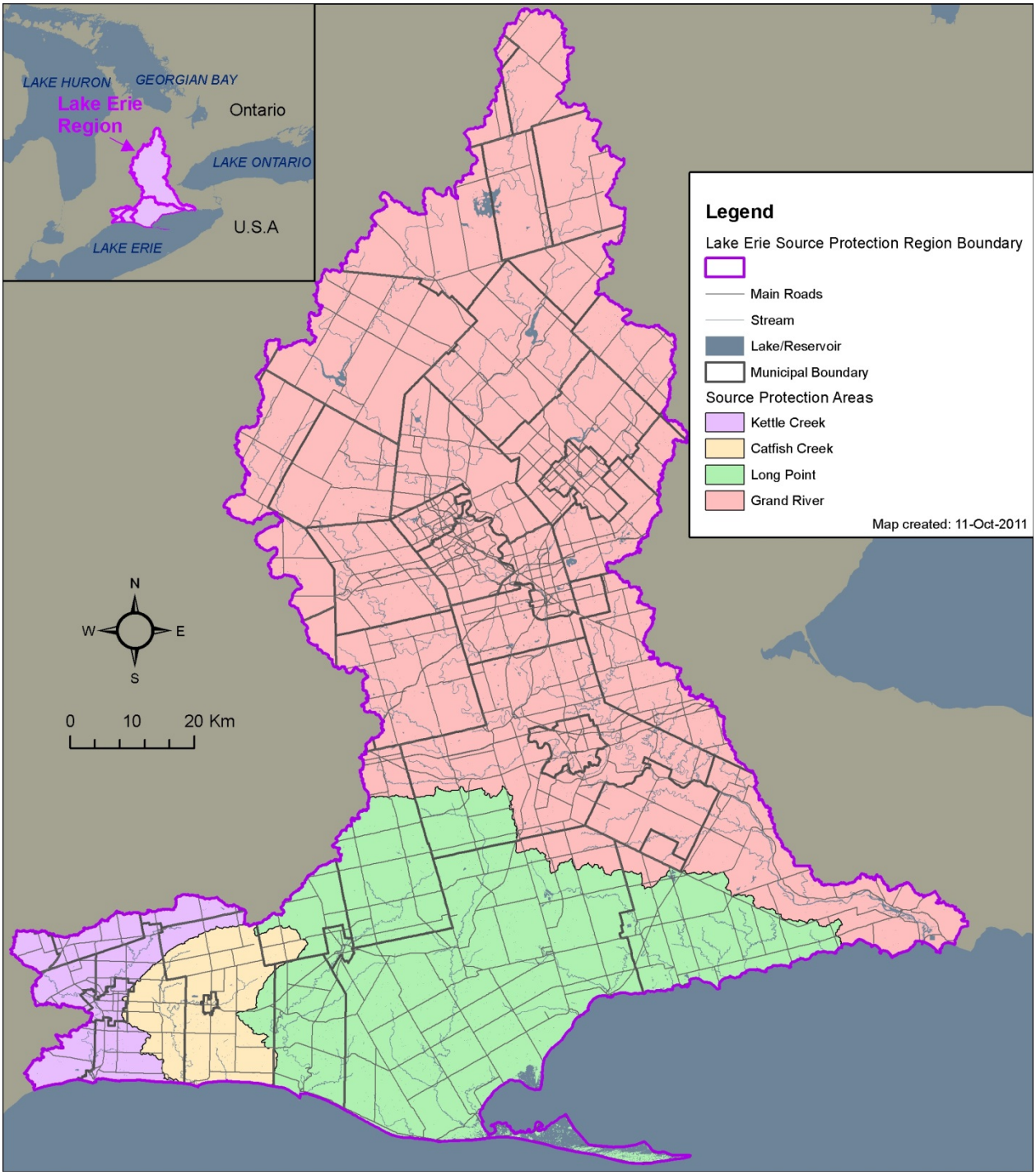
Message from the Committee

The overall objective of the Lake Erie Region Source Protection Committee, in partnership with local communities and the Ontario government, is to direct the development of source protection plans that 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 reduce the risk to drinking water sources. 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.

In December 2008, the Source Protection Committee submitted to the Minister of the Environment their Terms of Reference for the Catfish Creek Source Protection Area Assessment Report and Source Protection Plan. The Terms of Reference that set out the work plan for completing both the Assessment Report and Source Protection Plan received Ministerial approval on May 11, 2009. A copy of the Catfish Creek Source Protection Area Terms of Reference is available online at: www.sourcewater.ca.

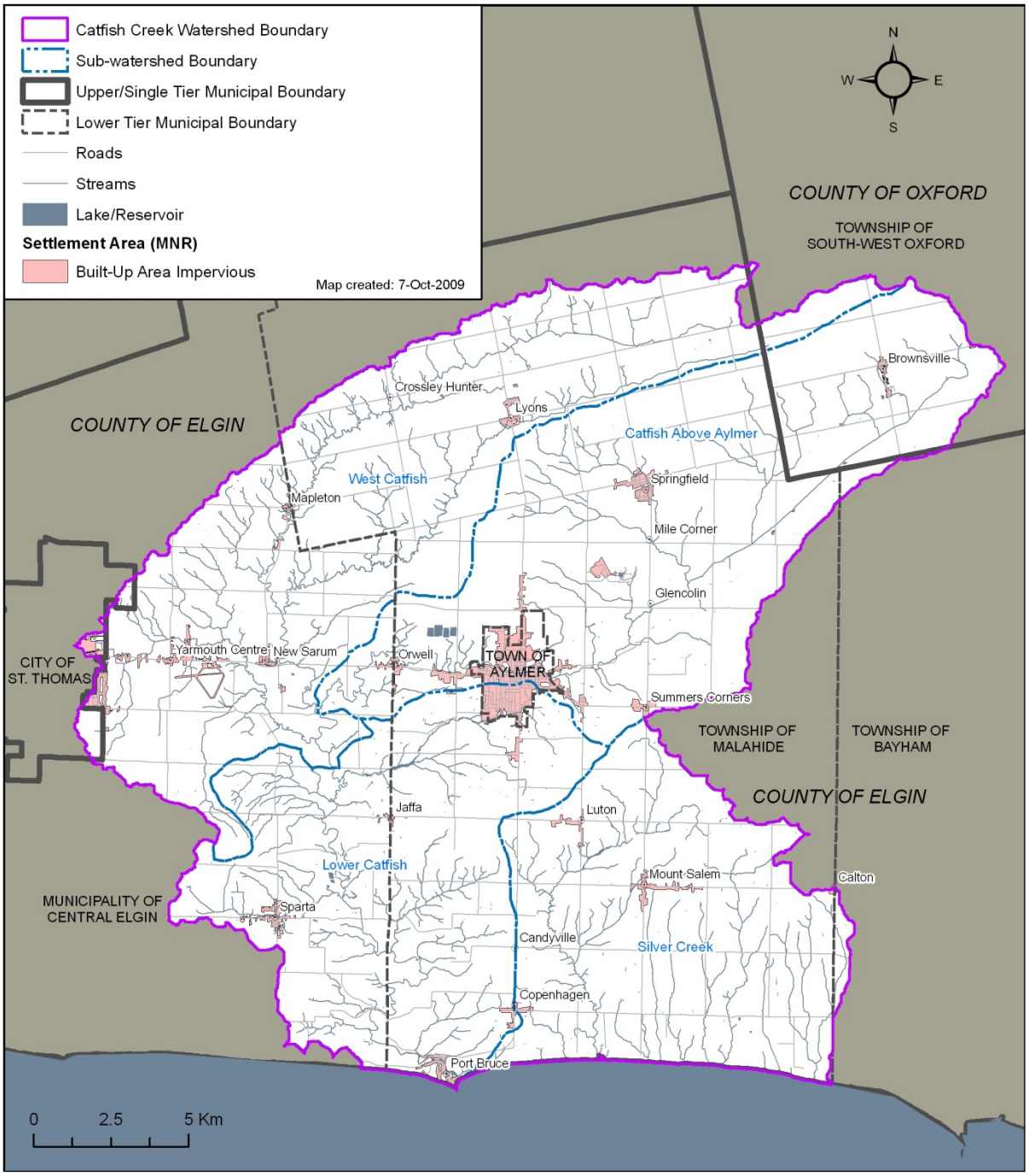
Map A: Lake Erie Source Protection Region



4.1 Catfish Creek Source Protection Area

The Catfish Creek Source Protection Area (i.e. watershed) is located in the heart of the Carolinian Life Zone in southwestern Ontario, presented in **Map B.** Catfish Creek and its tributaries drain an area of approximately 490 km^2 in Elgin and Oxford Counties. Catfish Creek enters Lake Erie at Port Bruce. The watershed can be broken down into four sub-watersheds: West Catfish, Catfish above Aylmer, Lower Catfish Creek and Silver Creek. The City of St. Thomas and the Town of Aylmer are the main urban areas within the Catfish Creek Source Protection Area.

Map B: Catfish Creek Source Protection Area



According to Conservation Ontario (2011), the population of Catfish Creek Source Protection Area is approximately 19,750 people. The municipal population projection estimates the population will reach 25,974 people in 2026 and 34,865 in 2056. The most densely populated area in Catfish Creek is the Town of Aylmer, which falls entirely within the boundaries of the watershed, with a population density of 1213.3 people per km^2. The remaining areas in the Catfish Creek watershed are mainly rural agricultural, and as such, have relatively low population density.

Land uses in the Catfish Creek watershed are characterized by small urban commercial, industrial and residential centres, surrounded by less-populated rural land used for intensive agricultural production. The predominant land use is rural / agricultural. Agricultural crops in the Catfish Creek watershed are typical to southwestern Ontario. Corn and soybean are the highest in land area, with grains and hay as the next largest in land area. However, vegetables and root crops make up a large percentage of land relative to the rest of southwestern Ontario, due to the ideal soils of the Norfolk Sand Plain.

The two most significant tributaries joining Catfish Creek in the lower part of the watershed are Nineteen Creek and Bradley's Creek. Along the Lake Erie shoreline, on the east side of Catfish Creek, are a number of small watersheds that drain directly into Lake Erie; the largest being Silver Creek. The Catfish Creek watershed is predominantly influenced by two hydrologic processes: surface runoff and shallow groundwater-surface water interactions.

Municipal Systems

The Catfish Creek watershed contains one municipal drinking water system, located in the village of Brownsville in the County of Oxford. The system serves approximately 490 people from two groundwater wells. Both wells are completed within a deep overburden aquifer, and operate under a Permit to Take Water issued by the Ministry of the Environment and Climate Change. All other municipalities receive their drinking water from either primary or secondary water systems from the Elgin Area Primary Water Supply System intake in Lake Erie, located near Port Stanley. These communities include Aylmer and smaller communities in Central Elgin and Malahide Townships. There are no municipal surface water intakes located within the Catfish Creek watershed.

5.0 DEVELOPMENT OF THE SOURCE PROTECTION PLAN

5.1 Establishing a Framework

The Source Protection Committee established a Terms of Reference prepared in accordance with the *Clean Water Act, 2006*. This Terms of Reference was approved by the Minister of the Environment on May 11, 2009, and included: a description of the source protection planning process; maps of the Source Protection Area and Source Protection Region; a description of the Source Protection Area; a list of members of the Source Protection Committee; a list of municipalities wholly or partially within the Source Protection Area; a 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 municipal role as defined within the source protection planning process was critical to the success of this program. Each task within the process was given an assigned lead – either municipalities or the Conservation Authority on behalf of the Source Protection Committee. Regardless of which party took the lead for undertaking a particular task, the Lake Erie Region Source Protection Committee had 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 Ministry of the Environment and Climate Change for final approval.

Where municipalities intended to take the lead on a task, a municipal council resolution was required to assume the responsibility to undertake the task.

5.2 Preparing the Source Protection Plan

The Source Protection Plan builds on the information contained in earlier reports. It sets out the actions required to address the drinking water threats identified in the science-based Assessment Report, and to meet the objectives outlined in the *Clean Water Act, 2006*. The Source Protection Plan sets out: how drinking water threats will be reduced, eliminated or monitored; who is responsible for taking action; timelines; and how progress will be measured.

A notice of the commencement of the Source Protection Planning process was sent in May 2011 to the following parties as required by Section 19 of O. Reg. 287/07 under the *Clean Water Act, 2006:*

- the clerk of each municipality in which any part of the source protection area is located;
- if any part of the reserve of a band is included in the source protection area, the chief of the band;
- if any part of the area of the Niagara Escarpment Plan is located in the source protection area, the chair of the Niagara Escarpment Commission;
- if a planning board has jurisdiction in any part of the source protection area, the secretary-treasurer of the planning board; and
- every person who the source protection committee believes could be engaging in one or more activities that are or would be significant drinking water threats in the source protection area, according to the information contained in the assessment report under clauses 15 (2) (g) and (h) of the Act. O. Reg. 246/10, s. 12.

5.2.1 Discussion Papers

As part of the Source Protection Plan development process, a series of Discussion Papers were developed by the Lake Erie Source Protection Committee for the prescribed drinking water threats and sub-threats (with the exception of drinking water threats 19 and 20), local threats, and optional content as outlined in **APPENDIX B**. These discussion papers provide background information on the drinking water threats and available policy tools that could be used to address each threat.

Consultation with agency and industry stakeholders was conducted between February and April 2011 through a series of nine workshops. Participants offered input on the potential policy options and policy tools provided by the *Clean Water Act, 2006*. The results of the workshops were recorded and compiled in threat specific outcome reports. These outcome reports were subsequently reflected in the Discussion Papers, which served to elicit further feedback from stakeholders and the Source Protection Committee on policy options. The 21 Discussion Papers are available online at www.sourcewater.ca.

After completion of the Discussion Papers, policy choices were selected by the Lake Erie Region Source Protection Committee and municipal councils with input from various stakeholders and policy developers. The policies were then consolidated into the Source Protection Plan.

5.2.2 Pre-consultation with Implementing Bodies

Before the Draft Plan is released to the public for review and comment, the Source Protection Committee must pre-consult on draft policies with individuals and agencies that are responsible for implementing them. Notices of pre-consultation for the Catfish Creek draft policies were distributed to implementing bodies, and government ministries that have obligations under the *Clean Water Act* on March 12, 2012. All comments made on the draft policies were considered by policy developers. The following is a summary of what is required during pre-consultation under O. Reg. 287/07.

Section 35: Notice of Designation of any person or body responsible for implementation

- Provide notice of the proposed policy to the implementing person or body.

Section 36: Notice of Policies affecting Prescribed Instruments

- Provide notice of the proposed policy to the person or body responsible for issuing or otherwise creating the prescribed instrument.

Section 37: Notice of Policies affecting decisions under other Acts

- Provide notice of the proposed policy to: the municipal council, municipal planning authority, planning board or other local board whose decision will be affected, the regional director of the Ministry of Municipal Affairs and Housing (MMAH) services office that is responsible for a region that includes any part of the source protection area.

Section 38: Notice of Significant Threat Policies

- Provide notice of the proposed policy to the municipality, local board or source protection authority (SPA) who will be affected.

Section 39: Notice of Designated activities, land uses and areas

- Provide notice of the proposed designations to the municipality that would be responsible for the enforcement of Part IV of the Act with respect to the activity or land use in a wellhead protection area (WHPA) or an intake protection zone (IPZ).

For all notices made under Sections 35 to 39:

- Provide draft wording of the proposed policy.
- Provide a summary of reasons for the proposed policy.
- Request written comments on the proposed policy.
- Source Protection Committee must consider all comments received, if any, regarding the proposed policy.

Agencies were able to provide comments to the County of Oxford until April 23, 2012 on the draft Source Protection Plan policies. The March 12 to April 23, 2012 pre-consultation period was the first opportunity for agencies to provide comments on the draft policies. Late comments received after the April 23, 2012 deadline were considered, if possible.

5.2.3 Public Consultation

Catfish Creek Source Protection Plan Terms of Reference:

The *Clean Water Act, 2006* under Section 8 requires the development of a Terms of Reference for the preparation of the Assessment Report and Source Protection Plan for each Source Protection Area.

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 a public meeting in Aylmer on October 8, 2008.

At the October 16 and November 6, 2008 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 the Terms of Reference.

The Committee submitted the Terms of Reference to the Catfish Creek Source Protection Authority on November 6, 2008, and released the Terms of Reference for an additional 30-day public comment period starting on November 7, 2008 closing on December 6, 2008.

Formal written comments received were submitted to the Minister of the Environment with the Proposed Terms of Reference by the Catfish Creek Source Protection Authority on December 19, 2008. The Minister approved the Terms of Reference on May 11, 2009.

Catfish Creek Assessment Report

Public input on the Catfish Creek Assessment Report was sought during two public comment periods between December 2009 and April 2010. The first comment period, on the Draft Assessment Report, began on December 4, 2009 and ended on January 25, 2010. This consultation period was the first opportunity for stakeholders and the public to view and provide comment on the Draft Catfish Creek Assessment Report. The following steps were undertaken to satisfy the requirements of the *Clean Water Act, 2006.*

- The Draft Assessment Report was posted publicly online at www.sourcewater.ca and in hard copy at the head offices of the Catfish Creek Conservation Authority, the Kettle Creek Conservation Authority, the Municipality of Central Elgin, the County of Oxford, the Township of South-West Oxford, the Town of Aylmer, and the Township of Malahide.
- Notification was sent to municipal clerks, Great Lakes Bodies, neighbouring Source Protection Committee Chairs, and the Canadian Environmental Law Association on December 7, 2009.

- Notification was published in the Aylmer Express, the Tillsonburg News and the Woodstock Sentinel-Review.
- One public meeting was held on January 12, 2010 in Brownsville.

One comment on the Draft Assessment Report was received from the Ministry of the Environment during this first round of consultation. This comment was presented to the Source Protection Committee for their consideration in the finalization of the Proposed Updated Assessment Report in March 2010.

The second public consultation period on the Proposed Catfish Creek Assessment Report began on March 5, 2010 and closed on April 9, 2010. Stakeholders and members of the public were invited to review and provide comments on the changes made to the Assessment Report since the Draft consultation period. The following steps were undertaken to satisfy the requirements of the *Clean Water Act, 2006.*

- The Proposed Assessment Report was posted publicly online at www.sourcewater.ca and in hard copy at the head office of the Catfish Creek Conservation Authority.
- A copy of the Proposed Assessment Report was sent to municipal clerks, along with notification of the second round of public consultation on March 8, 2010.
- Notification was published in the Aylmer Express, the Tillsonburg News and the Woodstock Sentinel-Review.

No comments were received during the second round of public consultation. The Ministry of the Environment approved the Catfish Creek Assessment Report on October 7, 2010. Some technical updates including verified significant drinking water threat numbers have been included in a Draft Updated Catfish Creek Assessment Report. These changes have been consulted on together with the revisions to the Catfish Creek Source Protection Plan.

Catfish Creek Source Protection Plan

The *Clean Water Act, 2006* requires source protection plans to undergo two formal rounds of consultation with the public and stakeholders. The first round of public consultation on the Draft Catfish Creek Source Protection Plan began on August 20, 2012 and closed on September 24, 2012. This was an opportunity for the public and stakeholders to comment on the Draft Source Protection Plan. The following steps were undertaken to satisfy the requirements of the *Clean Water Act, 2006:*

- The Draft Source Protection Plan was posted publicly online at www.sourcewater.ca and in hard copy at the head offices of the Catfish Creek Conservation Authority, the County of Oxford, the Township of Southwest-Oxford, the Town of Aylmer, the Township of Malahide, and the Municipality of Central Elgin.
- Notification was sent to implementing bodies that were pre-consulted with, municipal clerks, Great Lakes Bodies, and neighbouring Source Protection Committee Chairs.
- Notification was sent to all persons identified as having significant drinking water threats occurring on their properties.
- Notification was published in the Aylmer Express and the Tillsonburg Independent.
- One public meeting was held on September 18, 2012 in Brownsville.

The purpose of the public meeting was to invite members of the public to provide comment on the Draft Source Protection Plan. No formal comments were received during the public meeting in Brownsville; however, common questions and concerns raised during the meeting's informal

discussion period were presented to the Committee for their consideration. Comments from provincial ministries and other agencies were also considered by the Source Protection Committee in their finalization of the Proposed Source Protection Plan.

An additional 30 day comment period followed from November 2 until December 3, 2012 to provide the public and stakeholders with an opportunity to review and comment on the revisions before the Proposed Source Protection Plan was submitted to the Minister of the Environment for final approval. The comments and feedback received during this final comment period were submitted in their entirety as part of the Proposed Source Protection Plan to the Minister of the Environment. The Catfish Creek Source Protection Authority submitted the Proposed Source Protection Plan to the Minister on December 13, 2012.

As part of the plan review process, the Ministry of Environment formally provided recommended revisions and comments on December 13, 2013. These comments were addressed and the proposed changes included in the Proposed Amended Source Protection Plan.

5.3 First Nations Involvement

The involvement of First Nations is very important to the planning and implementation of source protection plans to achieve source protection both on and off First Nations' land. The *Clean Water Act, 2006* includes provisions that allow a First Nation's drinking water system, on a voluntary basis, to be considered as part of the source protection planning process.

There are no First Nations reserves located within the Catfish Creek Source Protection Area.

5.4 Liaison with Other Source Protection Partners

The Catfish Creek Source Protection Area is adjacent to other Source Protection Areas and conservation authorities (see **Map C**) as follows:

<u>Within the Lake Erie Source Protection Region</u>

- Kettle Creek Conservation Authority
- Long Point Region Conservation Authority

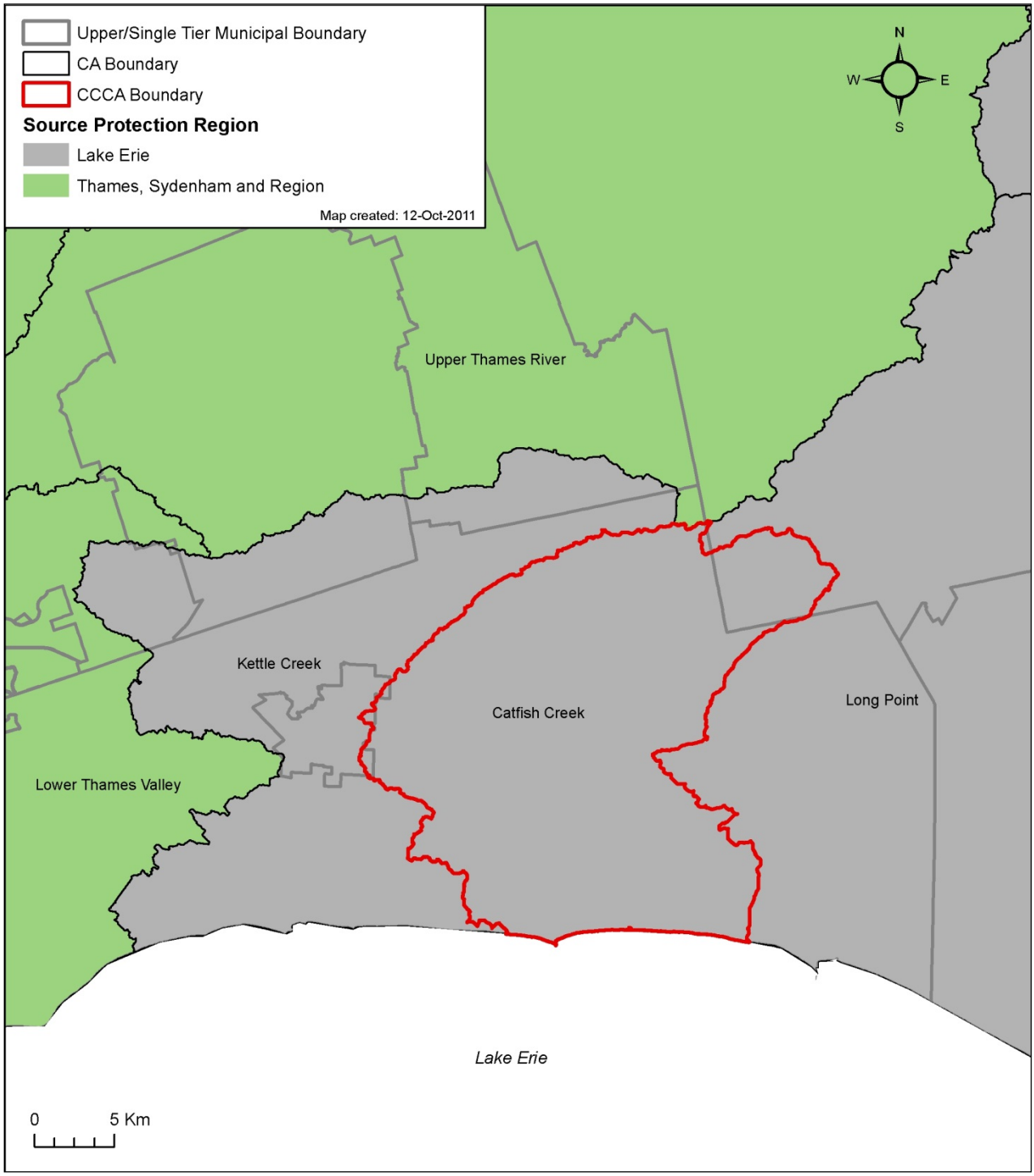
<u>Outside of the Lake Erie Source Protection Region</u>

- Thames, Sydenham and Region Source Protection Region
    - Upper Thames River Conservation Authority

In cases where two or more Source Protection Committees have jurisdiction in one municipality, the municipality has been engaged and has provided guidance, to ensure consistent policy direction where possible. The same is true for bordering source protection authorities.

Communication with neighbouring regions throughout the source protection planning process has included sharing information through the website (www.sourcewater.ca), teleconferences, workshops and meetings. Although not a requirement, consistency in policy direction was strived for through this sharing of information and early engagement activity.

Map C: Adjacent Source Protection Regions and Municipalities



6.0 DRINKING WATER THREATS

6.1 Identifying Drinking Water Threats

The Ontario *Clean Water Act*, *2006* defines a drinking water threat as, "an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulation as a drinking water threat."

The Technical Rules (MOE, 2009a) list five ways to identify a drinking water threat:

1) Through an activity prescribed by the *Clean Water Act, 2006* as a Prescribed Drinking Water Threat;
2) Through an activity identified by the Source Water Protection Committee as an activity that may be a threat and (in the opinion of the Director) a hazard assessment confirms that the activity is a local threat;
3) Through a condition that has resulted from past activities that could affect the quality of drinking water;
4) Through an activity associated with a drinking water issue; and
5) Through an activity identified through the events based approach.

The methods used to identify drinking water threats are described in detail in the Assessment Report available online at www.sourcewater.ca and summarized below**.** To identify drinking water threats, studies were completed in the areas around municipal wells and surface water intakes to identify activities that could threaten municipal water supplies. A summary of the technical studies and enumeration of significant drinking water threats undertaken to characterize the Catfish Creek watershed are found in the Assessment Report. A brief description of the key components of this report is provided below.

Water Quality Risk Assessment
The Water Quality Risk Assessment identified ground and surface water vulnerable areas within the Catfish Creek Source Protection Area, and evaluated the risk of contamination from specific drinking water threats (existing or future activities, or existing conditions that results from a past activity) entering drinking water supplies.

Groundwater Vulnerability
The Groundwater Vulnerability module identified wellhead protection areas (WHPA) A, B, C, D and E around municipal drinking water supply wells, highly vulnerable aquifers (HVA) and significant groundwater recharge areas (SGRA). The relative vulnerability within each of these areas was characterized as high, medium or low. The categorization reflected the susceptibility of the aquifer(s) in the vulnerable areas to surface (or near surface) sources of contamination. Vulnerable areas were delineated and assigned vulnerability scores along with the level of uncertainty associated with each score.

Surface Water Vulnerability
The Surface Water Vulnerability module identified Intake Protection Zones (IPZ) for Lake Erie and riverine water supplies, and assigned a vulnerability score for each of the zones referring to the comparative likelihood of a contaminant of concern reaching an intake. 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 were analyzed. 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 IPZs were delineated and assigned vulnerability scores, obtained by multiplying the source vulnerability factor with the area vulnerability factor. A level of uncertainty was associated with each score. Vulnerability scoring was used to rank threats to drinking water in the surface water quality risk assessment.

There are no municipal surface water intakes in the Catfish Creek Source Protection Area.

Issue Contributing Area (ICA)
Through the Source Water Protection program, historical raw water groundwater chemistry was also analyzed for each municipal drinking water system. The analysis determined if concentrations of contaminants are present at the well which would lead to the deterioration of the quality of the water used for drinking water. For each identified Issue an Issue Contributing Area (ICA) was developed, which in most cases is the 25 year time of travel capture zone. The ICA is the area within which activities have contributed, or are likely to contribute, to the elevated contaminant at the well.

There were no ICAs identified in the Catfish Creek Source Protection Area.

Threats Inventory and Issues Evaluation
The Threats Inventory and Issues Evaluation included the areas around each drinking water intake and wellhead. A hazard rating associated with the inventoried drinking water threats was used to rate the likelihood of chemical or pathogenic contamination of a drinking water source, as well as the potential severity of its impact. An inventory of contaminant pathways was mapped and a threat was categorized as significant, based on the qualitative assessments in the vulnerable areas. In most cases, moderate and low drinking water threats were not enumerated.

6.2 Prescribed Drinking Water Threats

Section 1.1 of O. Reg. 287/07, made under the *Clean Water Act, 2006* identifies twenty-one (21) activities as 'prescribed drinking water threats'. This includes nineteen (19) drinking water quality threats and two (2) drinking water quantity threats.

The twenty-one (21) drinking water threats identified in the regulations established under the *Clean Water Act, 2006* are as follows:

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act.*
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.

3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.*
6. The application of non-agricultural source material to land.**
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.***
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.†
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.‡
20. An activity that reduces the recharge of an aquifer.‡
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

* No policies were included for the management of agricultural source material, i.e., aquaculture (prescribed drinking water threat #5) as the circumstances for this threat are such that the vulnerability scoring would never present a significant threat in the vulnerable areas in the Catfish Creek Source Protection Area.

** The application of most types of non-agricultural source material (NASM) can only be a significant drinking water threat if the percent managed land and livestock density meet specific criteria. The policy included in the Catfish Creek Source Protection Plan for the application of NASM only applies to a subset of category 3 NASM, which includes NASM from a meat plant or sewage works.

*** The application of commercial fertilizer (#8) can only be a significant drinking water threat if the percent managed land and livestock density meet specific criteria. This situation does not currently exist within the WHPA-A of the Brownsville wells and therefore policies were not included to address this threat.

† The application of road salt (#12) is only a significant drinking water threat if the impervious area is equal to or greater than 80%. This situation does not currently exist within the WHPA-A of the Brownsville wells and therefore policies were not included to address this threat.

‡ The Catfish Creek Source Protection Plan does not contain policies relating to water quantity (#19 and #20). As the potential for water quantity stress is low in the Catfish Creek watershed, and is not expected to increase significantly in the future, these policies were not required.

For a more complete description of the drinking water quality threats, see **APPENDIX B.**

Drinking Water Threat Tables

The Ministry of the Environment and Climate Change Tables of Drinking Water Threats include two (2) tables: Table 1 - Chemicals and Table 2 - Pathogens. These tables provide the following information:

- Drinking water threat;

- Reference number;
- Circumstances;
- Areas within Vulnerable Area;
- Significant Threat Vulnerability Score;
- Moderate Threat Vulnerability Score; and
- Low Threat Vulnerability Score.

In the Tables of Drinking Water Threats, each of the 21 prescribed drinking water threats has been broken out into a number of circumstances that are significant, moderate, or low threats dependent on the vulnerability score and the vulnerable area. The Catfish Creek Source Protection Plan addresses primarily significant drinking water threats. Additional drinking water threat policies and optional content, as approved by the Source Protection Committee, are also included and described below.

The Ministry created seventy six (76) different Provincial Tables of Circumstances. These tables represent a unique combination of threat levels (i.e., significant, moderate and low drinking water threats), vulnerable area and vulnerability score, for which there are provincially prescribed threats and circumstances within the Ministry of the Environment and Climate Change Tables of Drinking Water Threats.

Links to the Ministry of the Environment and Climate Change Tables of Drinking Water Threats and the Provincial Tables of Circumstances can be found online at www.sourcewater.ca.

6.3 Optional Content

O.Reg 287/07 under the *Clean Water Act, 2006* provides for optional content to be included in the Source Protection Plan. The Source Protection Committee decided that the first Source Protection Plans should not include policies for moderate and low drinking water threats; incentive programs or education/outreach programs for systems not included in the Terms of Reference; or policies for data collection for climate change. On January 13, 2011, the Source Protection Committee passed a resolution (Res. No. 05-11) that determined the Source Protection Plans shall include the policies listed below:

1. Policies on Conditions from past activities that have been identified as significant drinking water threats in the Assessment Reports;
2. Policies to update spill prevention, spill contingency or emergency response plans along highways, railways or shipping lanes in Intake Protection Zones (IPZ) or Wellhead Protection Areas (WHPA);
3. Policies that govern transport pathways;
4. Policies for the monitoring of moderate and low threats in specific situations;
5. Anything that will assist in understanding the plan; and
6. Dates for when the policies take effect.

Further detail on the rationale behind what topics were not included in the Source Protection Plans is provided in the Explanatory Document.

A more complete description of each of the optional content sections is presented in **APPENDIX B**.

6.4 Catfish Creek Watershed and Great Lakes Agreements

Under the *Clean Water Act*, *2006* the following Great Lakes agreements must be considered in the work undertaken in Assessment Reports:

- Canada – United States Great Lakes Water Quality Agreement (GLWQA)
- Canada – Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA)
- Great Lakes Charter
- Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement

The Great Lakes Water Quality Agreement and the Canada – Ontario Agreement generally deal with water quality concerns, while the Great Lakes Charter, the Great Lakes Charter Annex, and the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement provide principles for joint water resources management and water quantity and quality concerns in the Great Lakes Basin.

The Catfish Creek watershed drains directly into Lake Erie. The work described in the approved Assessment Report considered the impact of the Great Lakes Agreement on the Elgin Area Primary Water Supply. Further clarification from the Government of Ontario is required regarding this situation prior to determining whether the water supplies may be impacted in the future. Given the level of uncertainty regarding the impact of the Great Lakes Agreement on the Elgin Area Primary Water Supply it was not included as part of the approved Assessment Report; therefore, no Great Lake Policies have been included in the Catfish Creek Source Protection Plan at this time.

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7.0 HOW TO READ THE SOURCE PROTECTION PLAN

7.1 Legal Effect of the Source Protection Plan

As required by the Clean Water Act, 2006, the Source Protection Plan policies must identify who will be responsible for implementation. The legal effect describes whether there is a legal obligation for the responsible party to implement the policy. Three factors determine the legal effect of a policy: 1) the policy tool, 2) the ranking of the threat (significant/moderate/low), and 3) the implementing body. This information is presented in the Legal Effect Matrix, included in **APPENDIX C**. Further information about the legal effects of the Plan is presented in Volume II.

7.2 Source Water Protection Policy Tools

The *Clean Water Act, 2006* (O.Reg 287/07) enables a range of approaches or "policy tools" to achieve the objectives of the Source Protection Plan.

7.2.1 Part IV Tools

Part IV of the *Clean Water Act, 2006* created additional tools that can be used to implement a significant threat policy to address significant drinking water threat activities. Specifically, Part IV provides Source Protection Committees with the following tools to address significant drinking water activities:

- Prohibiting the activity (section 57)
- Requiring a risk management plan for the activity (section 58)
- Restricted land use (section 59)

Section 57: Prohibition
Section 57 Prohibition can be used to prohibit both existing and future occurrences of an activity.

Section 58: Risk Management Plans
Section 58 risk management plans are site-specific documents, established after the approval of the Source Protection Plan. A risk management plan will outline the actions required to address identified significant drinking water threat(s), accounting for risk management measures already in place. The risk management plans are negotiated between the risk management official and the person engaging in the activity that is or would be causing a significant drinking water threat. A risk management plan can be thought of as a means of applying regulatory controls to an activity; it is a plan that regulates how a significant drinking water threat activity is undertaken – one which offers the opportunity for practical considerations and local agreement. A risk management plan must be established for the significant drinking water threat activity to be undertaken or continue to be undertaken at a site thus ensuring reasonable mitigation measures are in place to protect the water supply.

While the intent is for risk management plans to be voluntarily negotiated wherever possible, the authority does exist within the *Clean Water Act, 2006* for a risk management plan to be imposed by a Risk Management Official on a person engaged (or proposing to engage) in an activity. Under section 58 of the *Clean Water Act, 2006,* the Risk Management Official can give the property owner a notice establishing a deadline for negotiating the risk management plan. If this deadline is not met, the risk management official may establish a risk management plan by order. It is intended that this authority would be used only as a last resort.

Section 59: Restricted Land Use
Where the Source Protection Plan includes policies using section 57 prohibition or section 58 risk management plans, a complementary policy that uses section 59 may exist. The purpose of section 59 is to ensure that, if a development that may include a significant drinking water threat activity is proposed in an area that is subject to section 57 or 58 policy, then approvals for the proposal (i.e. municipal approvals, planning approvals or building permits) cannot be issued until the Risk Management Official has an opportunity to review the proposal and ensure its compliance with those provisions (MOE Administering & Enforcement of Part IV, 2011).

7.2.2 Land Use Planning

The *Clean Water Act, 2006* recognizes the authority of the *Planning Act* and *Condominium Act* to regulate land uses and provides for the implementation of certain Source Protection Plan policies through Ontario's existing land use planning framework. The *Planning Act* and *Condominium Act, 1998* in Ontario provide tools with which municipalities can regulate development as they plan their communities, such as allocating land for agricultural, residential, commercial or mixed uses.

7.2.3 Prescribed Instruments

Under the *Clean Water Act, 2006*, an "instrument" is defined as any document of legal effect, including a permit, licence, approval, authorization, direction or order issued or otherwise created under an Act. These instruments listed in section 1.0.1(1) of O.Reg. 287/07 are prescribed for the purposes of the *Clean Water Act, 2006* policy development.

Prescribed Instruments listed in section 1.0.1(1) of O.Reg. 287/07 under the *Clean Water Act, 2006* are as follows:

- Section 39 of the *Environmental Protection Act* with respect to environmental compliance approvals for the use, operation, establishment, alteration, enlargement or extension of waste disposal sites or waste management systems;
- Sections 7 and 11 of the *Pesticides Act* with respect to permits for land exterminations, structural exterminations and water exterminations;
- Sections 10, 14, 15.2, and 28 of O. Reg. 267/03 made under the *Nutrient Management Act, 2002* with respect to nutrient management plans, nutrient management strategies and non-agricultural source material plans;
- Sections 8, 11, 13, 20, 30, 36, and 37 of the *Aggregate Resources Act* with respect to licenses, wayside permits, aggregate permits or site pans accompanying applications for wayside permits or aggregate permits;
- Sections 34 and 53 *Ontario Water Resources Act* with respect to permits to take water and approvals to establish, alter, extend or replace new or existing sewage works; and
- Sections 40 and 44 of the *Safe Drinking Water Act, 2002* with respect to drinking water works permits and municipal drinking water licenses.

7.2.4 Non-Regulatory Tools

In addition to the tools listed above, a Source Protection Plan can use a number of non-regulatory tools to manage existing and future drinking water threats. The legal effect of these policy tools is dependent on the party responsible for implementation and the risk level of the threat being addressed. The following are the non-regulatory tools provided by the *Clean Water Act, 2006*:

- education and outreach programs;
- incentive programs;
- establishment of stewardship programs;
- specify and promote best management practices;
- establishment of pilot programs;
- govern research; or
- specify actions to be taken to implement the plan or to achieve the plan's objectives.

These policy approaches may be applied alone or in combination with other policy approaches to deal with a particular drinking water threat.

Education and Outreach and Incentive Programs

Education and outreach programs can be used to inform the identified property owners of the drinking water threats associated with their property. Further, these programs can encourage the use of best management practices to manage the drinking water threat. Incentives are used to encourage an action by means of support, usually financial.

Stewardship Programs

In Ontario, stewardship programs are typically collaborative partnerships between organizations (who provide financial or technical assistance, information, or data) and individuals who take action at a local scale. This assistance may be provided for the development of educational materials, incentives for infrastructure upgrades, or to maintain a monitoring and information network. Local conservation authorities may already administer stewardship programs for drinking water source protection or for environmental conservation that also benefits source protection.

Best Management Practices

Often, with activities like agriculture or construction, there are also sector established best management practices that promote the safest or most efficient way of doing something. Information on typical best management practices may be available from professional organizations, and industry associations, as well as from people who operate in that sector. Best management practices can apply to a range of measures from operational procedures to administrative processes. While best management practices are generally voluntary in nature, source protection plan policies can support the continuation of these practices and encourage their use at other sites where similar threat activities occur.

Pilot Programs

Emerging technologies or new methods to address certain threats to drinking water may need to be assessed for their applicability in different situations, or for their suitability to address a wider range of threats. Pilot programs could test these methods or technologies and look at the feasibility of the approach in addressing particular threats or to examine potential improvements to these methods or technologies.

Research
There may be situations where the Source Protection Committee feels that further research is necessary to develop new methods or new technologies for addressing certain threats. This may be in cases where existing methods to address the threat have not been as effective as desired under local conditions and the Committee feels that research may find a better solution or modification.

Specify Actions
The Source Protection Plan can include specific actions to achieve the Plan's objectives. Specify Action refers to a set of policy tools described within portions of section 26 and 27 of O. Reg. 287/07. This type of policy specifies that an implementing body undertake a particular action to address either a specific threat identified in the Assessment Report or a transport pathway. A specify action policy can be a significant threat policy if it addresses an activity that is identified as a significant threat. Some specify action policies can have a 'comply with' (CW) legal effect if they address significant drinking water threats and are directed at a municipality, local board or source protection authority (these appear on List E within the appendices of the Plan found in Volume II). Other specify action policies are 'non-legally binding' (NB), for example, if they rely on specify action tools and are directed at an implementing body *other than* a municipality, local board or source protection authority, such as a provincial ministry (these appear on List K within the appendices found in Volume II). Specify action policies can also be grouped as strategic action policies (List J of Volume II) if they meet the criteria set out in Section 33 of O. Reg 287/07.

Specify Action policies are policies identified in the following sections of O.Reg 287/07:

- Section 26 – policies that specify the actions to implement the SPP or achieve the plans objectives with respect to drinking water threats identified in the Assessment Report;
- Section 26 – policies that specify the actions with regards to climate data gathering;
- Section 26 – policies that specify the actions with regards to updating spill prevention and spill contingency plans or emergency response plans along highways, railway lines, or shipping lanes; and
- Section 27 – policies that specify the actions with regard to transport pathways.

7.2.5 Strategic Action

Strategic Action refers to a group of policies as per section 33 of O.Reg 287/07. These are policies that do not address significant threats, are not Great Lakes policies, are not monitoring policies, and are not "have regard to" policies under the *Planning Act* or the *Condominium Act*, *1998* or "have regard to" policies that affect prescribed instruments. For the most part, these policies address items such as Transport Pathways, Spills Prevention & Response Plans, and moderate or low threat policies that use tools other than the *Planning Act* or prescribed instruments. Strategic action policies appear on List J within the appendices of Volume II of the Source Protection Plan and are non-legally binding.

7.3 How to Read Volume II of the Source Protection Plan

Sections 1 and 2 of Volume II present information required to understand the policies contained in the Source Protection Plan. Section 3 of Volume II contains the Source Protection Plan policies that have been developed to meet the objectives of the *Clean Water Act, 2006*. The following is a guide to how to read Volume II to determine if a property is or would be subject to the presented Source Protection Plan policies.

Section 3 is divided into three parts: (1) definitions needed to interpret the Source Protection Plan policies, (2) County of Oxford Source Protection Plan policies, (3) and the County of Oxford Policies Addressing Prescribed Drinking Water Threats.

For each drinking water system, Policy Applicability Maps are included within the schedules. These maps have been adapted from the Approved Assessment Report mapping, available online at www.sourcewater.ca. The Policy Applicability Map presents a summary of the prescribed drinking water threats and the location where policies will apply based on the Tables of Drinking Water Threats, published under the *Clean Water Act, 2006*. As the Policy Applicability Map is a summary, not all of the details about the circumstances under which the policies would apply are captured and the reader should refer to the Tables of Drinking Water Threats for more detail. A link to the Tables of Drinking Water Threats can be found online at www.sourcewater.ca.

A summary of which activities are significant drinking water threats and where they exist is also presented in the Assessment Report in a tabular format. The table, for each of the drinking water systems, is found under the Drinking Water Quality Threats Assessment Section of the Assessment Report. The tables include a list of the Circumstance ID numbers for the circumstances under which activities are or will be significant drinking water threats. These Circumstance ID numbers will further assist the reader in locating the applicable circumstances in the Tables of Drinking Water Threats.

The first step to determine if the property is subject to a Source Protection Plan policy is to determine if the property is located within an area where a policy applies as shown on the Policy Applicability Map. Once located, the user should have the following information:

- The wellhead protection area where the property is located;
- The vulnerability score (i.e. how vulnerable the area is to contaminants). As indicated on the Policy Applicability Map, each vulnerability score is associated with a colour. This colour is then reflected in the summary table provided on the map to indicate which potential drinking water threats would apply to a specific section; and
- Prescribed Drinking Water Threats that would be significant drinking water threats if present on the property.

With these three pieces of information, the reader should then consult the applicable policies listed under the Prescribed Drinking Water Threats section of Volume II of the Source Protection Plan. A review of the policies, aided by the sidebar notes, should indicate which policy would apply to that property based on the activities being conducted.

The reader should next consult the Drinking Water Quality Threats Assessment section within the Assessment Report and locate the Identification of Drinking Water Quality Threats Table. The Provincial Table Reference Code provided in this table (e.g. 12(PW10S)) directs the reader to one of 76 Provincial Tables of Circumstances. The Provincial Table of Circumstances lists the applicable Circumstance ID numbers with which the reader can more easily find the relevant circumstances in the Table of Drinking Water Threats and therefore, the exact detailed information about the circumstances that would make the activity a drinking water threat.

8.0 SOURCE PROTECTION PLAN IMPLEMENTATION

8.1 Status and Effect

Following the Minister of the Environment's approval of the Source Protection Plan, the decision notice is posted on the Environmental Bill of Rights Registry. The Source Protection Plan takes effect on the date set by the Minister.

8.2 Roles and Responsibilities

The implementation of the source protection policies included in Volume II of this Source Protection Plan requires the cooperation of the various source protection partners. The following section outlines the key roles and responsibilities of the players in the implementation of the Source Protection Plan.

Source Protection Committee
The Source Protection Planning process is being led by a multi-stakeholder steering committee called the Lake Erie Region Source Protection Committee. The Committee was formed in November 2007, and is responsible for directing the development of the Assessment Reports and Source Protection Plans for each of the four Source Protection Areas in the Lake Erie Region. The committee is comprised of 24 local stakeholders and a Chair as defined in the Regulation.

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 Plans.

Source Protection Authority
The conservation authority as the Source Protection Authority is responsible for providing technical and administrative support to the Source Protection Committee. The Source Protection Authority, along with municipalities and other partners, has an important role in monitoring and reporting on the progress of the Source Protection Plan's implementation. They will continue their role as liaison with the Ministry of the Environment and Climate Change and local conservation authorities and municipalities. The Source Protection Authority will also submit any Updated Source Protection Plans, Terms of Reference, and Assessment Reports to the Ministry of the Environment and Climate Change for approval.

Province
The Province is required to carry out the significant threat policies associated with provincial instruments as prescribed in O. Reg. 287/07 s. 1.0.1 and implement monitoring policies developed under section 45 of the *Clean Water Act, 2006*. Also, other non-legally binding policies will request the Province to take specific actions as an implementing body.

Municipalities
Municipalities have a strong role in implementing Source Protection Plans. Currently, municipalities are responsible for the delivery of municipal drinking water and for land use planning. Many of the source protection policies included in this Plan build on these roles, meaning implementation of the Source Protection Plan policies will, for the most part, be incorporated into existing municipal planning processes.

Municipalities are responsible for bringing their Official Plans, by-laws, plans of subdivision and plans of condominium into conformity with the significant threat policies contained in the Source Protection Plan. They are required to ensure that any future undertaking does not conflict with the Source Protection Plan.

For the implementation of policies that use Part IV Tools, two new roles are required of municipalities, as outlined in the *Clean Water Act, 2006* – a Risk Management Official and a Risk Management Inspector (section 52). The Risk Management Official is responsible for negotiating or establishing risk management plans (section 58). In addition, the Risk Management Official has the authority to: establish interim risk management plans (section 56); establish enforcement orders (section 63) and orders to cause things to be done (section 64); enter property if appropriately trained (section 66); issue orders to pay costs (section 67); and submit annual reports (section 81). The Risk Management Inspector has authority to: conduct inspections (section 62); issue enforcement orders (section 63); issue an order causing a thing to be done (section 65 where person liable is unknown); and enter property (section 66). The Risk Management Inspector is also responsible for prosecution related to activities stipulated by section 106 of the *Clean Water Act, 2006.*

The Risk Management Official and Risk Management Inspector will be required to meet specific requirements, hold specific qualifications and receive proper training, as outlined in O.Reg.287/07. Risk Management Officials and Risk Management Inspectors may be cross-appointed (i.e. an individual who is appointed as a Risk Management Official can also be appointed as a Risk Management Inspector). The *Clean Water Act, 2006* contains provisions whereby a municipality can enter into an agreement with other entities, including a board of health, planning board, other municipalities, or the Source Protection Authority, in which case that entity would be responsible for Part IV enforcement. Two or more municipalities can also share the responsibility of enforcing Part IV under the *Clean Water Act, 2006*.

Landowners and Business Owners

Individual property owners and local businesses may be asked to take action on significant drinking water threats occurring on their properties, where they are located within Wellhead Protection Areas and Intake Protection Zones. The action taken will be dependent on the source protection policy outlined in Volume II of this Source Protection Plan.

Other Agencies/ Parties

Source Protection Plan policies can also provide direction to other agencies and parties such as the Federal Government and the Technical Safety and Standards Authority (TSSA). The action taken and legal effect is dependent on the source protection policy outlined in Volume II of this Source Protection Plan.

8.3 Annual Review Process

The *Clean Water Act, 2006* requires that the Source Protection Authority prepare an annual progress report describing the measures taken to address existing and future significant drinking water threats, the results of monitoring and the progress that has been achieved in meeting the Source Protection Plan's objectives. The Annual Reports will rely on several sources for information. Further details on what information must be included in these Annual Reports can be found in section 46 of the *Clean Water Act, 2006* and section 52 of O. Reg. 287/07.

Prior to the submission to the Director of the Ministry of the Environment and Climate Change, the Annual Report will be submitted to the Source Protection Committee with the opportunity to provide comments. The report, along with the comments from the Source Protection Committee, will then be submitted to the Director to allow the Ministry of the Environment and Climate Change to monitor progress of the Source Protection Plan policies against the objectives outlined in the *Clean Water Act, 2006*.

The Annual Report will provide the basis for future Source Protection Plan amendments and will serve as important information in the ongoing assessment of progress towards source water protection.

8.4 Financing and Costs

As of the date this Source Protection Plan was completed, there has been no clear indication from the Ministry of the Environment and Climate Change as to the level of financial commitment from the Province of Ontario for the implementation of Source Protection Plans.

The Province of Ontario has fully funded the source protection planning process, including capacity building, at each conservation authority, and the writing of various reports and completion of the technical documents required to contribute to the completion of the Assessment Reports and Source Protection Plans. The Grand River Conservation Authority has the responsibility for fiscal management with parties undertaking tasks in the Lake Erie Source Protection Region. Where a municipality has taken the lead for specific tasks, a Memorandum of Agreement between the Grand River Conservation Authority and the municipality was required, setting out the legal and financial obligations, technical deliverables, and schedules.

Section 97 of the *Clean Water Act, 2006* 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. O.Reg. 287/07 (General) further clarifies the details of the Ontario Drinking Water Stewardship Program.

Under this stewardship program, funding from the Ministry of the Environment provided grants to undertake early actions that protect municipal sources of drinking water. The grants are directed at landowners within close proximity to municipal wells or surface water intakes to undertake projects that reduce or eliminate existing potential contamination sources. In addition, funding has been available for communications and outreach efforts to persons and businesses in these areas.

The program was funded throughout 2013 to provide grants to undertake Early Response Programs to address significant drinking water threats in advance of approved Source Protection Plans.

By way of Committee resolutions and letters to the Ministry of the Environment, the Lake Erie Region Source Protection Committee has requested that the Province of Ontario continue to support funding of the Ontario Drinking Water Stewardship Program beyond 2013. Ongoing funding will continue to provide financial assistance to property owners affected by new policies and risk reduction strategies that may result from approved Source Protection Plans.

Source water protection is a responsibility that crosses watershed and municipal boundaries; therefore, arriving at a fair and equitable manner to share the financial responsibilities of implementation of the Source Protection Plan is complicated. Within the *Clean Water Act, 2006,* some provisions are set out for financing various aspects of source protection including stewardship programs and application of fees for Part IV policies.

As stated in the *Clean Water Act, 2006*, fees can be applied for applications received under section 58, 59 or 60, for agreeing to or establishing a risk management plan under section 56 or 58, for issuing a notice under section 59, for accepting a risk assessment under section 60, or for entering property or exercising any other powers under section 62.

The Lake Erie Region Source Protection Committee has, from the onset of the planning process, empowered the municipalities to direct the Source Protection Plans to meet their needs. The Lake Erie Region has been unique in this approach in allowing municipalities to take the lead on the technical assessment and policy development. This has resulted in local Plans that are financially practical and implementable.

The *Clean Water Act, 2006* and the source protection planning process was a program introduced by the Province in response to a province-wide concern about the safety of municipal drinking water. The Lake Erie Region Source Protection Committee strongly believes that the Province should continue to fund the implementation of the Catfish Creek Source Protection Plan and is committed to requesting that this be done.

APPENDIX A: DEFINITIONS

"**Activity**" includes land use as defined in the *Clean Water* Act*, 2006*. Activities are prescribed in the Table of Drinking Water Threats: *Clean Water Act, 2006* and in the Technical Rules: Assessment Report.

"**Chemical**" means a substance of distinct molecular composition which has been deemed to be of concern to drinking water due to its toxicity, environmental fate, quantity, method of release into the environment and type of vulnerable area into which it might be released (see the Ministry of the Environment and Climate Change publication Table of Drinking Water Threats*: Clean Water Act, 2006).*

"**Director**" means the director appointed under the *Clean Water Act, 2006.*

"**Drinking Water**" has the same meaning as in the *Safe Drinking Water Act, 2002*.

"**Drinking Water Threat**" means an activity or condition that adversely affects or has the potential to adversely affect the quality (chemical or pathogen) or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat. O.Reg. 287/07 sets out in Section 1.1(1) a prescribed list of drinking water threats.

"**Existing**" see definition stated in Volume II of the Catfish Creek Source Protection Plan.

"**Future or New**" see definition stated in Volume II of the Catfish Creek Source Protection Plan.

"**Groundwater**" is water that has percolated into the ground and occupies spaces between soil particles or cracks and fissures in otherwise solid rock. (Source: Ministry of the Environment. 2004. White Paper on Watershed-based Source Protection Planning).

"**Implementing Body**" can be a provincial ministry, municipality, local board, source protection authority, or other body.

"**Intake Protection Zone**" (IPZ) means a zone established around a surface water intake of drinking water as prescribed in the Technical Rules: Assessment Report.

"**Legal Effect**" The policies in the Source Protection Plan have one of three types of legal effect – "must conform/comply with" policies, "have regard to policies", and "non-legally binding" policies (Source: Conservation Ontario. 2011. Legal Effect of Source Protection Policies).

"**Low Drinking Water Threat**" means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a low risk *(Source: Clean Water Act, 2006. O.Reg. 287/07.)*

"**Moderate Drinking Water Threat**" means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a moderate risk *(Source: Clean Water Act, 2006. O Reg. 287/07).*

"**Pathogen**" means a microscopic organism capable of producing infection or infectious disease in humans (Source: Tables of Drinking Water Threat, *Clean Water Act, 2006)*.

"**Planned**" means, with respect to a drinking water system, a drinking water system that is to be established, or a part of a drinking water system that is to be established, if, (a) approval to proceed with the establishment of the system or part has been given under Part II of the *Environmental Assessment Act*, (b) the establishment of the system or part has been identified as the preferred solution within a completed planning process conducted in accordance with an approved class environmental assessment under Part II.1 of the *Environmental Assessment Act* and no order has been issued under subsection 16 (1) of that Act, or (c) the system or part would serve a reserve as defined in the *Indian Act* (Canada).

"**Policy Lead/ Task Lead/ Developer**": The lead authority as outlined in the appropriate Approved Terms of Reference for the Preparation of the Source Protection Plan.

"**Prescribed Instrument**" is any document of legal effect, including a permit, licence, approval, authorization, direction or order, that is issued or otherwise created under an Act and listed in Section 1.0.1 of O.Reg. 287/07.

"**Risk Management Inspector**" means a risk management inspector appointed under Part IV of the *Clean Water Act, 2006 (Source: Clean Water Act, 2006).*

"**Risk Management Official**" means the risk management official appointed under Part IV of the *Clean Water Act, 2006 (Source: Clean Water Act, 2006).*

"**Risk Management Plan**" means a plan for reducing a risk prepared in accordance with the regulations and the rules of the *Clean Water Act, 2006 (Source: Clean Water Act, 2006).*

"**Significant Drinking Water Threat**" means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. The Provincial Table of Drinking Water Threats*: Clean Water Act, 2006* along with the vulnerability score in the Assessment Report provides the basis for the risk assessment.

"**Significant groundwater recharge area**" means an area within which it is desirable to regulate or monitor drinking water threats that may affect the recharge of an aquifer. (*Source: Clean Water Act, 2006).*

"**Source Protection Authority**" means a conservation authority or other person or body that, under subsection 4 (2) or section 5, is required to exercise and perform the powers and duties of a drinking water source protection authority under the *Clean Water Act, 2006.* In this Source Protection Plan, it refers specifically to the Catfish Creek Source Protection Authority.

"**Source Protection Committee**" means a drinking water source protection committee established under section 7 of the *Clean Water Act, 2006.* In this Source Protection Plan, it refers specifically to the Lake Erie Region Source Protection Committee.

"**Source Protection Plan**" means a drinking water source protection plan prepared under the *Clean Water Act*; *2006.* In this Source Protection Plan, it refers specifically to the Catfish Creek Source Protection Plan.

"**Source Protection Region**" means a drinking water source protection region established by the regulations (*Source: Clean Water Act, 2006).* In this Source Protection Plan, it refers specifically to the Lake Erie Source Protection Region.

"**Surface Water**" means water collecting in a stream, river, lake, and wetland. It is the source for drinking water for the Intakes in the Great lakes (Source: Ministry of the Environment. 2004. White Paper on Watershed-based Source Protection Planning.);

"**Surface Water Intake Protection Zone**" means an area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats (*Source: O.Reg. 287/07);*

"**Transport Pathway**" means a condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system set out in clause 15 (2) (e) of the *Clean Water Act, 2006* (Source: *Clean Water Act, 2006. O.Reg. 246/10.);*

"**Wellhead Protection Area**" means an area that is related to a wellhead and within which it is desirable to regulate or monitor drinking water threats (*Source: Clean Water Act, 2006.);*

"**Vulnerable Area**" means,(a) a significant groundwater recharge area,(b) a highly vulnerable aquifer,(c) a surface water intake protection zone, or (d) a wellhead protection area (*Source: Clean Water Act, 2006.);*

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APPENDIX B: DRINKING WATER THREATS AND OPTIONAL CONTENT FOR LAKE ERIE SOURCE PROTECTION REGION

The following is a description of the nineteen (19) prescribed drinking water quality threats prescribed by the *Clean Water Act, 2006*, one (1) local threat and four (4) optional content policies. Threat circumstance details are available online at www.sourcewater.ca .

Threat 1: The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act

As defined in the *Environmental Protection Act* a waste disposal site is any land, building, and/or structure in connection with the depositing, disposal, handling, storage, transfer, treatment or processing of waste. Operational activities associated with these sites are also included in the definition.

"Waste" is defined to include: ashes, garbage, refuse, domestic waste, industrial waste, or municipal refuse and such other materials as are designated in the regulations under the *Environmental Protection Act.* Waste disposal sites may be active, inactive, or closed. There are 35 chemicals listed in the Ministry of the Environment and Climate Change Tables of Drinking Water Threats that have the potential to be introduced into surface and groundwater as a result of the storage and land disposal of waste, including arsenic, barium, vinyl chloride, lead, and mercury. In most circumstances, a waste disposal site (particularly a medium to large operation) has the potential to be identified as a significant or moderate threat.

This drinking water threat contains ten (10) sub-threats:

1. Storage, Treatment and Discharge of Tailings from Mines
2. Waste Disposal Site- Landfarming of petroleum refining waste
3. Waste Disposal Site- Landfilling (Hazardous Waste)
4. Waste Disposal Site- Landfilling (Municipal Waste)
5. Waste Disposal Site- Landfilling (Solid Non Hazardous Industrial or Commercial)
6. Waste Disposal Site- Liquid Waste Injection into a Well
7. Waste Disposal Site- PCB Waste Storage
8. Waste Disposal Site- Storage of Hazardous Waste at Disposal Sites
9. Waste Disposal Site- Storage of wastes as described in clauses (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste
10. Application of Untreated Septage to Land

Threat 2: The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.

This drinking water quality threat contains nine (9) sub-threats:

1. Sewage System or Sewage Works- Septic System
2. Sewage System or Sewage Works- Septic System Holding Tank
3. Sewage System or Sewage Works- Sewage treatment plant effluent discharges (including lagoons);

4. Sewage System or Sewage Works- Sewage treatment plant bypass discharges to surface water;
5. Sewage System or Sewage Works- Storage of Sewage (treatment plant tanks);
6. Sewage System or Sewage Works- Sanitary sewers and related pipes;
7. Sewage System or Sewage Works- Industrial effluent discharges;
8. Sewage System or Sewage Works- Combined sewer from a Stormwater outlet to surface water;
9. Sewage System or Sewage Works- Discharge of Stormwater from a Stormwater Management Facility.

Septic systems and holding tanks include systems that store and/or treat human waste on-site, but do not include sewage treatment plants. These systems come in a variety of forms including earth pit privies, privy vaults, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks. Leaching bed systems with septic tanks or holding tanks are the systems most commonly used. Onsite sewage systems are considered a drinking water threat due to the potential discharge of chemicals and pathogens and their potential impact on the sources of drinking water. The Ministry of the Environment and Climate Change Tables of Drinking Water Threats list the following chemicals and pathogens of concern: total coliform; *E. coli*; acetone; chlorine; nitrogen; total phosphorus; dichlorobenzene-1,4 (para), and sodium.

Sewage treatment plant effluent discharges (including lagoons): All sewage treatment plants release treated wastewater that is called effluent. The effluent can be directly released to a watercourse or water body or its release from a lagoon can be scheduled.

Sewage treatment plant bypass discharges to surface water: Sometimes the capacity at a sewage treatment plant is overwhelmed and partially treated or untreated sanitary waste is released into the receiving water body. This is typically a result of an extreme wet weather event (i.e. significant rainfall or snow melt) where the sanitary sewer network is not completely isolated from stormwater. Combined sewers or sewer networks with inflow/infiltration issues are the root cause of such bypasses.

Sewage storage (e.g. treatment plant tanks): Many sewage treatment plants have sewage storage tanks as part of the treatment process.

There are 318 chemical and pathogen circumstances for sewage treatment plants listed in the Ministry of the Environment and Climate Change Tables of Drinking Water Threats that could affect surface and groundwater as a result of a discharge. The main groups of contaminants are pesticides, metals, synthetic chemicals and pathogens.

Sanitary sewers and related pipes refer to a wastewater collection system that collects or transmits sewage. This sub-threat does not include the sewage storage tanks, designed bypass or plumbing associated with a wastewater collection facility. The sanitary sewer system is an underground pipe network that collects wastewater produced by houses, businesses, and institutions and directs the wastewater to a treatment plant where it is treated before being discharged into surface waters. Leaking underground sewer lines are of concern to groundwater and surface water quality in Ontario. Leaks in sewer lines can happen for numerous reasons, including blockage from tree roots, soil slippage, washout resulting in loss of foundation, sewage backup, faulty materials, improperly constructed pipelines, lack of corrosion protection, age of the system, and ground subsidence. There are 65 chemical and pathogen

circumstances for sanitary sewers and related pipes listed in the Ministry of the Environment and Climate Change Tables of Drinking Water Threats.

The main groups of contaminants for sanitary sewers and related pipes are pesticides, metals, synthetic chemicals and pathogens. The classification of a sanitary sewer and pipes as a drinking water threat is dependent on the location, type of facility and designed conveyance rate.

Industrial effluent discharges refer to a system that discharges to surface water and has as its primary function, the collection, transmission or treatment of industrial sewage. These systems are collectively referred to as sewage works. Industrial effluent discharges could result in the presence of chemicals in both surface water and groundwater, and the presence of pathogens in surface water. The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify 56 chemicals that are associated with significant drinking water threats, including carbon tetrachloride, tetrachloroethylene, and chloroform. These substances could be by-products, impurities, reactants or manufacturing aids resulting from manufacturing or processing methods. It should be noted that only meat plants pose significant drinking water threats for pathogens as identified through the Ministry of the Environment and Climate Change Tables of Drinking Water Threats.

Combined sewers are those which function simultaneously as a storm sewer and a sanitary sewer and may discharge sanitary sewage containing human waste to surface water other than by way of a designed bypass. Traditional combined sewer discharges are not common practice in the Lake Erie Source Protection Region and they are unlikely to be built in the future. Situations where sanitary sewers and stormwater channels are separated by a dividing wall are more common. The assessment of a combined sewer discharge as a drinking water threat is dependent on the chemical or pathogen released and the size of the wastewater treatment plant to which it is connected.

Stormwater refers to rainwater runoff, water runoff from roofs, snowmelt and surface runoff. Where stormwater is managed, it is often under a stormwater management (SWM) plan which addresses runoff through conveyances and end of pipe collection systems. Stormwater can also be managed at source. A hierarchical approach to managing stormwater is preferred: at-source, then conveyance, and finally end-of-pipe controls. Stormwater management facilities are designed to collect runoff from the local storm-sewer system following either a rainfall or snowmelt event, or from activities such as washing cars. They are built to temporarily hold water, provide some treatment to remove some pollutants, and then slowly release it back to natural waterways or allow it to infiltrate into the ground. Not all SWM facilities are designed for quality control; many older facilities only provide quantity control. The assessment of a SWM facility as a drinking water threat is dependent on the chemical or pathogen released, the size of the drainage area the facility serves, and the predominant surrounding land uses flowing into the facility.

Threats 3, 4 and 5: The application, storage, and management of agricultural source material (ASM)

Agricultural source material (ASM) is a type of nutrient that can be applied to land for the purpose of improving growth of agricultural crops and for soil conditioning. The *Nutrient Management Act, 2002* defines the materials that are considered to be ASM, to include manure, run-off from farm animal yards, wash water, anaerobic digestion output, organic materials, and regulated compost. ASM is produced on farms with livestock, and can be stored in a permanent

nutrient storage facility (usually a steel or concrete manure storage facility or earthen lagoon), or on a temporary field nutrient storage site (only for solid ASM). The classification of the threat differs depending on whether it is being applied to land or stored.
The application of ASM is dependent on the vulnerability score of the specific area and the volume applied, as well as the combination of the managed land percentage and livestock density for the vulnerable area. The storage of ASM is dependent on the location of the storage facility (storage at, above, or below grade) and the type of storage (permanent or temporary). Both the application and storage of ASM are considered significant threats in any quantity and regardless of how and where it is stored.

The management of ASM refers to aquaculture facilities. The primary sources of pathogens in ASM from aquaculture are the water in which fish manure and by-products are in suspension or settled, the incoming water to an aquaculture facility contaminated with pathogens from other sources, and dead fish not removed from the water. These sources can negatively impact fish health, cause a food safety issue, and can increase the pathogens in the water.

Threats 6 and 7: The application, handling and storage of non-agricultural source material (NASM)

Non-agricultural source material (NASM) is a type of nutrient that can be applied to land for the purpose of improving growth of agricultural crops and for soil conditioning. NASM means any of the following materials, other than compost that meets the Compost Guidelines, or a commercial fertilizer, if the materials are intended to be applied to land as nutrients:

1. Pulp and paper biosolids;
2. Sewage biosolids;
3. Anaerobic digestion output (if less than 50 per cent, by volume, of the total amount of anaerobic digestion materials that were treated in the mixed anaerobic digestion facility were on-farm anaerobic digestion materials), and;
4. Any other material that is not from an agricultural source and that is capable of being applied to land as a nutrient.

The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify nitrogen, total phosphorus and pathogens as concerns due to the potential for runoff containing these nutrients to enter local drinking water sources.

Threat 8 and 9: The application, handling and storage of commercial fertilizer

Fertilizer, as defined by the *Fertilizer Act,* is any substance or mixture of substances, containing nitrogen, phosphorus, potassium or other plant food, manufactured, sold or represented for use as a plant nutrient. Commercial fertilizer is not an agricultural source material (ASM) or non-agricultural source material (NASM) but is considered a nutrient as defined by the *Nutrient Management Act, 2002* and associated regulations. Commercial Fertilizer is used extensively by the agriculture industry, as well as for heavily landscaped commercial, institutional, recreational, industrial and residential areas. Commercial fertilizer products are also known as “chemical fertilizers”. The impacts from commercial fertilizer application generally stem from improper use, such as application without consideration for nutrients available in the soil and plant requirements; or inappropriate timing of application for plant growth cycles and weather conditions causing an excess of nutrients to enter the groundwater and surface water. Potential impacts from storage of commercial fertilizers relate to leaks and spills as a result of aging infrastructure or improper handling or storage.

The Ontario Ministry of the Environment and Climate Change (MOECC) Tables of Drinking Water Threats identify nitrogen and total phosphorus as substances that could make their way into surface and groundwater as a result of the application of commercial fertilizer to land (circumstances 19 to 36), and through spills resulting from the handling and storage of commercial fertilizer (circumstances 1273 to 1288). Nitrogen is a concern for both surface and groundwater. Total phosphorus is only considered a concern for surface water because excessive inputs of total phosphorus in surface water results in eutrophication and can cause toxic algae blooms: both of which impair water quality.

The storage of commercial fertilizer is divided into two categories in the Ministry of the Environment and Climate Change Tables of Drinking Water Threats: (1) storage at a facility where it is manufactured or processed, or from which it is wholesaled, and (2) storage for retail sale or in relation to its application to land. For both retail sale and manufacturing, the storage of commercial fertilizer can be a significant threat in IPZs and WHPAs.

Threat 10 and 11: The application, handling and storage of pesticides

In Ontario, the *Pesticides Act* defines "pesticide" as any organism, substance or thing that is manufactured, represented, sold or used as a means of directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest or altering the growth, development or characteristics of any plant life that is not a pest and includes any organism, substance or thing registered under the *Federal Pest Control Products Act*. Historically, pesticide has been applied as part of many land uses including agricultural, active recreation, institutional, industrial, commercial and residential. Since 2009, there has been a ban on the cosmetic use of pesticide in Ontario that prohibits the application of pesticide on lawns, vegetable and ornamental gardens, patios, driveways, cemeteries, and in parks and school yards. However, the ban does make exceptions for various land uses, such as agricultural, golf courses, and public works operations. The Ministry of the Environment and Climate Change Tables of Drinking Water *Threats* identify 11 chemicals that could make their way into surface and groundwater from the application or storage and handling of pesticide under certain conditions.

Threat 12 and 13: The application, handling and storage of road salt

Road salt as a drinking water threat refers to any product containing sodium and/or chloride that is used to maintain roads and pedestrian areas. Most road salt is used as a de-icer or an ice prevention agent, but is sometimes also used for dust suppression. The most commonly used products for de-icing roads and preventing ice formation on roads are sodium chloride and calcium chloride because they are effective and inexpensive. The most common technique involves the use of liquid salts, either as an additive to conventional rock salt (pre-wetting) or applied on its own in advance of snow accumulation (direct liquid application). Given the extended winter season in Ontario, there is widespread use and storage of road salt. The majority of the material is handled by road authorities such as municipalities and the Ontario Ministry of Transportation; however, private businesses and residential property managers also store and use salt. At typical concentrations in drinking water, sodium and chloride are not risks to human health; however, at concentrations greater than 20 milligrams per litre (mg/L), sodium intake can present a health issue for some people. The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify sodium and chloride as contaminants that could make their way into surface and groundwater from road salt application, storage and handling.

The application of road salt can only be a significant drinking water threat if the impervious area is equal to or greater than 80%. This situation does not exist within the Wellhead Protection Areas or the two (2) municipal drinking water systems in the Catfish Creek Source Protection Area. Therefore, no policies pertaining to the application of road salt were included in this Source Protection Plan.

Threat 14: The storage of snow

For health and safety reasons (i.e., slipping hazard), snow removed from roads and parking lots must be melted on-site or transported to a location where it is either melted or stockpiled and allowed to melt. Since snow can be contaminated with salt, oil, grease and heavy metals from vehicles, litter, and airborne pollutants, it must be handled and stored in ways that protect water sources. The activities related to snow storage that are considered to be drinking water threats include:

- Snow that is pushed into large piles on a property (e.g. stored in parking lots);
- Snow that is transported to a central site from other locations (e.g. snow disposal sites); and,
- Large snow banks along roads that are close to municipal wellheads or surface water intakes.

The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify 11 substances such as chloride, copper, sodium and nitrogen, which could make their way into surface and groundwater as a result of runoff from snow storage areas and threaten the safety of drinking water sources.

Threat 15: The handling and storage of fuel

This category of drinking water threat includes the handling of liquid fuel as well as its storage. The types of storage facilities to be considered are defined in O.Reg. 213/01 (Fuel Oil) or O.Reg. 217/01 (Liquid Fuels). Both of these regulations are made under the *Technical Standards and Safety Act, 2000*. Facilities where fuel is manufactured or refined are also to be considered. The types of fuel storage facilities include those outlined in O.Reg. 217/01.

A facility is defined as:

- Permanent or mobile retail outlets;
- Bulk plant;
- Marinas;
- Cardlocks/ keylocks;
- Private outlets; or
- Farms.

Residential properties that store greater than 250 Litres of fuel oil below grade or partially below grade (including within a basement) are also categorized as a significant drinking water threat.

The primary circumstance that determines whether an activity is a significant drinking water threat is related to quantity and type of fuel, and whether or not it is stored above, below or partially at below grade.

The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify BTEX compounds (benzene, toluene, ethylbenzene and xylene) and petroleum hydrocarbons as contaminants that could make their way into surface water or groundwater from spills associated with the handling and storage of liquid fuel.

Threat 16: The handling and storage of Dense Non-Aqueous Phase Liquid (DNAPL)

A Dense Non-Aqueous Phase Liquid (DNAPL) is a liquid chemical that is denser than water and tends to be sparingly soluble in water. The majority of DNAPLs are used in industrial and commercial applications. They can also be found in small quantities in common household products such as paints and adhesives. Historically, these compounds were also found in smaller quantities in personal care products (e.g., shampoo, cosmetics), but in many cases are being phased out of such products. If spilled, DNAPLs tend to sink into the ground and can contaminate even the deepest groundwater resources. The DNAPLs identified in the Drinking Water Threat circumstance tables are toxic to humans and/or the environment at even the lowest levels, meaning that even if only a small amount dissolves into the water, it would be harmful to humans. Therefore, these DNAPLs pose a significant threat to drinking water sources.

Threat 17: The handling and storage of organic solvents

Organic solvents are liquid organic compounds with the ability to dissolve solids, gases, or liquids. They have been used in vast quantities for decades in industrial and commercial applications and can also be found in small quantities in common household products such as adhesives and cleaners. Four organic solvents have been identified as potential concerns related to drinking water: carbon tetrachloride, chloroform, dichloromethane and pentachlorophenol. These substances have various properties, uses and negative environmental effects. The assessment of the risk to drinking water sources from these organic solvents is dependent on whether they are stored underground, at ground surface or above ground and the amount of material stored. Underground storage is of greater concern due to the potential for undetected leaks.

Threat 18: The management of runoff that contains chemicals used in the de-icing of aircraft

With respect to aircraft de-icing, the Ministry of the Environment and Climate Change's Tables of Drinking Water Threats identify dioxane-1,4 and ethylene glycol as contaminants that could make their way into surface and groundwater as a result of runoff containing aircraft de-icing materials being discharged to land or water. Ethylene glycol is the active ingredient in de-icing fluids, and dioxane-1, 4 may be used as an additive for its wetting or dispersing properties. These chemicals could threaten the safety of drinking water sources in certain situations. The classification of this activity as a significant, moderate or low drinking water threat is dependent on the classification of the airport as a remote, small, regional or national airport. The activity is classified as a significant threat only for airports that: i) have passenger traffic as part of the definition of "regional" or "national" airport and; ii) that lie within an intake protection zone or wellhead protection area.

Threat 21: The use of land as livestock grazing or pasturing land, an outdoor confinement area (OCA) or a farm-animal yard

This threat can be divided into two sub-threats: 1) Outdoor Confinement Areas and farm animal yards; and 2) livestock grazing and pasturing. An Outdoor Confinement Area (OCA) is a yard, facility, or enclosure (for livestock, deer, elk or game animals) with a very high animal concentration, typically 15 or more animals per acre, often for extended periods of time. Grazing is crop production where the animals do the harvesting. Ontario grazing systems involve a concentration of up to 2 to 3 animals per acre during the grazing season, often on a rotational basis. The Ministry of the Environment and Climate Change Tables of Drinking Water Threats identify nitrogen, total phosphorus and pathogens (such as *E. coli*) as contaminants that could make their way into surface and groundwater drinking water sources from livestock areas.

Generally speaking, keeping greater numbers of livestock in an area intensifies the accumulation of nutrients and pathogens, thereby increasing the risk of contamination to drinking water sources and the requirement for more active management.

Local Threat

The Conveyance of Oil by way of Underground Pipelines

The conveyance of oil by way of an underground pipeline is not a prescribed threat listed in O.Reg. 287/07, but has been approved as a local threat for the Lake Erie Source Protection Region. The Lake Erie Region Source Protection Committee applied to the Director of the Source Protection Program Branch on February 2, 2011 to include this local threat given the toxicity and potential negative impact to a municipal drinking water source if a pipeline rupture were to occur. The conveyance of oil by way of an underground pipeline was approved as a local threat for the Lake Erie Source Protection Region by the Director on June 13, 2011. The specific threat is as follows:

> The conveyance of oil by way of an underground pipeline that would be designated as transmitting or distributing “liquid hydrocarbons”, including “crude oil”, “condensate”, or “liquid petroleum products”, and not including “natural gas liquids” or “liquefied petroleum gas”, within the meaning of Ontario Regulation 210/01 under the *Technical Safety and Standards Act*, or is subject to the *National Energy Board Act*.

Oil pipelines consist of the pipeline and associated equipment including compressors and pumps. Pipe diameters can range in size, but typical sizes found within the Lake Erie Region are approximately 12 inches. The main consideration for reducing or eliminating drinking water threats related to this threat is to prevent spills as a result of pipeline ruptures and to have an appropriate spill response. The hazard ratings provided by the Director identify BTEX (benzene, toluene, ethylene and xylene) and hydrocarbons F1 through F4 as contaminants that could make their way into groundwater; there is no volume associated with the circumstances. Significant threats occur in wellhead protection areas with a vulnerability score of 10.

There were no local threats identified in the Assessment Report and therefore none are addressed in the Catfish Creek Source Protection Plan.

Optional Content

On January 13, 2011, the Source Protection Committee passed a resolution (Res. No. 05-11) which determined that policies for optional content shall be included within the Source Protection Plans as outlined in O. Reg. 287/07 and the report (SPC-11-01-03) to the committee.

Conditions
Significant conditions are contaminated sites for which there is evidence of off-site contamination from a past activity that may have an immediate impact on drinking water quality, as outlined in Part XI.3, Rule 126 of the *Clean Water Act, 2006* Technical Rules. There were no significant conditions identified in the Assessment Report and therefore none are addressed in the Catfish Creek Source Protection Plan.

Spill Prevention, Spill Contingency or Emergency Response Plans
Spill prevention plans outline the appropriate handling and storage (action plan) of potentially harmful substances and may include preventative maintenance standards and reporting. Spill prevention and contingency plans are outlined in the *Environmental Protection Act*, O. Reg. 224/07 and are developed by industries as described in O. Reg. 222/07, Environmental Penalties.

This includes, but is not limited to, industrial facilities (Table 1 of O. Reg. 222/07) and those that discharge sewage other than stormwater to a watercourse.

These plans must include the following: a written description of the facility; plans required by the Act to prevent or reduce the risk of spills of pollutants and prevent, eliminate or ameliorate any adverse effects that may result in a spill; and the date the plan must be developed and implemented.

Policies included for spill prevention, spill contingency or emergency response plans can only be included in the Source Protection Plan if they relate to a highway (as defined by the *Highway Traffic Act*), railway line or a shipping lane (i.e., along a transportation corridor). This does not include properties that are along highways and also within the vulnerable area (O.Reg. 287/07 section 26(6)).

Every municipality is responsible for creating an emergency plan governing the provision of necessary services during an emergency, and the procedures under and the manner in which employees of the municipality and other persons will respond to the emergency. The council of the municipality shall by by-law adopt the emergency plan. An emergency plan authorizes employees of the municipalities and public servants to take action prior to the declaration of the emergency; specifies the procedures to be taken for the safety and evacuation of persons in the emergency area; designates one or more members of the council who may perform the duties of the head of council, if the head of council is unable to act; provide for obtaining and distributing materials, equipment and supplies during an emergency; and provide for such other matters as are considered necessary or advisable for the implementation of the emergency plan during an emergency. Outdated plans may pose a risk to drinking water sources as they may not contain the most recent data and most appropriate response (e.g., personnel) to an emergency or spill.

Spill requirements found in Part X of the *Environmental Protection Act* (Spills) and applicable regulations (e.g. O. Reg. 675/98) set out obligations for various parties to take action (including, but not limited to, duty to report spills, duty to mitigate and restore the environment etc.) in the event of a spill. Among others, various duties apply to the owner of spilled material, controller of spilled material, person who spills or causes or permits a spill, and the municipality where a spill occurs.

Transport Pathways

Transport pathways are defined in the *Clean Water Act, 2006* O.Reg. 287/07. Transport pathways are a land condition, resulting from human activity, which increases the vulnerability of a municipal drinking water system's raw water supply. This can include constructed pathways such as subsurface utility corridors, abandoned boreholes, deteriorating water wells, which do not meet applicable legal requirements, pits and quarries, geothermal systems, underground parking lots and excavations.

They are a concern to drinking water supplies because they may facilitate the movement of contaminants vertically or laterally below grade, and result in a more widespread distribution of contaminants.

In the Assessment Report, transport pathways are considered as part of the vulnerability assessment for the wellhead protection areas and intake protection zones. If a transport pathway(s) was identified, the vulnerability scoring may have been increased, therefore potentially causing activities (i.e., one of the prescribed drinking water threats) to become significant threats due to the vulnerability scoring change.

For example, in the case of groundwater wells which do not meet applicable legal requirements, transport pathways provide a conduit to an aquifer that bypasses the natural protection of the overburden layer resulting in a greater potential risk for contamination. In the case of surface water intakes, transport pathways include anthropogenic (storm sewersheds) conduits which can extend the delineation of intake protection zones two and three.

Under the *Clean Water Act, 2006*, transport pathways, albeit in many cases human-made pathways that increase the vulnerability, are not considered activities; therefore, they cannot be addressed the same way as the 21 Prescribed Drinking Water Threats. Inclusion of policies to address these transport pathways, as allowed by the *Clean Water Act* under section 27 of O. Reg. 287/07, facilitates the need to ensure protection of drinking water sources.

Monitoring of Moderate and Low Threats

Listed under mandatory content, the monitoring of moderate and low threats must be included in the Source Protection Plans where the Source Protection Committee thinks this is advisable to prevent them from becoming significant drinking water threats. However, moderate and low threats need to be inventoried before they can be monitored and policies can be developed and applied.

Dates for When Policies Take Effect

Implementation dates must be included in the Source Protection Plan to help identify to municipalities and other bodies when the policies take effect and when compliance must be met.

Section 29: Additional Source Protection Plan Information

Under the *Clean Water Act*, *2006,* O.Reg. 287/07 section 29, the Source Protection Committee has the ability to include content in the Source Protection Plan that allows for the inclusion, in their opinion, of anything that will assist in understanding the plan. The information is included to provide clarification on issues and concerns raised throughout the source protection planning process by either the Lake Erie Region Source Protection Committee, other interested bodies or the general public. Further information is presented in the Explanatory Document.

Sources:

- *Discussion Papers prepared by the Grand River Source Protection Area, Region of Waterloo, County of Oxford, City of Guelph and Lura Consulting*
- *Catfish Creek Source Protection Area – Approved Assessment Report (October 7, 2010)*
- *Clean Water Act, 2006*
- *Ministry of the Environment and Climate Change Provincial Tables of Circumstance Tables of Drinking Water Threats, 2009b*

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APPENDIX C: LEGAL EFFECT MATRIX

Implementing Body:	Provincial	Municipality, Local Board or Source Protection Authority	Other Bodies[1]
SIGNIFICANT THREAT POLICIES- ACTIVITIES			
Part IV Tools [1]	Comply	Comply	Comply
Prescribed Instruments	Must Conform	N/A	N/A
Land Use Planning Approaches		Must Conform	Must Conform
Education and Outreach/ Incentive Programs	Non-legally Binding	Comply	Non-legally Binding
Other[2]			
SIGNIFICANT THREAT POLICIES-CONDITIONS			
Part IV Tools[1]	N/A	N/A	N/A
Prescribed Instruments	Must Conform		
Land Use Planning Approaches		Must Conform	Must Conform
Education and Outreach/ Incentive Programs	Non-legally Binding	Comply	Non-legally Binding
Other[2]			
MONITORING POLICIES [3]			
All Policy Tools	Comply	Comply	Comply
MODERATE AND LOW THREAT POLICIES-ACTIVITIES AND CONDITIONS			
Part IV Tools[1]	N/A	N/A	N/A
Prescribed Instruments	Have Regard		
Land Use Planning Approaches		Have Regard	Have Regard
Education and Outreach/ Incentive Programs	Non-legally Binding	Non-legally Binding	Non-legally Binding
Other[2]			
OTHER – STRATEGIC ACTIONS			
Transport Pathways	Non-legally Binding	Non-legally Binding	Non-legally Binding
Climate change data collection			
Spill prevention, contingency or response plans along highways, railways or shipping lanes			

Notes:

(1) Other Bodies would include any body which is not a provincial body, municipality, local board and/or Source Protection Authority (e.g., the TSSA)

(2) Part IV Tools include Section 57 Prohibition, Risk Management Plans and Restricted Land Uses

(3) Other approaches authorized by the regulation include: specify the action to be taken to implement the Source Protection Plan or to achieve the plan's objectives; establish stewardship programs; specify and promote best management practices; establish pilot programs; and govern research.

(4) The "comply with" legal effect only applies to policies where section 45 of the *Clean Water Act* applies. Monitoring policies written for Strategic Action policies have a Non- legally binding legal effect.

N/A not applicable

Source: Adapted from: Conservation Ontario, 2011. Legal Effect of Source Protection Plan Policies

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Catfish Creek Source Protection Area

APPROVED
SOURCE PROTECTION PLAN

VOLUME II

Prepared on behalf of:
Lake Erie Region Source Protection Committee

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

September 19, 2014

The Minister has approved this plan. The effective date is January 1, 2015.

400 Clyde Road, Cambridge, ON N1R 5W6 • www.sourcewater.ca

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1.0 INTRODUCTION

The Catfish Creek Source Protection Plan is a document that contains policies to protect sources of drinking water against existing and future drinking water threats prescribed in the *Clean Water Act, 2006* within the Catfish Creek Source Protection Area.

The Source Protection Plan is comprised of two volumes and accompanied by an Explanatory Document. This second volume of the Source Protection Plan contains the Source Protection Plan policies. The policies are assigned a legal effect and direct implementing bodies to comply with, conform with, or have regard to these policies. Some policies are non-legally binding.

Below is a brief description of what is included in Volume I and the Explanatory Document.

Volume I
Volume I of the Source Protection Plan provides the context for the Plan, which includes a brief history of source protection planning and the *Clean Water Act*, 2006 Source Protection Plan objectives, and a description of the watershed/Source Protection Area.

The Catfish Creek Source Protection Area Assessment Report, approved by the Ministry of the Environment on October 7, 2010, is a key component of the Source Protection Plan. This Assessment Report forms the basis of the Source Protection Plan and provides information, including mapping, for understanding its objectives and policies. The full report is available online at www.sourcewater.ca.

Explanatory Document
Section 40 of O. Reg. 287/07 under the *Clean Water Act, 2006* requires an Explanatory Document be prepared and submitted with the Source Protection Plan. The Explanatory Document is not part of the Source Protection Plan; however, it provides interested parties with the rationale used by the policy makers when developing the Source Protection Plan policies. Further, the Explanatory Document summarizes the key factors considered when selecting policy approaches.

1.1 Source Protection Plan- Legal Effect

As required by the *Clean Water Act, 2006*, the Source Protection Plan policies must identify who or what agency will be responsible for implementation. The legal effect describes whether there is an obligation for the responsible party to implement the policy. Three factors determine the legal effect of a policy: 1) the policy tool, 2) the threat ranking (significant / moderate / low), and 3) the implementing body. For example, a specify action policy could direct a municipality to comply with a significant drinking water threat policy, whereas a Provincial Ministry would not be legally bound to comply with the policy. This information is presented in the Legal Effect Matrix, included in Appendix C of Volume I.

Part III (Effect of Source Protection Plans) of the *Clean Water Act, 2006* gives the Source Protection Plan and its policies their various legal effects. Within Part III, certain provisions require specific statutory decisions to conform to or comply with the significant threat policies; therefore, the implementing bodies have an obligation to implement the Source Protection Plan policies. The Ministry of the Environment and Climate Change provided direction under section 34 of O. Reg. 287/07 to ensure a consistent method of identifying the policies' legal effect under one or more provisions of Part III of the *Clean Water Act, 2006*. The following is included in **APPENDIX A** of Volume II**.**

List A Significant threat policies that affect decisions under the *Planning Act* and *Condominium Act, 1998*
List B Moderate and low threat policies that affect decisions under the *Planning Act* and *Condominium Act, 1998*
List C Significant threat policies that affect prescribed instrument decisions
List D Moderate and low threat policies that affect prescribed instrument decisions
List E Significant threat policies that impose obligations on municipalities, source protection authorities and local boards
List F Monitoring policies referred to in subsection 22(2) of the *Clean Water Act, 2006*
List G Policies related to section 57 of the *Clean Water Act, 2006*
List H Policies related to section 58 of the *Clean Water Act, 2006*
List I Policies related to section 59 of the *Clean Water Act, 2006*
List J Strategic Action policies
List K Significant threat policies targeted to bodies other than municipalities, local board or source protection authorities for implementation

In addition to the lists above, two tables are included which identify the type of prescribed instrument that the policy affects, in relation to Lists C and D, and a summary of all the policies with respect to the above lists. These tables are presented in **APPENDIX B** of Volume II.

The *Clean Water Act, 2006* identifies policy tools to address the prescribed drinking water threats identified in O. Reg. 287/07. This Volume contains the policies developed to address existing and future drinking water threats within the Catfish Creek Source Protection Area.

2.0 HOW TO READ THE SOURCE PROTECTION PLAN POLICIES

There is one municipal drinking water system located in the Catfish Creek Source Protection Area. These Source Protection Plan policies have been developed for this municipal drinking water system. Further information and rationale is included in Volume I of the Source Protection Plan and in the Explanatory Document.

2.1 Policy Format

Each policy addresses significant drinking water threats as per the Ministry of the Environment and Climate Change's Table of Prescribed Drinking Water Threats. In most cases, the Ministry of the Environment and Climate Change's Prescribed Drinking Water Threat is stated within the policy and it is understood that this will include all sub-threats as listed in the *Clean Water Act, 2006* Provincial Tables of Circumstances available online at www.sourcewater.ca and in the Assessment Report. These prescribed drinking water threats are also described in Volume I of this Source Protection Plan.

The policies in the Catfish Creek Source Protection Plan are included in Section 3, which contains the following information:

- County of Oxford Specific Definitions
- County of Oxford Source Protection Plan Policies
- Policies addressing Prescribed Drinking Water Threats within the County of Oxford

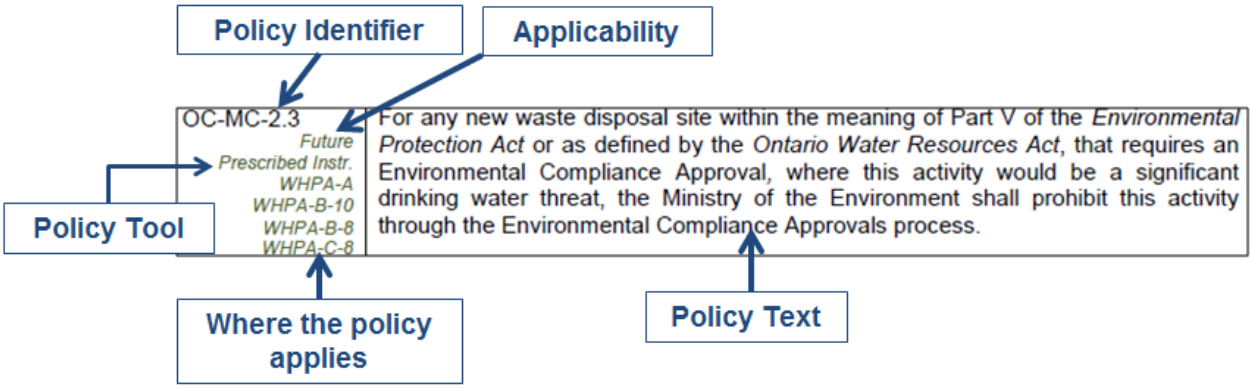
Following Section 3, Appendix A lists the policies as per Section 34 of Ontario Regulation 287/07. Appendix B shows the Prescribed Instruments which apply to Source Protection Plan policies in Lists C and D (Table 1) and a Policy Summary Matrix (Table 2).

Policy Applicability Mapping can be found under the List of Schedules.

In some cases, policies have been included in this Source Protection Plan, even though it is in the opinion of the municipality and the Source Protection Committee that certain activities are unlikely to occur in the future. Policies addressing potential future drinking water threats are required to be included in the Source Protection Plan, as per the objectives outlined in the *Clean Water Act, 2006*.

To aid the policy reader, policies are presented in a standard format (Figure 1).

Figure 1: Example of a Source Protection Plan Policy



2.2 Policy Identifier

To assist the reader, an identifier has been used for each policy. The identifier specifies the system/ policy location, policy number, and its legal effect (i.e., OC-CW-1.1).

The system/ policy location is identified first:

- OC – County of Oxford

The legal effect follows the policy location identifier and is designated as follows:

- CW – Comply With
- MC – Must Conform
- NB – Non-legally Binding

Each policy is numbered sequentially.

Significant threat policies address existing drinking water threats, potential future threats, or both. The policy text also includes the agency responsible for implementation.

2.2.1 Legal Effects

A description of the legal effects is presented below. The legal effect policy matrix is presented in Volume I of this Source Protection Plan.

The policies in the Source Protection Plan have one of three types of legal effect – "must conform/comply with", "have regard to", and "non-legally binding". The following is an explanation of which policies fall under each legal effect provision. The appendices of the Source Protection Plan also contain Policy Lists, ensuring that the Source Protection Plan policies are designated the appropriate legal effect provision as outlined in the *Clean Water Act, 2006*. Specific reference to these lists is included in the definitions below, where applicable.

Must Conform (MC) / Comply With (CW)

- The *Clean Water Act, 2006* requires municipalities; local boards or source protection authorities to comply with any obligations imposed on it to address a significant drinking water threat (activity/condition), regardless of the particular tool or approach used in the policy (see List E).

- The *Clean Water Act, 2006* requires decisions under the *Planning Act* and *Condominium Act* to conform with significant drinking water threat (activity/condition) policies (see List A).

- The *Clean Water Act, 2006* requires decisions related to prescribed instruments to conform with significant drinking water threat (activity/condition) policies (see List C).

- Persons carrying out significant threat activities must comply with policies that use Part IV powers under the *Clean Water Act, 2006*.

- The Source Protection Plan must designate a public body[1] to carry out monitoring required by the *Clean Water Act, 2006* and these public bodies must conform with the obligations set out in the monitoring policies (see List F).

Non-legally Binding (NB)

The Source Protection Plan includes other types of policies that, while the Source Protection Committee may determine are important to achieving the Plan's objectives, are not given legal effect by the *Clean Water Act, 2006*. These may include:

- Significant, moderate and low drinking water threats and/or condition policies to be implemented by bodies other than municipalities, local boards or source protection authorities, and which do not rely on Part IV or the *Clean Water Act, 2006*, prescribed instruments or *Planning Act and Condominium Act* tools.

- Other permitted policies governing:

    - Incentive programs and education & outreach programs, not aimed towards a specific threat activity or Condition including those for systems not in terms of reference
    - The update of spills prevention, contingency or response plans along highways, railways or shipping lanes
    - Climate conditions data collection
    - Transport pathways in WHPA or IPZ.

- Optional monitoring policies (i.e. moderate/low drinking water threats in areas where the threat could never become significant and monitoring of other permissible plan policies) to be implemented by bodies other than municipality, local boards or source protection authorities.

[1] Public body is defined in section 2 of the CWA and means "a municipality, local board or conservation authority, a ministry, board, commission, agency or official of the Government of Ontario, or a body prescribed by the regulations". Based on this definition, a commission like the Niagara Escarpment Commission is a public body, whereas any federal government ministry and the Technical Standards and Safety Authority (TSSA) are not.

Not all policy options mentioned above have been included in the Catfish Creek Source Protection Plan. Volume I of the Source Protection Plan provides additional detail on optional content and what has, and has not, been included in the Source Protection Plan.

2.3 Sidebar

Information is provided in a sidebar below the Policy Identifier to provide a quick reference for the reader when reviewing the Source Protection Plan policies. The sidebar does not form part of the Source Protection Plan policies and specifies the following:

- Whether the policy will apply to existing activities, future activities, or both;
- The policy tool that is being applied to manage or prohibit the activity (a summary of the policy tools is presented in Volume I of this Source Protection Plan); and
- The vulnerable area where the policy will apply, including the vulnerability score, if applicable.

The following acronyms were used to present this information:

- WHPA: Wellhead Protection Area;
- Part IV- RMP: Part IV of the *Clean Water Act, 2006*, Risk Management Plan;
- Part IV- RLU: Part IV of the *Clean Water Act, 2006*, Restricted Land Use;
- Prescribed Instr.: Prescribed Instrument (e.g., Environmental Compliance Approval); and
- -v. #: Applicable vulnerability score where the policy will apply.

2.4 Policy Applicability Mapping

Policy applicability mapping has been provided in the Schedules to aid the reader in determining where Source Protection Plan policies apply. This mapping is based on the Approved Assessment Report mapping, modified to indicate where the Source Protection Plan policies may apply, based on the Tables of Drinking Water Threats under the *Clean Water Act, 2006.*

The purpose of this mapping is to provide a summary of the circumstances presented in the Tables of Drinking Water Threats. As indicated on the Policy Applicability Map, each vulnerability score is associated with a colour. This colour is then reflected in the summary table provided on the map to indicate which potential drinking water threats would apply to a specific location.

To determine if a policy applies, the policy text, the Assessment Report mapping and the Tables of Drinking Water Threats (specific circumstances) should be consulted. A summary on how to read the Source Protection Plan is provided in Volume I.

The Tables of Drinking Water Threats, *Clean Water Act, 2006* and the Approved Assessment Report are available online at www.sourcewater.ca.

2.5 Monitoring of Significant Drinking Water Threat Policies

Activities that are or would be significant drinking water threats must be monitored and the effectiveness of the policy at addressing a significant drinking water threat must be evaluated. This evaluation will help the Source Protection Committee determine if the threat policy is effective and/ or if revisions to the policy(ies) would be required in future updates of the Source Protection Plans. The same monitoring policy may be used to monitor one or more drinking water threat policies.

3.0 CATFISH CREEK SOURCE PROTECTION PLAN POLICIES- THE COUNTY OF OXFORD

The following Catfish Creek Source Protection Plan policies will be implemented in the vulnerable areas identified in the County of Oxford for the Brownsville Water Supply as presented in Schedules A of Volume II. The Brownsville Water Supply, within the County of Oxford, is the only drinking water system within the Catfish Creek watershed for which significant drinking water threat policies were developed. Further information on this process is presented in the Catfish Creek Assessment Report available online at www.sourcewater.ca.

3.1 Definitions

General definitions are provided in Volume I of the Catfish Creek Source Protection Plan or in the *Clean Water Act, 2006.* The following definitions are included to aid the reader in understanding the source protection policies and where and when they apply. The definitions shall apply only to the Catfish Creek Source Protection Area where the drinking water threat policies apply. Defined terms are intended to capture both the singular and plural forms of these terms.

Area Municipality – means one or more of the eight lower tier municipalities located within the County of Oxford, consisting of the City of Woodstock, Town of Tillsonburg, Town of Ingersoll and Townships of Blandford-Blenheim, East Zorra-Tavistock, Norwich, Southwest-Oxford and Zorra.

County - means the County of Oxford.

Existing – means undertaken or established as of the date the Source Protection Plan takes effect, or at some point prior to the date the Source Protection Plan takes effect with a demonstrated intent to continue.

New or Future - means not existing, as defined herein.

3.2 County of Oxford Source Protection Plan Policies

Policy Number	Source Protection Plan Policies within the County of Oxford
Transitional Policies and Implementation Timing	
OC-CW-1.1 *Implement. & Timing*	Except as set out below or as otherwise prescribed by Section 57 or 58 of the *Clean Water Act*, 2006 the policies contained in this Source Protection Plan shall come into effect on the effective date set by the Minister. a. For Section 57 of the *Clean Water Act,* 2006 if an activity was engaged in a particular location before this Source Protection Plan takes effect, policies regarding prohibited activities do not apply to a person who engages in the *activity* at that location until 180 days from the date the Source Protection Plan takes effect; b. For Section 58 of the *Clean Water Act*, 2006 if an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location that, in the opinion of the Risk Management Official, policies regarding regulated activities should apply to the person who engages in the activity at that location on and after a date specified in the notice that is at least 120 days after the date notice is given; c. For Section 59 of the *Clean Water Act*, 2006 restricted land use policies shall come into effect on the day the Source Protection Plan takes effect; d. For Section 43 of the *Clean Water Act*, 2006 if an activity was engaged in a particular location before this Source Protection Plan takes effect, amendments to prescribed instruments shall be completed within three (3) years from the date the Source Protection Plan takes effect; e. For Section 40 and 42 of the *Clean Water Act*, 2006 the amendments to the Official Plan required to conform with the significant threat policies shall be initiated by the *County* within five (5) years from the date the Source Protection Plan takes effect, or as part of the next Official Plan Review undertaken in accordance with Section 26 of the *Planning Act*. The amendments to the Zoning By-Laws required to conform with the significant threat policies shall be initiated by the Area Municipalities within two (2) years of the adoption of the Official Plan conformity amendment; and f. Where the Source Protection Policies require the development of education and outreach programs as the primary tool for managing or eliminating a particular significant threat, such programs shall be developed and implemented within five (5) years from the date the Source Protection Plan takes effect.

Policy Number	Source Protection Plan Policies within the County of Oxford
OC-CW-1.2 *Transition*	i) Notwithstanding the definition of existing, where development is being proposed by one or more of the following applications: a. A site specific amendment to a zoning by-law under subsection 34(10) of the *Planning Act*; b. Approval of development in a site plan control area under subsection 41(4) of the *Planning Act*; or c. A building permit under the *Building Code Act*. A significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: a. The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and b. The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is to be undertaken as part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as *existing* for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and, where applicable, the relevant appeal body, or have lapsed or been withdrawn. ii) Notwithstanding the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and such activity does not require any approvals under the *Planning Act* or Ontario *Building Code Act* to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. iii) Notwithstanding the definition of existing or the provisions contained in subsection i) or ii) of OC-CW-1.2, where a Risk Management Inspector has conducted a property specific assessment and documented the significant drinking water threat activities that are undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered new or future from that point forward. iv) Notwithstanding the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.

Policy Number	Source Protection Plan Policies within the County of Oxford
Uses and Areas Designated as Restricted Land Use	
OC-CW-1.3 *Part IV- RLU*	In accordance with Section 59 of the *Clean Water Act*, 2006 all land uses identified within the *County* Official Plan and/or Area Municipal Zoning By-Laws, with the exception of residential uses, that are located within an area where sections 57 and/or 58 of the *Clean Water Act,* 2006 may apply (Well Head Protection Areas A, B or C), are hereby designated for the purposes of section 59 (Restricted Land Use). Within these designated land use categories and areas, a notice from the Risk Management Official in accordance with section 59(2) of the *Clean Water Act,* 2006 shall be required prior to approval of any *Planning Act* or Building Permit application. Despite the above policy, a Risk Management Official may issue written direction specifying the circumstances under which a planning authority or building official may be permitted to make the determination that a site specific land use is not designated for the purposes of section 59. Where such direction has been issued, a site specific land use that is the subject of an application for approval under the *Planning Act* or for a permit under the *Building Code Act* is not designated for the purposes of Section 59, provided that the planning authority or building official, as the case may be, is satisfied that: i. The application complies with the circumstances specified in the written direction from the Risk Management Official; and ii. The applicant has demonstrated that a significant drinking water threat activity designated for the purposes of section 57 or 58 will not be engaged in, or will not be affected by the application.
Official Plan and Zoning By-law Amendment(s) Policies	
OC-MC-1.4 *Future Land Use Planning*	The County shall amend the Official Plan and the Area Municipalities shall amend their respective Zoning By-Laws to: a. Identify the WHPAs in which a significant drinking water threat could occur; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; c. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the *Clean Water Act*, 2006 in accordance with the significant drinking water threat specific policies contained in this Source Protection Plan; and d. Incorporate any other amendments required to conform with the significant drinking water threat specific land use policies identified in this Source Protection Plan.
Education and Outreach Programs	
OC-CW-1.5 *Existing/Future Education & Outreach*	The County, in collaboration with Conservation Authorities and other bodies wherever possible, may develop and implement education and outreach programs directed at any, or all, significant drinking water threats, where such programs are deemed necessary and/or appropriate by the County and subject to available funding. Such programs may include, but not necessarily be limited to, increasing awareness and understanding of significant drinking water threats and promotion of best management practices.
Incentive Programs	
OC-CW-1.6 *Existing/Future*	The County, in collaboration with the Ministry of the Environment and Climate Change, Conservation Authorities and other bodies wherever possible, may develop and implement incentive programs directed at various significant drinking

Policy Number	Source Protection Plan Policies within the County of Oxford
Incentive	water threats, where such programs are deemed necessary and/or appropriate by the County and subject to available funding.
OC-NB-1.7 *Existing/Future Incentive*	The Ministry of the Environment and Climate Change and other provincial ministries shall consider providing, continued funding and support for incentive programs, such as the Ontario Drinking Water Stewardship Program, to assist in protecting existing and future drinking water sources and addressing significant drinking water threats.
Annual Reporting	
OC-CW-1.8 *Monitoring*	The County shall provide a report to the Source Protection Authority, by February 1st of each year, summarizing the actions taken by the County to implement the Source Protection Plan Policies, where specifically required by the policies and not forming part of the report from the Risk Management Official required under OC-CW-1.10. Where the County is required to implement education and outreach programs as the primary means of managing the risk associated with significant drinking water threats, the County shall provide a report to the Source Protection Authority. This report must indicate, at minimum, the properties where these programs were implemented and additional details on how the significant drinking water threat was managed and/or ceased to be significant.
OC-CW-1.9 *Monitoring*	Where this Source Protection Plan requires the County or Area Municipality to amend their Official Plan and/or Zoning By-law and provide confirmation of such amendments to the Source Protection Authority, they shall provide a copy of such compliance within 30 days of adoption of the amendment(s) by County and/or Area Municipal Council or, where the matter has been appealed to the Ontario Municipal Board, the date of their decision to approve.
OC-CW-1.10 *Monitoring*	The Risk Management Official shall provide a report to the Source Protection Authority, by February 1st of each year, summarizing the actions taken by the Risk Management Official to implement the Source Protection Plan policies, in accordance with the *Clean Water Act*, 2006 and associated regulations.
OC-CW-1.11 *Monitoring*	Where the Source Protection Plan policies may result in amendments to a prescribed instrument or the issuance of a new prescribed instrument, the applicable Ministry shall summarize the actions taken the previous year to implement the policies and provide a written report summarizing this information to the Source Protection Authority and the County by February 1st of each year.
OC-CW-1.12 *Monitoring*	Where the Source Protection Plan policies prohibit an activity through the use of a prescribed instrument, the applicable Ministry shall summarize the actions taken the previous year to implement the policies and provide a written report summarizing this information to the Source Protection Authority and the County by February 1st of each year.
Environmental Compliance Approvals and Consultation with Oxford County	
OC-NB-1.13 *Existing/Future Specify Action*	The Ministry of the Environment and Climate Change should, collaboratively with the County develop a consultation process related to document sharing and consultation on the issuance and/or notification of prescribed instruments, which could be used to guide information exchange between the two agencies to protect municipal drinking water sources.

Policy Number	Source Protection Plan Policies within the County of Oxford
Strategic Action	
Spill Prevention, Spill Contingency or Emergency Response Plans	
OC-NB-1.14 *Existing/Future Specify Action*	To ensure spill prevention plans, contingency plans, and emergency response plans are updated for the purpose of protecting municipal drinking water sources with respect to spills that occur within a WHPA along highways, or railway lines, a. The County is requested to incorporate the location of WHPAs into their emergency response plans in order to protect municipal drinking water sources when a spill occurs along highways or rail lines. b. The Ministry of the Environment and Climate Change is requested to provide mapping of the identified vulnerable areas to the Spills Action Centre to assist them in responding to reported spills along transportation corridors.
Transport Pathways	
OC-NB-1.15 *Existing/Future Specify Action*	The Ministry of the Environment and Climate Change should consider providing sufficient staff and financial resources to ensure the effective implementation of ongoing programs to decommission abandoned water wells, in accordance with O. Reg. 903 of the *Ontario Water Resources Act*.
Interpretation	
OC-CW-1.16 *Interpretation of Source Protection Plan*	The Source Protection Plan provides policies to meet the objectives of the *Clean Water Act, 2006*. The Source Protection Plan consists of the written policy text and Schedules. a. The Schedules in the Source Protection Plan identify the areas where the policies of the Source Protection Plan apply. The boundaries for the circumstances shown on the Plan Schedules are general. More detailed interpretation of the boundaries relies on the mapping in the approved Assessment Report and the Specific Circumstances found in the Tables of Drinking Water Threats, *Clean Water Act, 2006*. b. Where any Act or portion of an Act of the Ontario Government or Canadian Government is referenced in this Plan, such reference shall be interpreted to refer to any subsequent renaming of sections in the Act as well as any subsequent amendments to the Act, or successor thereof. This provision is also applicable to any policy statement, regulation or guideline issued by the Province or the municipality. No provision of this Plan shall derogate from any applicable law.

3.3 The County of Oxford Policies Addressing Prescribed Drinking Water Threats

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
1. Establishment, Operation or Maintenance of a Waste Disposal Site, within the Meaning of Part V of the *Environmental Protection Act*	
OC-MC-2.1 *Existing Prescribed Instr. WHPA-A- v.10*	For any existing waste disposal site within the meaning of Part V of the *Environmental Protection Act,* that is subject to an Environmental Compliance Approval, where this activity is a significant drinking water threat, the Ministry of the Environment and Climate Change shall review, and where necessary, amend Environmental Compliance Approvals to incorporate terms and conditions that, when implemented, ensure the activity ceases to be a significant drinking water threat.
OC-CW-2.2 *Existing Part IV-RMP WHPA-A- v.10*	For any existing waste disposal site, or aspect thereof, within the meaning of Part V of the *Environmental Protection Act,* that is not subject to an Environmental Compliance Approval, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act,* 2006 and a Risk Management Plan shall be required to ensure the activity ceases to be a significant drinking water threat.
OC-MC-2.3 *Future Prescribed Instr. WHPA-A- v.10*	For any new waste disposal site within the meaning of Part V of the *Environmental Protection Act,* that requires an Environmental Compliance Approval, where this activity would be a significant drinking water threat, the Ministry of the Environment and Climate Change shall prohibit this activity through the Environmental Compliance Approvals process to ensure the activity never becomes a significant drinking water threat.
OC-CW-2.4 *Future Part IV- Prohibit WHPA-A- v.10*	For any new waste disposal site, or aspect thereof, within the meaning of Part V of the *Environmental Protection Act,* that does not require an Environmental Compliance Approval, where this activity would be a significant drinking water threat, this activity shall be designated for the purpose of Section 57 of the *Clean Water Act,* 2006 and shall be prohibited to ensure the activity never becomes a significant drinking water threat.
2. Establishment, Operation or Maintenance of a System That Collects, Stores, Transmits, Treats or Disposes of Sewage	
Sewage System or Sewage Works – Septic System and Septic System Holding Tanks	
OC-CW-3.1 *Existing/Future Specify Action WHPA-A- v.10*	For any a. existing septic system or septic system holding tank regulated under the *Ontario Building Code Act, 1992*, including expansions, modifications or replacements of such systems, or b. new septic system or septic system holding tank regulated under the *Ontario Building Code Act, 1992,* required for a municipal water supply well where these activities are, or would be, significant drinking water threats, the County shall implement an on-site sewage system maintenance inspection program, as required by the *Ontario Building Code Act, 1992,* to ensure these activities cease to be or never become significant drinking water threats.
OC-MC-3.2 *Future Land Use Planning WHPA-A- v.10*	For a new septic system or septic system holding tank regulated under the *Ontario Building Code Act, 1992,* with the exception of a new septic system or septic system holding tank that is required for a municipal water supply well facility, the County shall amend their Official Plan and the Area Municipalities shall amend their respective Zoning By-laws to prohibit uses, buildings or structures requiring a new septic system or septic system holding tank in areas where such activities would be significant drinking water threats, to ensure they never become significant drinking water threats. For the purposes of this policy, upgrading, alteration, expansion or replacement of an existing septic system or septic system holding tank to an improved standard shall not be considered to be a new

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
	system.
OC-MC-3.3 *Existing Prescribed Instr. WHPA-A- v.10*	For an existing septic system or septic system holding tank subject to an Environmental Compliance Approval in accordance with the *Ontario Water Resources Act,* where these activities are significant drinking water threats, the Ministry of the Environment and Climate Change shall review, and where necessary, amend Environmental Compliance Approvals, to incorporate terms and conditions that, when implemented, ensure these activities cease to be significant drinking water threats. The terms and conditions should include, but not necessarily be limited to, requirements for the proponent/applicant to undertake mandatory monitoring of groundwater impacts, contingencies in the event that drinking water quality is adversely affected, regular and ongoing compliance monitoring, mandatory system inspections at least every five (5) years, annual reporting to the Source Protection Authority and the County on any required inspection or monitoring programs and upgrading of these septic systems to current standards, where necessary.
OC-MC-3.4 *Future Prescribed Instr. WHPA-A- v.10*	For a new septic system or septic system holding tank requiring an Environmental Compliance Approval, in accordance with the *Ontario Water Resources Act,* where these activities would be significant drinking water threats, the Ministry of the Environment and Climate Change shall prohibit these activities through the Environmental Compliance Approvals process to ensure these activities never become significant drinking water threats.
Sewage System or Sewage Works- Storage of Sewage (e.g., treatment plant tanks) Sewage System or Sewage Works- Sewage Treatment Plant Effluent Discharges	
OC-MC-3.5 *Existing Prescribed Instr. WHPA-A- v.10*	For any existing sewage treatment plant effluent discharges or storage of sewage, where these activities are significant drinking water threats, the Ministry of the Environment and Climate Change shall review, and where necessary, amend Environmental Compliance Approvals to incorporate terms and conditions that, when implemented, ensure these activities cease to be significant drinking water threats.
OC-MC-3.6 *Future Prescribed Instr. WHPA-A- v.10*	For any new sewage treatment plant effluent discharge or storage of sewage, where these activities would be significant drinking water threats, the Ministry of the Environment and Climate Change shall prohibit these activities through the Environmental Compliance Approvals process to ensure these activities never become significant drinking water threats.
Sewage System or Sewage Works – Sanitary Sewers and Related Pipes	
OC-MC-3.7 *Existing/Future Prescribed Instr. WHPA-A- v.10*	For any existing or new sanitary sewer and related pipes, where this activity is, or would be a significant drinking water threat, the Ministry of the Environment and Climate Change shall ensure that the Environmental Compliance Approval for this activity is prepared, or, where necessary, amended to incorporate terms and conditions that, when implemented ensure this activity ceases to be or never becomes a significant drinking water threat. The terms and conditions may include, but not necessarily be limited to, requirements for regular maintenance and inspections by the holder of the Environmental Compliance Approval.
Sewage System or Sewage Works – Discharge of Stormwater from a Stormwater Management Facility	
OC-MC-3.8 *Existing Prescribed Instr. WHPA-A- v.10*	For any existing stormwater management facility that discharges stormwater, where this activity is a significant drinking water threat, the Ministry of the Environment and Climate Change shall review and, if necessary, amend Environmental Compliance Approvals to incorporate terms and conditions that, when implemented, will ensure this activity ceases to be a significant drinking water threat.

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
OC-MC-3.9 *Future* *Prescribed Instr.* *WHPA-A- v.10*	For any new stormwater management facility that would discharge stormwater where this activity would be a significant drinking water threat, the Ministry of the Environment and Climate Change shall prohibit this activity through the Environmental Compliance Approvals process to ensure this activity never becomes a significant drinking water threat.
3. The Application of Agricultural Source Material	
OC-CW-4.1 *Existing/Future* *Part IV-Prohibit* *WHPA-A-v.10*	For any existing or new application of agricultural source material to land, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity ceases to be or never becomes a significant drinking water threat.
4. The Storage of Agricultural Source Material	
OC-CW-5.1 *Future* *Part IV-Prohibit* *WHPA-A- v.10*	For any new storage of agricultural source material, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.
OC-CW-5.2 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For any existing storage of agricultural source material, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat. The requirements of the Risk Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the *Nutrient Management Act*, *2002* but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official.
6. The Application of Non-Agricultural Source Material (NASM)	
OC-MC-6.1 *Existing/Future* *Prescribed Instr.* *WHPA-A- v.10*	For any existing or future application of non-agricultural source material to land where this activity is, or would be, a significant drinking water threat, the Ministry of Agriculture, Food and Rural Affairs or the Ministry of the Environment and Climate Change, as applicable, shall prohibit this activity through the Non-Agricultural Source Material (NASM) Plan process, in accordance with the *Nutrient Management Act, 2002,* or through the Environmental Compliance Approval process, in accordance with the *Environmental Protection Act,* to ensure this activity ceases to be or never becomes a significant drinking water threat.
7. The Handling and Storage of Non-Agricultural Source Material (NASM)	
OC-MC-7.1 *Existing* *Prescribed Instr.* *WHPA-A- v.10*	For any existing facility for the handling and storage of non-agricultural source material where this activity is a significant drinking water threat, the Ministry of Agriculture, Food and Rural Affairs, or Ministry of the Environment and Climate Change, as applicable, shall review, and if necessary, amend the required Non-Agricultural Source Material (NASM) Plan, in accordance with the *Nutrient Management Act, 2002*, or Environmental Compliance Approval, in accordance with the *Environmental Protection Act,* to ensure such Plans/Compliance Approvals incorporate terms and conditions that, when implemented, ensure this activity ceases to be a significant drinking water threat.
OC-MC-7.2 *Future* *Prescribed Instr.* *WHPA-A- v.10*	For any new handling and storage of non-agricultural source material, where this activity would be a significant drinking water threat, the Ministry of Agriculture, Food and Rural Affairs or Ministry of the Environment and Climate Change, as applicable, shall prohibit this activity through the Non-Agricultural Source Material (NASM) Plan process in accordance with the *Nutrient Management Act, 2002*, or through the Environmental Compliance Approval process in accordance with the *Environmental Protection Act,* to ensure this

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
	activity never becomes a significant drinking water threat.
8. The Application of Commercial Fertilizer to Land	
OC-CW-8.1 *Existing/Future* *Part IV-RMP* *WHPA-A- v.10* *Does not currently apply in WHPA-A due to the percent managed land and livestock density calculation*	For the existing or future application of commercial fertilizer to land, on properties zoned for any other use than residential, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be or never becomes a significant drinking water threat.
OC-CW-8.2 *Existing/Future* *Education & Outreach* *WHPA-A- v.10* *Does not currently apply in WHPA-A due to the percent managed land and livestock density calculation*	For the existing or future application of commercial fertilizer to land, on properties zoned exclusively for residential purposes in the Area Municipal Zoning By- Laws, where this activity is, or would be, a significant drinking water threat, the County, in collaboration with the Source Protection Authority, Area Municipalities, the Ministry of the Environment and Climate Change, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties to ensure this activity ceases to be or never becomes a significant drinking water threat. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat and how commercial fertilizer can be applied appropriately.
9. The Handling and Storage of Commercial Fertilizer	
OC-CW-9.1 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For any existing handling and storage of commercial fertilizer, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-9.2 *Future* *Part IV-Prohibit* *WHPA-A- v.10*	For any new handling and storage of commercial fertilizer, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.
10. The Application of Pesticides	
OC-CW-10.1 *Existing/ Future* *Part IV-RMP* *WHPA-A- v.10*	For the existing or future application of pesticide to land where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be or never becomes a significant drinking water threat.
11. The Handling and Storage of Pesticides	
OC-CW-11.1 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For any existing facility for the handling and storage of pesticides where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-11.2 *Future* *Part IV-Prohibit* *WHPA-A- v.10*	For any new handling and storage of pesticide threat circumstances, where the total mass of all materials stored that contain a pesticide prescribed under the *Clean Water Act, 2006*, in any form, including liquid or solid, is more than 2500 kilograms, and where this activity would be a significant drinking water threat, this activity shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
OC-CW-11.3 *Future* *Part IV-RMP* *WHPA-A- v.10*	For any new handling and storage of pesticide threat circumstances not addressed by policy OC-CW-11.2, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity never becomes a significant drinking water threat.
13. The Handling and Storage of Road Salt	
OC-CW-12.1 *Existing/Future* *Part IV-Prohibit* *WHPA-A- v.10*	For any existing or new handling and storage of road salt, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity ceases to be or never becomes a significant drinking water threat.
14. The Storage of Snow	
OC-CW-13.1 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For any existing storage of snow, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-13.2 *Future* *Part IV-Prohibit* *WHPA-A- v.10*	For any new storage of snow, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.
15. The Handling and Storage of Fuel	
OC-CW-14.1 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For existing handling and storage of fuel, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-14.2 *Future* *Part IV-Prohibit* *Part IV- RMP* *WHPA-A- v.10*	For new handling and storage of fuel, where this activity would be a significant drinking water threat, a. This activity shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat. b. Notwithstanding OC-CW-14.2a), any handling and storage of fuel required for back-up generators at municipal supply wells shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity never becomes a significant drinking water threat.
16. The Handling and Storage of a Dense Non-Aqueous Phase Liquid (DNAPLs)	
OC-CW-15.1 *a) Existing/ Future* *Education &* *Outreach* *WHPA-A/B/C* *b) Existing/ Future* *Part IV-RMP* *WHPA-A/B/C*	For any existing or new handling and storage of a dense non-aqueous phase liquid, on properties zoned exclusively for residential and/or environmental protection purposes in the Area Municipal Zoning By-Laws, where this activity is, or would be, a significant drinking water threat, a. The County, in collaboration with the Source Protection Authority, Area Municipalities, the Ministry of the Environment and Climate Change, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties to ensure this activity ceases to be or never becomes a significant drinking water threat. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified, handled and disposed of appropriately. b. Notwithstanding OC-CW-15.1a), where the quantity and/or volume of DNAPLs handled or stored on a property exceeds that typical of household use, the handling

Policy Number	Policies Addressing Prescribed Drinking Water Threats within the County of Oxford
	and storage of a dense non-aqueous phase liquid shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be or never becomes a significant drinking water threat.
OC-CW-15.2 *Existing* *Part IV-RMP* *WHPA-A/B/C*	For any existing handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-Laws, where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-15.3 *Future* *Part IV-Prohibit* *WHPA-A*	For any new handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-Laws and located within a WHPA 'A', where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.
OC-CW-15.4 *Future* *Part IV-RMP* *WHPA-B* *WHPA-C*	For any new handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-Laws and located within a WHPA 'B' or a WHPA 'C', where such an activity would be a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity never becomes a significant drinking water threat.
17. The Handling and Storage of an Organic Solvent	
OC-CW-16.1 *Existing* *Part IV-RMP* *WHPA-A- v.10*	For existing handling and storage of an organic solvent where this activity is a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity ceases to be a significant drinking water threat.
OC-CW-16.2 *Future* *Part IV-Prohibit* *WHPA-A- v.10*	For new handling and storage of an organic solvent, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the *Clean Water Act, 2006* and shall be prohibited to ensure this activity never becomes a significant drinking water threat.
18. The Management of Runoff that Contains Chemicals Used in De-icing of Aircraft	
OC-CW-17.1 *Future* *Part IV-RMP* *WHPA-A- v.10*	For a new airport where there could be runoff containing de-icing chemicals, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure this activity never becomes a significant drinking water threat.
21. The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard	
OC-CW-18.1 *Existing/Future* *Part IV-RMP* *WHPA-A- v.10*	For the existing or future use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard, where these activities are, or would be, a significant drinking water threat, they shall be designated for the purpose of Section 58 of the *Clean Water Act, 2006* and a Risk Management Plan shall be required to ensure these activities cease to be or never become a significant drinking water threat.

APPENDIX A: LIST OF POLICIES AS PER SECTION 34 OF ONTARIO REGULATION 287/07

LIST A
Title: Significant threat policies that affect decisions under the *Planning Act* and *Condominium Act*, 1998

Opening Statement: "Clause 39 (1)(a), subsections 39 (2), (4) and (6), and sections 40 and 42 of the *Clean Water Act*, 2006 apply to the following policies:"

Content: OC-CW-1.1, OC-CW-1.2, OC-CW-1.3, OC-MC-1.4, OC-MC-3.2

LIST B
Title: Moderate and low threat policies that affect decisions under the *Planning Act* and *Condominium Act*, 1998

Opening Statement: "Subsection 39 (1) (b) of the *Clean Water Act*, 2006 applies to the following policies:"

Content: No Applicable Policies

LIST C
Title: Significant threat policies that affect prescribed instrument decisions

Opening Statement: "Subsection 39 (6), clause 39 (7) (a), section 43 and subsection 44 (1) of the *Clean Water Act*, 2006 apply to the following policies:"

Content: OC-CW-1.1, OC-CW-1.2, OC-MC-2.1, OC-MC-2.3, OC-MC-3.3, OC-MC-3.4, OC-MC-3.5, OC-MC-3.6, OC-MC-3.7, OC-MC-3.8, OC-MC-3.9, OC-MC-6.1, OC-MC-7.1, OC-MC-7.2

LIST D
Title: Moderate and low threat policies that affect prescribed instrument decisions

Opening Statement: "Clause 39 (7) (b) of the *Clean Water Act*, 2006 applies to the following policies:"

Content: No Applicable Policies

LIST E
Title: Significant threat policies that impose obligations on municipalities, source protection authorities and local boards

Opening Statement: "Section 38 and subsection 39 (6) of the *Clean Water Act*, 2006 applies to the following policies:"

Content: OC-CW-1.1, OC-CW-1.2, OC-CW-1.5, OC-CW-1.6, OC-CW-1.16, OC-CW-3.1, OC-CW-8.2, OC-CW-15.1a

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LIST F
Title: Monitoring policies referred to in subsection 22 (2) of the *Clean Water Act*, 2006

Opening Statement: "Section 45 of the Clean Water Act, 2006 applies to the following policies:"

Content: OC-CW-1.8, OC- CW-1.9, OC- CW-1.10, OC- CW-1.11, OC- CW-1.12

LIST G
Title: Policies related to section 57 of the *Clean Water Act*, 2006

Opening Statement: "The following policies relate to section 57 (prohibition) of the Clean Water Act."

Content: OC-CW-1.1, OC-CW-2.4, OC-CW-4.1, OC-CW-5.1, OC-CW-9.2, OC-CW-11.2, OC-CW-12.1, OC-CW-13.2, OC-CW-14.2a, OC-CW-15.3, OC-CW-16.2

LIST H
Title: Policies related to section 58 of the *Clean Water Act*, 2006

Opening Statement: "The following policies relate to section 58 (risk management plans) of the Clean Water Act."

Content: OC-CW-1.1, OC-CW-2.2, OC-CW-5.2, OC-CW-8.1, OC-CW-9.1, OC-CW-10.1, OC-CW-11.1, OC-CW-11.3, OC-CW-13.1, OC-CW-14.1, OC-CW-14.2b, OC-CW-15.1b, OC-CW-15.2, OC-CW-15.4, OC-CW-16.1, OC-CW-17.1, OC-CW-18.1

LIST I
Title: Policies related to section 59 of the *Clean Water Act*, 2006

Opening Statement: "The following policies relate to section 59 (restricted land use) of the *Clean Water Act*."

Content: OC-CW-1.1, OC-CW-1.3

LIST J
Title: Strategic Action policies

Opening Statement: For the purposes of section 33 of Ontario Regulation 287/07, the following policies are identified as strategic action policies:

Content: OC-NB-1.13, OC-NB-1.14, OC-NB-1.15

LIST K
Title: Significant threat policies targeted to bodies other than municipalities, local board or source protection authorities for implementation

Opening Statement: The following policies are identified as non-legally binding policies.

Content: OC- NB-1.7

APPENDIX B:PRESCRIBED INSTRUMENTS AND POLICY SUMMARY TABLES

Table 1: Prescribed Instruments Which Apply To Source Protection Plan Policies In Lists C And D Above (S.34(4) Of O.Reg. 287/07)

Policy #	Legal Effect	Environmental Protection Act	Nutrient Management Act	Ontario Water Resources Act
OC-CW-1.1	Comply With	X	X	X
OC-CW-1.2	Comply With	X	X	X
OC-NB-1.13	Non-Binding	X		X
OC-MC-2.1	Must Conform	X		X
OC-MC-2.3	Must Conform	X		X
OC-MC-3.3	Must Conform	X		X
OC-MC-3.4	Must Conform	X		X
OC-MC-3.5	Must Conform	X		X
OC-MC-3.6	Must Conform	X		X
OC-MC-3.7	Must Conform	X		X
OC-MC-3.8	Must Conform	X		X
OC-MC-3.9	Must Conform	X		X
OC-MC-6.1	Must Conform	X	X	
OC-MC-7.1	Must Conform	X	X	
OC-MC-7.2	Must Conform	X	X	

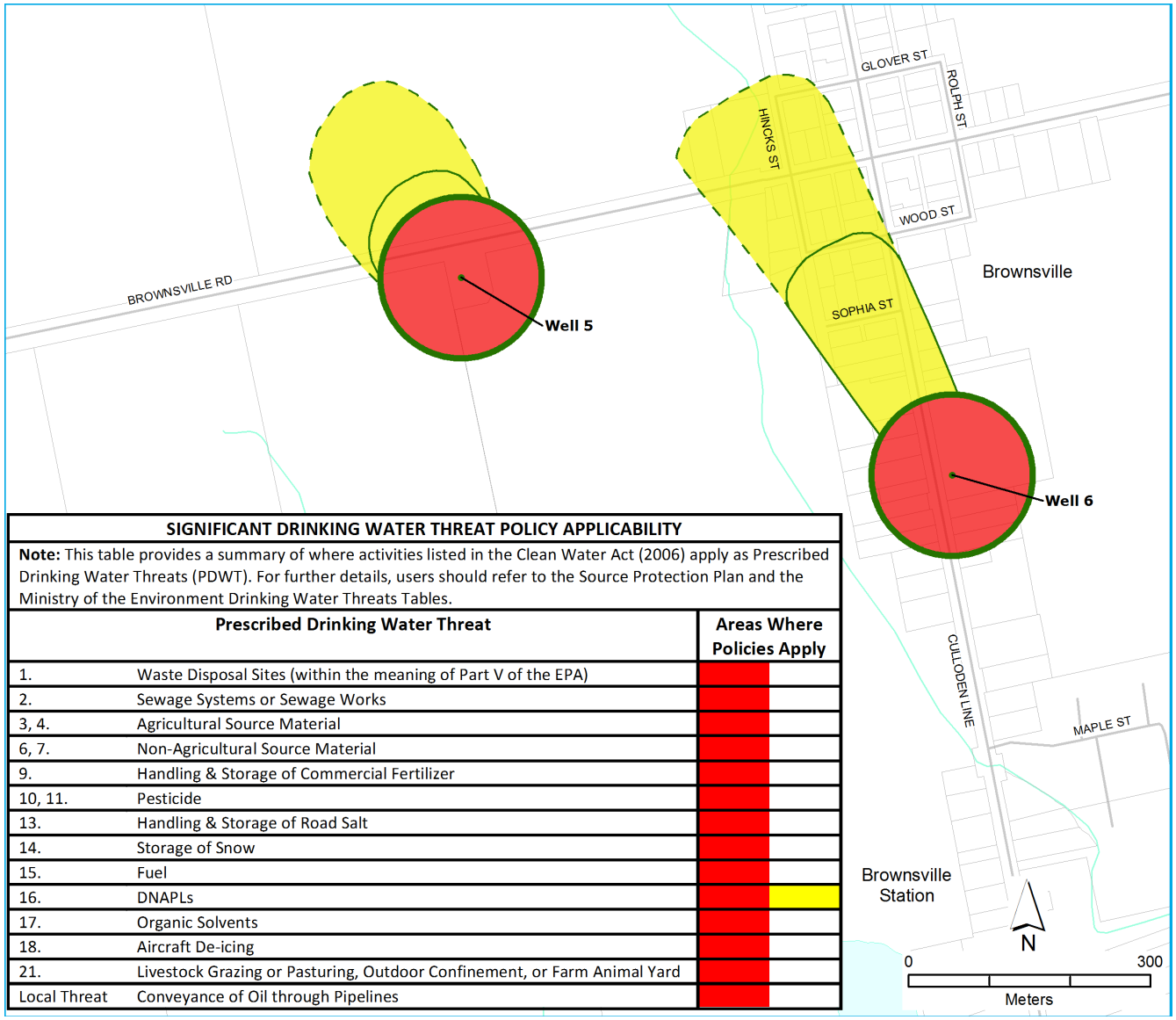
Table 2: Policy Summary Matrix

Policy ID#	Legal Effect (conform with, have regard to, non-binding)	Policy affects decisions under the Planning Act and Condominium Act, 1998 (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in s.22(2) of the Clean Water Act, 2006 (List F)	Part IV Policies - Significant threat policies that are designated in the plan as requiring a risk management plan, are prohibited under s. 57, or to which s. 59 of the Clean Water Act, 2006 applies (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a municipality, source protection authority or local board as responsible for implementing the policy (List K)
OC-CW-1.1	Comply With	X	X	X		X		
OC-CW-1.2	Comply With	X	X			X		
OC-CW-1.3	Comply With	X				X		
OC-MC-1.4	Must Conform	X						
OC- MC-3.2	Must Conform	X						
OC-MC-2.1	Must Conform		X					
OC-MC-2.3	Must Conform		X					
OC-MC-3.3	Must Conform		X					
OC-MC-3.4	Must Conform		X					
OC-MC-3.5	Must Conform		X					
OC-MC-3.6	Must Conform		X					
OC-MC-3.7	Must Conform		X					

Policy ID#	Legal Effect (conform with, have regard to, non-binding)	Policy affects decisions under the Planning Act and Condominium Act, 1998 (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in s.22(2) of the Clean Water Act, 2006 (List F)	Part IV Policies - Significant threat policies that are designated in the plan as requiring a risk management plan, are prohibited under s. 57, or to which s. 59 of the Clean Water Act, 2006 applies (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a municipality, source protection authority or local board as responsible for implementing the policy (List K)
OC-MC-3.8	Must Conform		X					
OC-MC-3.9	Must Conform		X					
OC-MC-6.1	Must Conform		X					
OC-MC-7.1	Must Conform		X					
OC-MC-7.2	Must Conform		X					
OC-CW-1.5	Comply With			X				
OC-CW-1.6	Comply With			X				
OC-CW-1.16	Comply With			X				
OC-CW-3.1	Comply With			X				
OC-CW-8.2	Comply With			X				
OC-CW-15.1	Comply With			X		X		
OC-CW-1.8	Comply With				X			
OC- CW-1.9	Comply With				X			
OC- CW-1.10	Comply With				X			
OC- CW-1.11	Comply With				X			
OC- CW-1.12	Comply With				X			
OC-CW-2.4	Comply With					X		
OC-CW-4.1	Comply With					X		
OC-CW-5.1	Comply With					X		
OC-CW-9.2	Comply With					X		
OC-CW-11.2	Comply With					X		
OC-CW-12.1	Comply With					X		
OC-CW-13.2	Comply With					X		
OC-CW-14.2	Comply With					X		
OC-CW-15.3	Comply With					X		
OC-CW-16.2	Comply With					X		
OC-CW-2.2	Comply With					X		
OC-CW-5.2	Comply With					X		
OC-CW-8.1	Comply With					X		
OC-CW-9.1	Comply With					X		
OC-CW-10.1	Comply With					X		
OC-CW-11.1	Comply With					X		
OC-CW-11.3	Comply With					X		
OC-CW-13.1	Comply With					X		
OC-CW-14.1	Comply With					X		
OC-CW-15.2	Comply With					X		
OC-CW-15.4	Comply With					X		
OC-CW-16.1	Comply With					X		

Policy ID#	Legal Effect (conform with, have regard to, non-binding)	Policy affects decisions under the Planning Act and Condominium Act, 1998 (Lists A and B)	Policy affects Prescribed Instrument decisions (Lists C and D)	Significant threat policies that impose obligations on municipalities, source protection authorities and local boards (List E)	Monitoring policies referred to in s.22(2) of the Clean Water Act, 2006 (List F)	Part IV Policies - Significant threat policies that are designated in the plan as requiring a risk management plan, are prohibited under s. 57, or to which s. 59 of the Clean Water Act, 2006 applies (Lists G, H, and I)	Strategic Action Policies (List J)	Significant threat policies which designate a body other than a municipality, source protection authority or local board as responsible for implementing the policy (List K)
OC-CW-17.1	Comply With					X		
OC-CW-18.1	Comply With					X		
OC-NB-1.13	Non-Binding						X	
OC-NB-1.14	Non-Binding						X	
OC-NB-1.15	Non-Binding						X	
OC-NB-1.7	Non-Binding							X
OC-NB-1.13	Non-Binding		X					X

SCHEDULE A: COUNTY OF OXFORD: BROWNSVILLE WATER SUPPLY



SIGNIFICANT DRINKING WATER THREAT POLICY APPLICABILITY

Note: This table provides a summary of where activities listed in the Clean Water Act (2006) apply as Prescribed Drinking Water Threats (PDWT). For further details, users should refer to the Source Protection Plan and the Ministry of the Environment Drinking Water Threats Tables.

Prescribed Drinking Water Threat		Areas Where Policies Apply	
1.	Waste Disposal Sites (within the meaning of Part V of the EPA)		
2.	Sewage Systems or Sewage Works		
3, 4.	Agricultural Source Material		
6, 7.	Non-Agricultural Source Material		
9.	Handling & Storage of Commercial Fertilizer		
10, 11.	Pesticide		
13.	Handling & Storage of Road Salt		
14.	Storage of Snow		
15.	Fuel		
16.	DNAPLs		
17.	Organic Solvents		
18.	Aircraft De-icing		
21.	Livestock Grazing or Pasturing, Outdoor Confinement, or Farm Animal Yard		
Local Threat	Conveyance of Oil through Pipelines		

DRINKING WATER SOURCE PROTECTION
ACT FOR CLEAN WATER

Significant Drinking Water Threat Policy Applicability Map

Oxford County:

Brownsville Water Supply

- Well
- Roads
- Property Boundaries
- Minor Rivers
- Lakes / Main Rivers

Wellhead Protection Zones:

- WHPA-A
- WHPA-B
- WHPA-C

Vulnerability Score:

- 10
- 6 or less

Lake Erie
Source Protection Region
www.sourcewater.ca

Catfish Creek
Source Protection Area

Ontario

Produced by GRCA on behalf of the Lake Erie Source Protection Committee, January 2, 2014