DRINKING WATER SOURCE PROTECTION
Our Actions Matter

LAKE ERIE SOURCE PROTECTION REGION

Kettle Creek Source Protection Area

SOURCE PROTECTION PLAN

EXPLANATORY DOCUMENT

Prepared on behalf of:
Lake Erie Region Source Protection Committee

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

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Note: Please refer to Volume I of the Kettle Creek Source Protection Plan for a list of version numbering and a high-level summary of amendments that have been made since original approval in 2014.

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1.0 INTRODUCTION

The Explanatory Document provides stakeholders, the general public, and other interested parties, as well as the Source Protection Committee, the Source Protection Authority and the Ministry of the Environment, Conservation and Parks (MECP), with the intent and rationale behind the policy decisions made in the Source Protection Plan policies (Volume II).

Volume I of the Kettle 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 Kettle Creek watershed/source protection area. Volume I also includes a description of the Plan's components, the planning process, public consultation, interaction with other Source Protection Regions, and source water threats, as well as guidance on how to read the plan, and details on Plan implementation and enforcement.

The **Assessment Report** is a key component of the Source Protection Plan. Since 2005, numerous technical studies were completed to identify the risks to municipal drinking water sources, and these studies are summarized in the Kettle Creek Source Protection Area Assessment Report. The Assessment Report is available on the Lake Erie Source Protection Region website.

Volume II of the Kettle Creek Source Protection Plan contains the Source Protection Plan policies. These policies address both existing (where applicable) and future drinking water threats. Volume II only includes policies for significant drinking water threats, and optional content. Future updates to the Source Protection Plan may include policies for moderate and low threats. The appendices associated with Volume II include information as required by Section 34 of O. Reg. 287/07:

The **Explanatory Document**, as stated in Section 40 of O. Reg. 287/07 of the *Clean Water Act, 2006*, contains the following information:

- An explanation of the reasons for each policy set out in the Source Protection Plan.
- An explanation of the reasons for designating an activity under paragraph 1 of Subsection 22 (3) of the Act, 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.
- 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.
- 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.

- A summary of how the consideration of the potential financial implications for persons and bodies that would be implementing or affected by the Source Protection Plan influenced the development of the policies set out in the plan.
- If a policy described in Subsection 22 (7) of the Act 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,
    - 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
    - a policy to regulate or prohibit the activity is not necessary to achieve those objectives.

This document is submitted to the Ministry of the Environment, Conservation and Parks with the Source Protection Plan under Section 22 (16) of the Clean Water Act, 2006 and under Section 43 (1) of O. Reg. 287/07.

In preparation for submission, this document was updated to reflect any changes made to the Kettle Creek Source Protection Plan and to include a brief explanation of the effect, if any, of comments received during consultation on the plan under Section 41 of O. Reg. 287/07.

2.0 OVERVIEW OF POLICY DEVELOPMENT WITHIN THE LAKE ERIE SOURCE PROTECTION REGION

The following sections present an overview of policy development within the Lake Erie Source Protection Region, specifically for the Kettle Creek Source Protection Area, and the necessary information that guided the policy development process. The policies were developed to meet the objectives of the Clean Water Act, 2006 and are described in Volume I of this Source Protection Plan. All documents referenced are available on the Lake Erie Source Protection Region website.

2.1 Policy Development within the Lake Erie Source Protection Region

2.1.1 Municipal Process

The municipal role, as defined by the approved Terms of Reference for the Source Protection Plan development, is critical to the success of the program. Municipalities within the Kettle Creek Source Protection Area together with the Kettle Creek Conservation Authority have been actively involved in the development of the Source Protection Plan policies. Two members of the Lake Erie Region Source Protection Committee are closely connected to the Kettle Creek Source Protection Area. Their intimate involvement with source water protection at the committee level has meant that the Municipality of Central Elgin and the member municipalities of the Elgin Area Primary Water Supply System have been well-informed and able to provide input throughout the planning process. In addition, municipal councils have been actively informed about the Source Protection Plan policies throughout the policy development process. This collaborative process ensured that local conditions and needs were considered and accounted for. Further information on the process completed within the Kettle Creek Source Protection Area is presented in Section 5.

2.1.2 Financial Considerations

Drinking water source 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.

Development of the Source Protection Plan

The *Clean Water Act, 2006* and the source protection planning process were introduced by the Province in response to a province-wide concern about the safety of municipal drinking water. When the Source Protection Plan was being developed, the Province provided funding to Conservation Authorities to complete much of the original technical work (e.g. WHPA delineation, water budgets, etc.).

Transitional funding was also provided to support the initial implementation of source protection plans by landowners and municipalities. This included funding (2008 to 2013) through the Ontario Drinking Water Stewardship Program, established by section 97 of the *Clean Water Act, 2006*. Additionally, the Province provided funding (2013 to 2017) for small and rural municipalities through the Source Protection Municipal

Implementation Fund, designed to support municipal activities in the early stages of implementation.

Within the *Clean Water Act*, *2006* some provisions are set out for financing various aspects of source protection implementation, including stewardship programs and the collection of fees for Part IV policies. Fees can be collected for applications received under sections 58, 59 or 60, for agreeing to or establishing a Part IV Risk Management Plan under sections 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 outset of the planning process, empowered municipalities to lead development of source protection plan policies to meet their needs. This approach has resulted in source protection plan policies that have been designed with the financial means of the municipality in mind.

Ongoing Source Protection Plan Updates

The Province continues to provide funding to Conservation Authorities to deliver their responsibilities as Source Protection Authorities, as described in the *Clean Water Act, 2006* and section 21.1 of the *Conservation Authorities Act, 1990*.

Beginning in 2018, there has been no Provincial funding specifically for implementation of source protection plans and the expectation has been that municipalities will fund implementation efforts. The Lake Erie Region Source Protection Committee continues to encourage the Province to re-establish and rejuvenate the Ontario Drinking Water Stewardship Program to support local source protection plan implementation efforts.

Some source protection plan policies recommend the Province provide ongoing funding and support for incentive programs, such as the Ontario Drinking Water Stewardship Program and Rural Water Quality Program, to protect existing and future drinking water sources and address significant drinking water threats.

Municipalities in the Lake Erie Source Protection Region often selected Prescribed Instruments as the main policy tool wherever they have been made available under the *Clean Water Act, 2006*. Having the Province responsible for implementing these policies, through existing mechanisms and instruments, reduces duplication, and minimizes the number of policies and associated costs directed to the municipality to implement Risk Management Plans.

More details about the financial considerations and implications for individual municipalities are included in municipal sections below.

2.1.3 Industry Stakeholder Meetings and Discussion Papers

Industry specific experts were invited to attend a series of workshops between February and April 2011 to aid in the development of the policy tool analysis presented in the appendices of the Discussion Papers. These workshops provided an opportunity for

Source Protection Committee members, staff, municipalities, and industry experts to discuss each of the drinking water threats and determine policy tool options that would be best suited to meet the objectives of the Clean Water Act, 2006. The Discussion Papers did not make specific recommendations on the tools to be used but identified the most promising policy options to address the specific drinking water threats.

2.1.4 Post Discussion Papers

After publishing the Discussion Papers in 2011, additional information on the drinking water threats was provided by a variety of stakeholders and implementing bodies allowing for further refinement of the policy approaches for each of the drinking water threats. This was reflected in the policies presented in Volume II of the first Source Protection Plan. Discussion on the specific details of further refinement of the Source Protection Plan policies is presented for each of the drinking water threats, where applicable, in Section 5.0 of this Explanatory Document.

2.1.5 Early Engagement Process

An “early engagement” process was initiated prior to this updated source protection plan being released to implementing bodies as part of pre-consultation. This process provided the Ministry of the Environment, Conservation and Parks the opportunity to provide feedback on draft updates to the assessment report and source protection plan.

2.1.6 Additional Source Protection Plan Information

The following section provides clarification on issues and concerns raised throughout the source protection planning process by the Lake Erie Region Source Protection Committee, other interested bodies and 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 were not included.

O. Reg. 287/07 permits prescribed optional content to be included in Source Protection Plans. Priorities for the optional content needed to be set early in the process because of limited time and capacity.

On January 13, 2011 the Source Protection Committee passed a resolution stating that the Source Protection Plans include policies governing significant conditions; updates to spill prevention, spill contingency and emergency response plans; transport pathways; and monitoring of moderate and low threats in specific situations. Due to a lack of specific information, guidance and large scope, the Source Protection Committee did not recommend that the first source protection plans include policies for moderate and low drinking water threats, incentive programs or education/outreach programs for systems outside the Terms of Reference, or policies for climate change data collection.

Further detail on the rationale behind why these items were not included in the first source protection plans is provided below.

Moderate and Low Threat Policies

Moderate and low threat policies were considered to have too large of a scope for the work that needed to be accomplished for the first Source Protection Plan. Since the first Source Protection Plan was approved, “the establishment and operation of a liquid hydrocarbon pipeline” was added as a Prescribed Drinking Water Threat. An assessment of liquid hydrocarbon pipelines threats in Lake Erie Source Protection Region was completed and significant, moderate and low policies developed and included in the Source Protection Plan for this activity only. The addition of moderate and low policies for other Prescribed Drinking Water Threats will be considered on a case-by-case basis.

Policies for Incentive Programs or Education and Outreach Programs for Drinking Water Systems outside of the Terms of Reference

Generally, policies in Source Protection Plans can only address threats related to drinking water systems included in the Terms of Reference. Although there is a process for municipalities to add drinking water systems to the Terms of Reference if they meet certain criteria, no municipality in the Lake Erie Region has chosen to do this to date. The Clean Water Act, 2006 allows policies for incentive programs or education and outreach programs to be developed for drinking water systems outside the Terms of Reference. There is, however, no data available on the number or location of non-municipal residential systems in the Lake Erie Region.

Any private wells/intakes or communal systems that are located in close proximity to a municipal residential system may benefit from the protection afforded to its source by the Source Protection Plans. Also, there are incentive programs that currently exist to help landowners to implement selected best management practices that improve water quality. Kettle Creek Clean Water Initiative and the Elgin Clean Water Program offer cost share incentives of up to 50 percent for landowners willing to undertake stewardship projects on private property that benefit water quality. In addition, the funding provided by the Early Response Program helped landowners identified through the Assessment Report process to address activities considered significant drinking water threats.

Climate Change

Predictions on climate change have implications to both water quality and quantity. In terms of water quality, the increase in air temperature and greater occurrence of extreme precipitation events is predicted to degrade water quality, including lower dissolved oxygen rates and higher stream temperatures.

With regard to water quantity, climate change is expected to shift the timing of seasonal events, including an earlier and lower spring freshet, and change levels in Lake Erie due to increased lake surface temperatures. Further information on the potential effects of climate change is presented in the Kettle Creek Assessment Report.

Collecting data for climate change must be undertaken in a coordinated way at a cross-regional scale with all municipalities and other partners involved. Currently, work on the

water budget and water quantity components of the Assessment Reports may accomplish some of the data collection regarding climate change, and will provide direction for any potential additional data collection.

During the first round of source protection planning phase there was insufficient time to coordinate climate change data collection in a comprehensive and collaborative manner given the priorities and mandatory components for the Plans at that time.

Revised 2021 Technical Rules, under the Clean Water Act, 2006, included the consideration of climate change in source water quality risk assessments. A climate change vulnerability assessment tool, developed by Conservation Ontario in 2018, can provide municipalities, source protection authorities, and the Lake Erie Region Source Protection Committee with a practical and consistent approach to assess drinking water sources/systems for considerations of local climate change impacts.

Within Kettle Creek Source Protection Area, a climate change vulnerability assessment was completed for the Elgin Area Water Supply System intake in 2022. Results of the assessment conclude that impacts on source water quality can be expected due to climate change; however, with the high adaptive capacity of the Elgin Area Water Supply System, climate change impacts on the source water quality may be reduced. Detailed study results are in the Kettle Creek Assessment Report.

Emerging Contaminants: Pharmaceuticals in Drinking Water Supplies

Certain pharmaceuticals are potentially a new class of water pollutants. Drugs such as antibiotics, anti-depressants, birth control pills, seizure medication, cancer treatments, pain killers, tranquilizers and cholesterol-lowering compounds have been detected in varied water sources.

Pharmaceutical industries, hospitals, and other medical facilities are obvious sources of these compounds, but households also contribute a significant share. People often dispose of unused medicines by flushing them down toilets, and human excreta can contain varied incompletely metabolized medicines. These drugs can pass intact through conventional sewage treatment facilities, into waterways, lakes and aquifers. Further, discarded pharmaceuticals often end up at dumps and landfills, posing a threat to underlying groundwater.

Farm animals also are a source of pharmaceuticals entering the environment, through their ingestion of hormones, antibiotics and veterinary medicines. Manure containing traces of such pharmaceuticals is spread on land and can then wash off into surface water and percolate into groundwater.

Future source protection planning initiatives should consider the impacts of these sources of contaminants as potential threats to drinking water sources.

Dead Stock

At this Source Protection Plan's publication date, the disposal of dead stock is not included as a drinking water threat. This activity was included as a drinking water threat in the 2008 version of the Tables of Drinking Water Threats but has since been removed due to changes in legislation. The *Dead Animal Disposal Act, 1968* was replaced by the Disposal of Dead Farm Animals regulation (O.Reg. 106/09) under the *Nutrient Management Act, 2002* and the Disposal of Dead stock regulation (O.Reg. 106/09) under the *Food Safety and Quality Act, 2001*.

This regulation provides more disposal options for livestock producers and meat plant operators, with measures that will protect the environment. To be included as a drinking water threat in a future source protection plan, an application for inclusion as a local threat would need to be made by the Source Protection Committee to the Director. As of the date of this Source Protection Plan, this request has not been made by the Lake Erie Region Source Protection Committee.

Additional Technical Studies: Delineation of IPZ-3

On May 10, 2012, the Minister of the Environment granted a submission deadline extension for the Source Protection Plans of the Lake Erie Region until December 31, 2012. As a result, there was significant discussion among the Source Protection Committee that the extended time may be an opportunity to complete the delineation of an Intake Protection Zone-3. However, to delineate an Intake Protection Zone-3, additional technical studies were required, which would result in an update to the Assessment Report and a public consultation period. The Ministry of the Environment expressed concerns about updating the Kettle Creek Assessment Report so late in the initial round of source protection planning. Consequently, it was determined that the Kettle Creek Assessment Report and Source Protection Plan would not be updated prior to the submission deadline of December 31, 2012. Since then, additional technical studies have been conducted and their findings are included in the Assessment Report and Source Protection Plan.

3.0 WATERSHED WIDE POLICY DEVELOPMENT CONSIDERATION FOR PRESCRIBED DRINKING WATER THREATS

The following sections describe the decision-making process behind the drafting of the first Source Protection Plan policies by policy developers for the management or prohibition of the prescribed drinking water threats as outlined in the Clean Water Act, 2006. Prescribed Drinking Water Threat categories and sub-categories have been revised since the first Source Protection Plan was approved in 2014. Discussion paper summaries in the sub-sections that follow are based on the 2009 Tables of Drinking Water Threats and Circumstances. Further information on policy development, including the intent and rationale for the selection of specific policy tools is presented in Section 5.0.

A detailed description of the prescribed and non-prescribed drinking water quality threats can be found in Appendix A (Drinking Water Threats and Optional Content for Lake Erie Source Protection Region) of Volume I of the Source Protection Plan.

As required by the Clean Water Act, 2006, policies must be written to address existing drinking water threats that meet the objectives of the Clean Water Act, 2006. Where the policy developers and Source Protection Committee were confident that no existing drinking water threats were in existence, outreach and education policies and incentive policies were developed. The Source Protection Committee is of the opinion that these policies will promote the achievement and objectives of the Source Protection Plan where no existing drinking water threats were currently enumerated and/or are believed to come into existence before the approval of the Source Protection Plan. Based on a review of the existing land uses; it is very unlikely that these activities will occur on the subject properties.

The Clean Water Act, 2006 also requires policies addressing future drinking water threats that meet the objectives of the Clean Water Act, 2006. Some of the policies presented in Volume II of the Source Protection Plan were included because of this requirement, despite the municipalities' and the Source Protection Committee's understanding that these drinking water threats are very unlikely to occur in the future.

3.1 The Establishment, Operation or Maintenance of a Waste Disposal Site within the Meaning of Part V of the Environmental Protection Act

Discussion Paper Summary

The primary consideration for policy development was to reduce or eliminate the risks from existing and future waste sites. Specifically, to ensure that any discharge from the sites does not result in a significant risk to drinking water through appropriate measures to mitigate the threat. The following is a summary of the early discussions on potential policy options for each of the Waste Disposal Site subthreats for the first Source Protection Plan.

Application of Untreated Septage (Hauled sewage) to Land

The land application of hauled sewage is governed by an Environmental Compliance Approval, a prescribed instrument, which often contains terms and conditions designed to protect both the local groundwater and surface water supplies from adverse impacts associated with land application of this material. This may include, for example, stipulated separation distances from wells and surface water bodies and restrictions on winter spreading to reduce the risk of run-off. The Discussion Paper identified the use of prescribed instruments as an option to address this threat.

Policies could be written to require that Environmental Compliance Approvals for activities located within significant drinking water threat areas that receive hauled sewage be reviewed and, if necessary, amended to ensure they contain terms and conditions that adequately protect drinking water and meet the objectives of the Clean Water Act, 2006.

The Discussion Paper also identified education and outreach as a possible tool to promote implementation of best management and alternative practices by farmers and operators of sites that receive septage.

Storage, Treatment and Discharge of Tailings from Mines; Waste Disposal Site- Land farming (disposal) of Petroleum Refining Waste; and Waste Disposal Site- Liquid Industrial Waste Injection into a Well

As of the date of the completion of the Assessment Report enumeration, there were no existing activities identified in the Lake Erie Source Protection Region for the prescribed drinking water sub-categories listed above; therefore, only policies to prevent future significant threats were identified as being necessary. With the exception of mine tailing ponds, all of the above sub-threats are required to have an Environmental Compliance Approval under Part V of the Environmental Protection Act, 1990 therefore, the use of the prescribed instrument tool was identified as the most promising policy tool.

Mine tailing ponds are required to have an Environmental Compliance Approval under the Ontario Water Resources Act, 1990 thus, the prescribed instrument tool was also identified as the most promising policy tool.

Waste Disposal Sites- Landfilling of Hazardous Waste, Municipal Waste, and solid Non-Hazardous Industrial or Commercial Waste

The prescribed instrument tool was identified by the Discussion Paper, as it is available for most threats associated with landfilling activities. Policies could be written to require that Environmental Compliance Approvals are reviewed and, if necessary, amended by the Ministry of the Environment to ensure the protection of drinking water in vulnerable areas where these threats are significant. Terms and conditions for the Environmental Compliance Approval could be based on advanced best management practices and include requirements for training of staff, and ongoing monitoring.

Other approaches for managing landfilling and hazardous waste activities are associated with encouraging and supporting proper waste disposal by business and

home owners. For example, the Discussion Paper identified education and outreach programs as a policy option to educate the public about the disposal of household hazardous waste, electronics, compost and recyclables.

Waste Disposal Sites- PCB Waste Storage, Storage of Hazardous Waste at disposal sites, and Storage of Wastes as described in clause (p), (q), (r), (s), (t) or (u) of the definition of hazardous waste

Similar policy approaches to Waste Disposal Sites- Landfilling of Hazardous Waste, Municipal Waste, and solid Non-Hazardous Industrial or Commercial Waste were identified in the Discussion Paper to address the regulated waste disposal sites. However, there are a number of activities and types of waste disposal activities that are exempt from the Environmental Compliance Approval process under the Environmental Protection Act, 1990.

For example, hardware stores that collect and store hazardous waste are not required to have an Environmental Compliance Approval, even if the activity meets the criteria for a significant threat. Risk Management Plans were identified as an effective way to manage this activity, as Part IV tools can be utilized if no prescribed instrument tools are available.

Post Discussion Paper

Since the finalization of the Waste Disposal Sites Discussion Paper in September 2011, additional guidance was provided by the Ministry of the Environment on the ability of certain activities to be managed through the Environmental Compliance Approval process. This guidance aided the policy developers in their specific decision making progress.

In most cases, policies were developed using the prescribed instrument tool because it was determined to be the most efficient way to manage this activity. Using existing regulatory requirements, the Ministry of the Environment must review and, if necessary, amend Environmental Compliance Approvals for these activities. Further, policies were drafted to require the Ministry of the Environment to include terms and conditions when issuing new Environmental Compliance Approvals that, when implemented, will ensure these waste sites do not become significant drinking water threats. For those activities not regulated within the Environmental Compliance Approval process, the use of Part IV Risk Management Plans was selected in most cases to manage these activities.

Prohibition of these activities was also selected where, based on current and future land uses, this activity is unlikely to occur. Prohibition was also selected where further protection is required, based on the vulnerability of the area to contamination from this activity.

3.2 The Establishment, Operation or Maintenance of a System That Collects, Stores, Transmits, Treats or Disposes of Sewage

Discussion Paper Summary

The prescribed instrument tool (Environmental Compliance Approval under the Environmental Protection Act, 1990 or Ontario Water Resources Act, 1990) was identified as the most promising policy tool for managing and prohibiting significant drinking water threats related to sewage. Using this tool, a policy could be developed to require a review of existing activities or prohibition of future sewage system activities to ensure adequate protection of drinking water sources. Part IV tools are unavailable for sewage system activities where there is an existing prescribed instrument tool available. Where there is no prescribed instrument, the Part IV tools were identified as an option to manage or prohibit activities.

On January 1, 2011, updates to the Ontario Building Code Act, 1992 came into effect to recognize vulnerable areas identified within the Assessment Report and require mandatory inspection programs for sewage systems regulated under the Ontario Building Code Act, 1992 in areas where they are identified as significant drinking water threats in an approved Assessment Report.

Post Discussion Paper

To address these drinking water threat activities, policy developers typically selected the most promising policy tools as identified in the Discussion Papers. Since the publication of the Discussion Papers, refinements were made to the selected policy tools, based on clarifications of where land use planning can be used to address certain threats. Specific discussion included the ability to require tertiary treatment systems within the limitations of the Ontario Building Code Act, 1992. It was concluded that these systems could be encouraged, but not made mandatory due to the current building approval processes.

In most cases, policies were developed using the prescribed instrument tool because it was determined to be the most efficient way to manage this activity. Using existing regulatory requirements, the Ministry of the Environment must review and, if necessary, amend Environmental Compliance Approvals for these activities. Further, policies were drafted to require the Ministry of the Environment to include terms and conditions when issuing new Environmental Compliance Approvals that, when implemented, will ensure these activities do not become significant drinking water threats.

3.3 The Application and Storage of Agricultural Source Material to Land

Discussion Paper Summary

For agricultural properties that are regulated under the Nutrient Management Act, 2002, the prescribed instrument tool was identified as a policy option. A policy could be written to ensure that the Nutrient Management Plan and Strategy under the Nutrient Management Act, 2002 effectively protects drinking water sources from the application and storage of agricultural source material. For agricultural properties that are not

regulated under the Nutrient Management Act, 2002, Part IV Risk Management Plans for the application and/or storage of agricultural source material were identified as a favourable tool for managing threats related to agricultural source material. The site-specific plan could incorporate components of the requirements under the Nutrient Management Act, 2002, as well as additional or enhanced requirements to address the gaps in the existing legislation, such as monitoring or more restrictive nutrient application rates.

Education, outreach and incentive programs were identified as additional policy options to complement the prescribed instrument and Part IV Risk Management Plan policies.

Post Discussion Paper

Further guidance was presented to the policy developers and Source Protection Committee by the Ministry of the Environment and Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), who recently split into the Ontario Ministry of Agriculture and Food (OMAF) and the Ministry of Rural Affairs (MRA), on the applicability of the Nutrient Management Act, 2002 to protect drinking water sources. Policies contained in the Source Protection Plan reflect this guidance and comments received during the pre-consultation processes.

In their technical guidance, OMAFRA, at the time, stated that where the Nutrient Management Act, 2002 can be applied (i.e. farms that are phased in under the Nutrient Management Act, 2002), this prescribed instrument should be utilized. However, where the Nutrient Management Act, 2002 does not apply, OMAFRA recommended the use of a Part IV Risk Management Plan.

3.4 The Management of Agricultural Source Material

This Source Protection Plan only addresses significant drinking water threats. Policies addressing the management of agricultural source material (aquaculture) are therefore not included in this Source Protection Plan, as this activity cannot be a significant drinking water threat under the current Technical Rules.

3.5 The Application, Handling and Storage of Non-Agricultural Source Material (NASM) to Land

Discussion Paper Summary

Both Environmental Compliance Approvals (issued by the Ministry of the Environment under the Environmental Protection Act, 1990) and NASM Plans (issued by OMAF under the Nutrient Management Act, 2002) are prescribed instruments under the Clean Water Act, 2006 and have been identified as policy tool options to address these drinking water threats. Where NASM is currently regulated under the Nutrient Management Act, 2002, a policy was typically written to require OMAFRA to review existing and new NASM plans in significant threat areas to ensure that they protect drinking water sources. Similarly, where NASM is currently regulated under Section 39 of the Environmental Protection Act, 1990 policies were drafted to require the Ministry of the Environment to review and amend, if necessary, existing Environmental Compliance

Approvals in the significant threat areas to ensure that they protect drinking water sources.

The prohibition tool is also available for NASM and could be applied to vulnerable areas for future threats. The application of NASM is currently prohibited under the Nutrient Management Act, 2002 within 100 metres of a municipal well.

Post Discussion Paper

The acquisition of new information has been minimal, and few additional discussions have taken place since the finalization of the Discussion Paper.

3.6 The Application, Handling and Storage of Commercial Fertilizer to Land

Discussion Paper Summary

In cases where the application of commercial fertilizer to land is addressed through Nutrient Management Plans developed under the Nutrient Management Act, 2002, the Discussion Paper identified a specify action policy as a potential option. Specify action policies could be written to request the Ministry of the Environment to prioritize inspections for properties where the application of commercial fertilizer is considered a significant threat to ensure that the threat is appropriately managed. Nutrient Management Plans are created by a trained and certified individual - either a farmer or a consultant. Therefore, if a Source Protection Plan policy requires that specific management practices be included in Nutrient Management Plans using the prescribed instrument tool, OMAF/MRA and the affected farmers would need to be informed during consultation periods. This was identified as a significant challenge based on additional correspondence provided by the Ministry of the Environment.

Where commercial fertilizer is not regulated under the Nutrient Management Act, 2002, Part IV tools were identified as a potential policy option, meaning a policy could be written to require a Part IV Risk Management Plan for activities involving the application, handling and/or storage of commercial fertilizer in significant threat areas.

The Part IV Risk Management Plan could incorporate components of Nutrient Management Plans and other existing standards for commercial fertilizer, as well as requirements for inspection and monitoring. This tool would also effectively manage activities not occurring on a farm such as a retail storage facility.

Education and outreach programs were identified as another policy option to address drinking water threats related to commercial fertilizer. These programs could be targeted towards fertilizer application technicians, or towards homeowners who may not be aware of best management practices for fertilizer and the potential threats to drinking water sources.

Post Discussion Paper

Further discussions were held on the ability to effectively manage this activity using the Nutrient Management Act, 2002 as a prescribed instrument tool. It was determined that,

due to the limited ability to add additional requirements to the Nutrient Management Plans, it would be difficult to ensure reduced risk to drinking water sources. Thus, in many cases, Part IV Risk Management Plan was selected by policy developers to manage this activity, as this tool will better achieve the objectives of the Clean Water Act, 2006. In specific cases, prohibition of this activity was selected based on a review of current and future land use within the applicable vulnerable areas where this activity is or would be a significant drinking water threat.

3.7 The Application, Handing and Storage of Pesticide to Land

Discussion Paper Summary

Part IV Risk Management Plans were identified as the most promising policy options for activities involving the application, handling and storage of pesticides in significant threat areas. Where further restrictions are required, the prescribed instrument tool was identified as an option, as it could require the Ministry of the Environment to revoke, or not issue, pesticide permits where pesticide activities are considered significant threats.

Education and outreach policies were identified as supporting policy options. These programs could be developed to inform the various audiences involved in the application and storage of pesticide about best management practices, Integrated Pest Management, or alternatives to pesticides that are less harmful to the environment, specifically drinking water sources. Focus could be placed on retail storage of pesticide, which is less regulated than pesticide application.

Post Discussion Paper

Further review of the Pesticide Act revealed that there were few situations where a pesticide permit would actually be required on land uses surrounding municipal intakes. Therefore, the use of the prescribed instrument tool to address this drinking water threat was determined to be very limited. In many cases, policy developers selected the prohibition and management of future and existing activities using the Part IV tools.

3.8 The Application, Handling and Storage of Road Salt

Discussion Paper Summary

Addressing significant drinking water threats from road salt can be achieved by requiring Part IV Risk Management Plans for activities associated with the application and storage of road salt by road authorities. This can also be achieved by requiring Smart about Salt™ accreditation for property owners. However, Part IV Risk Management Plans may not be feasible in all municipalities based on the resources required to implement them.

The Discussion Paper also identified specify action policies that could be written to require municipal road authorities, and encourage the Ministry of Transportation and private contractors, to develop or amend existing salt management plans. These developments and/or amendments would ensure that salt management plans contain

policies for vulnerable areas to protect drinking water sources. Such a policy could require that the plan be submitted annually to Environment Canada.

Education and outreach programs were identified in the Discussion Paper as an option for promoting responsible salt storage and application and the use of alternative de-icers. Such programs could be targeted towards the residential, industrial, commercial and institutional sectors, as well as to the public at large and local decision makers. The goal of this approach would be to improve industry practices and raise awareness about the link between salt application and water quality.

For future threats, Part IV prohibition and land-use planning tools are available and could be used to prohibit certain activities associated with the storage of road salt. However, as road salt application is required to prevent winter related accidents, prohibiting this activity was considered an unlikely option, and if possible, limited to smaller areas.

Post Discussion Paper

After the publication of the Discussion Papers, additional discussion on alternative options to address this drinking water threat was minimal. Further guidance was provided by the Ministry of Transportation on their ability to amend salt management plans. Most policy developers selected land use planning and Part IV tools to manage and prohibit existing and future activities. In most cases these policies were complemented with education and outreach programs.

For the application of road salt to be considered a significant drinking water threat the impervious area must be equal to or greater than 80 percent. This circumstance does not currently exist within the WHPA-A of the Belmont wells and therefore policies were not included to address this threat.

3.9 The Storage of Snow

Discussion Paper Summary

The Discussion Paper identified Part IV Risk Management Plans to address existing threats from the storage of snow as an effective policy option for snow storage areas located within 100 metres of municipal drinking water sources. Other available policy options would require the development of salt management plans or amend existing plans to include conditions to protect municipal drinking water sources. Establishing an education and stewardship program for private contractors was identified as another option. This program could inform contractors about the responsibilities of storing and transporting snow in vulnerable areas and provide recognition for those who follow best management practices.

For future threats, land-use planning tools were identified as available to prohibit large scale storage areas in the most vulnerable areas. Future storage facilities within vulnerable areas could also be permitted subject to the provisions of a Part IV Risk Management Plan, satisfactory to the municipality.

Post Discussion Paper

Following the publication of the Discussion Papers and further discussions on policy tool options, this drinking water threat was limited. In most cases, the land use planning tool has been selected by policy developers to manage or prohibit these activities in the future.

3.10 The Handling and Storage of Fuel

Discussion Paper Summary

The Discussion Paper identified Part IV Risk Management Plans as an effective policy option to address significant threat activities involving the handling and storage of liquid fuel. A Part IV Risk Management Plan could incorporate components of O. Reg. 217/01 and its code, as well as other measures to ensure the protection of drinking water sources. Education and outreach and incentive programs were also identified as an available policy option to address drinking water threats from liquid fuels. Various players involved in the handling and storage of liquid fuel could be the target of such education programs. The Discussion Paper suggested that programs targeted at liquid fuel distributors would be especially valuable.

In certain cases, instruments relating to liquid fuel storage are issued under the Aggregate Resources Act and the Safe Drinking Water Act for aggregate operations and municipal residential drinking water facilities, respectively. For these circumstances, the prescribed instrument policy tool was identified as an effective policy option. A prescribed instrument policy could require that these instruments incorporate drinking water protection and contain appropriate spill contingency measures.

Post Discussion Paper

The Ministry of Consumer Services and the Technical Standards and Safety Authority provided guidance to the policy developers to aid in their development of the Source Protection Plan policies. This included a description of their abilities to implement certain policies with respect to the codes they promote. This discussion has been reflected in the current Source Protection Plan policies. As a result, the majority of policy developers decided not to direct the policies towards The Ministry of Consumer Services and the Technical Standards and Safety Authority.

3.11 The Handling and Storage of Dense Non-Aqueous Phase Liquid (DNAPLs)

Discussion Paper Summary

Part IV Risk Management Plans were identified in the Discussion Paper as an effective tool to address drinking water threats from dense non-aqueous phase liquid (DNAPLs). These plans could address operating practices, such as containment and management, employee training, spill contingency plans, periodic testing of storage systems, as well as other items. If the requirements of the Part IV Risk Management Plan are not met, then the storage site would be prohibited.

An alternative policy approach identified to address threats from DNAPLs was for municipalities to establish bylaws that prohibit the discharge of DNAPLs into municipal sewer systems, or to prohibit storage within 100 metres of the municipal drinking water source. By utilizing the specify action tool, a policy could be written to require municipalities to enact sewer use bylaws that address threats from DNAPLs, such as requirements for compliance programs and pollution prevention planning and reporting on DNAPL use.

'Softer' tools such as education and outreach and incentive programs were also identified to effectively address threats, especially for where DNAPLs are used in smaller volumes, such as in residential areas. Policies could be written to promote the use of alternative non-toxic products and/or proper waste disposal.

Post Discussion Paper

During the development of Source Protection Plan policies further discussions included determining the scope of work required, as the threat circumstances for DNAPLs do not stipulate a quantity threshold. Therefore, even a very small quantity is regarded as a significant drinking water threat. Policies typically reflect this and tend to be more restrictive closer to the municipal intake. In some cases, separate policies have been written for commercial and industrial versus residential users. As the Ministry of the Environment did not provide any guidance on quantity thresholds in the circumstance tables, the policy developers decided not to assign a quantity threshold.

3.12 The Handling and Storage of an Organic Solvent

Discussion Paper Summary

The Discussion Paper identified Part IV Risk Management Plans as an effective policy tool to manage significant drinking water threats from organic solvents. These plans could address operating practices such as containment and management, employee training, spill contingency plans, periodic testing of storage systems, as well as other items. If the requirements of the Part IV Risk Management Plan are not met, then the storage site would be prohibited.

Another policy approach identified to address significant drinking water threats from organic solvents is for municipalities to establish bylaws that prohibit the discharge of organic solvents into municipal sewer systems, or to prohibit storage within 100 metres of the municipal drinking water source. Through a specify action policy municipalities could be required to enact sewer use bylaws that address threats from organic solvents, such as requirements for compliance programs and pollution prevention planning.

Education and outreach programs were also identified as proactive tools for addressing threats from organic solvents, most likely to be used in support of other policy approaches. Programs could be directed at businesses that store organic solvents and could address pollution prevention approaches, best management practices and safe disposal in industries storing organic solvents, with priority on significant threat areas.

Post Discussion Paper

After the publication of the Discussion Papers there was little further discussion on this drinking water threat. In most cases, policy developers selected the Part IV tools to manage or prohibit these activities. Prohibition (using Part IV or land use planning tools) was often selected when there was future potential for this activity to occur within 100 metres of the municipal drinking water source or where the vulnerability score was high enough to regard this activity as significant.

3.13 The Management of Runoff That Contains Chemicals Used In the De-Icing of Aircraft

Discussion Paper Summary

There are no existing significant drinking water threats identified within the Kettle Creek Source Protection Area. Further, based on land use activities surrounding existing municipal intakes, the potential for an airport to be constructed in the future that is of a size that might rank as a significant drinking water threat is minimal.

It is possible to affect decision-making on airport lands, provided that the functioning of the site is not impeded. Although the Federal Government has immunity from provincial law, the Federal Government can waive that immunity by contract/agreement or conduct. Where a municipality has the responsibility for establishing Risk Management Plans, a Source Protection Plan policy can direct a municipality to negotiate a Part IV Risk Management Plan under the Clean Water Act, 2006 with the Airport Authority.

Post Discussion Paper

Although it is unlikely for this activity to occur in the Kettle Creek Source Protection Area in the foreseeable future, policies must be included as per the rules under the Clean Water Act, 2006. Therefore, as new airports would require the completion of an Environmental Assessment, the municipalities would in their review of this Environmental Assessment be able to provide comments to the Airport Authority on the effects of this activity on their drinking water supply, specifically for the de-icing of aircraft. This was most often determined to be the most effective method to manage these future activities. In addition, a non-binding policy was selected in most cases, requesting that the Airport Authority review all applications to ensure that this activity ceases to be a significant drinking water threat on future airport site development.

3.14 An Activity that Takes Water from an Aquifer or a Surface Water Body without Returning the Water Taken from the Same Aquifer or Surface Water Body and an Activity that Reduces the Recharge of an Aquifer

There were no Discussion Papers developed for these prescribed drinking water quantity threats. The Kettle 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 Kettle Creek watershed and is not expected to increase significantly in the future, these policies were not required.

3.15 The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard.

Discussion Paper Summary

Outdoor Confinement Areas

The Nutrient Management Act, 2002 is a prescribed instrument under the Clean Water Act 2006, meaning Nutrient Management Strategies can be used to implement policies. These tools and the legislative framework are already in place, making them an effective approach for addressing existing and future drinking water threats from farm animal yards and outdoor confinement areas. The prescribed instrument tool was identified in the Discussion Paper and a policy could require OMAF/MRA to ensure existing and proposed Nutrient Management Strategies in significant threat areas effectively protect municipal drinking water supplies. The policy could require that such strategies contain contingencies in case municipal groundwater monitoring shows concerns relating to nitrogen and pathogens.

Nutrient Management Strategies only apply to outdoor confinement areas and farm animal yards on properties regulated under the Nutrient Management Act, 2002. Therefore, for properties with outdoor confinement areas or farm animal yards that pose a significant threat to drinking water that are not regulated under the Nutrient Management Act, 2002, policies were drafted to require Part IV Risk Management Plans that could be applied to both existing and future threats. A Part IV Risk Management Plan could effectively deal with the diversity of farm animal yards and types of outdoor confinement areas by applying best management practices.

These include components of the Environmental Farm Plan on a site-by-site basis and requirements for ongoing monitoring and reporting to the Risk Management Official. The Part IV Risk Management Plan could also include aspects of a Nutrient Management Strategy, as it relates to outdoor confinement areas, to maintain consistency with current regulations.

Livestock Grazing and Pasturing Land

Livestock grazing and pasturing lands are not defined under the Nutrient Management Act, 2002, and therefore, these threats cannot be managed through the use of the prescribed instruments tool. Therefore, a policy could be written to require Part IV Risk Management Plans for properties with grazing and pasturing lands that pose significant drinking water threats.

In both cases, ‘softer’ tools such as education and outreach and incentive programs can be used to address livestock threats. These tools will support implementation of regulations, but they can also be used on their own. Incentive programs could also be developed to support the implementation of education programs or other policy options, such as voluntary Nutrient Management Strategies, to increase the likelihood of adopting best management practices.

Post Discussion Paper

Within 100 metres of the municipal intake, or within the Intake Protection Zone-1 it was determined that these areas should be considered “no go” zones. This is due to the close proximity to the municipal well or intake and the need to protect this area from any possible activities that may impact or damage the source. Therefore, in a majority of cases, most policies require prohibition of this activity within these areas. This position of prohibition within 100 metres of the well and/or within IPZ-1 was not supported by OMAF/MRA, based on their technical guidance received during the consultation period.

3.16 The Establishment and Operation of a Liquid Hydrocarbon Pipeline

At the time water quality discussion papers were developed, the establishment and operation of a liquid hydrocarbon pipeline was not a Prescribed Drinking Water Threat activity; however, the conveyance of oil by way of underground pipelines was included as an approved local threat activity in the Lake Erie Region. In July 2018, O. Reg. 287/07 under the Clean Water Act, 2006 was amended to include the establishment and operation of a liquid hydrocarbon pipeline in the list of Prescribed Drinking Water Threats.

4.0 WATERSHED WIDE POLICY DEVELOPMENT, INTENT AND RATIONALE FOR NON-PRESCRIBED DRINKING WATER THREATS

The following sections describe the decision-making process for the selection of policy tools made by the policy developers for non-prescribed drinking water threats. A summary is provided where the outcomes published within the Discussion Paper were available. The Discussion Paper accompanied the development of the first Kettle Creek Source Protection Plan. Further information on policy development including the intent and rationale for the selection of specific policy tools is presented in Section 5.0.

4.1 Optional Content

Discussion Paper Summary

On January 13, 2011 the Lake Erie Region Source Protection Committee passed a resolution (Res. No. 05-11) which determined that policies for the following optional content shall be included within the Source Protection Plans as outlined in O. Reg. 287/07:

1. Policies on conditions 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 Area (WHPA);

3. Policies that govern transport pathways;

4. Policies for the monitoring of moderate and low drinking water threats in specific situations;

5. Anything that will assist in understanding the plan; and

6. Dates for when the policies take effect.

Conditions

Conditions are contaminated sites for which there is evidence of contaminants migrating towards a well from a past activity that may have an immediate impact on drinking water quality, as outlined in Part XI.5 of the Technical Rules. No Condition sites have been identified in the Kettle Creek Source Protection Area.

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, 1990, 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 and facilities that discharge sewage other than storm water to a watercourse.

Policies 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, 1990), 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 response 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. Outdated plans may be a threat to drinking water sources, as they may not contain the most recent data and most appropriate response (i.e. personnel) to an emergency or spill.

Policies were written in all cases to encourage the appropriate party(ies) to update their response/prevention/contingency plans to include the vulnerability mapping, allowing the appropriate party to have immediate access to this information when needed. This may also modify the development of these plans to ensure that if a spill occurred, a heightened response to the activities would occur because of the threat to the municipal drinking water supply.

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. Transport pathways, such as an abandoned well, may facilitate the movement of contaminants vertically or laterally below grade, and result in a more widespread distribution of a drinking water threat.

Policies for a specific transport pathway could support ongoing stewardship programs to provide funding to decommission abandoned wells, thereby reducing the ability of contaminates to enter the groundwater within the vulnerable areas. This may further reduce the vulnerability of an area and the number of enumerated threats. For transport pathways not related to drinking water wells, a policy to support best management practices and the approval of installation of new municipal infrastructure by a qualified professional would aid in the protection of municipal drinking water sources.

A broad transport pathway policy could include requesting municipalities to determine which transport pathways exist within the identified vulnerable areas and develop policies once completed to protect municipal drinking water sources.

Abandoned wells were the only transport pathways identified as a concern for the Kettle Creek Source Protection Area surrounding the Belmont wellhead protection area. As such, this is the only transport pathway addressed in this Source Protection Plan.

Monitoring of Moderate and Low Drinking Water Threats

The monitoring of moderate and low drinking water threats must be included in the Source Protection Plans where the Source Protection Committee determines that this is advisable to ensure they do not become significant drinking water threats. The Source Protection Committee determined it was not advisable to monitor moderate and low threats for the development and approval of the first Source Protection Plan. Since that time, “the establishment and operation of a liquid hydrocarbon pipeline” was added as a Prescribed Drinking Water Threat. Significant, moderate and low liquid hydrocarbon pipeline policies were developed and incorporated into the Kettle Creek Source Protection Plan. There are no locations within the Lake Erie Source Protection Region where the Source Protection Committee determined it was advisable to monitor moderate and low threats for other Prescribed Drinking Water Threat activities.

Spill Prevention, Spill Contingency and Emergency Response Plans along highways, railway lines or shipping lanes

The intent of the Source Protection Plan polices is to ensure that spill prevention plans, contingency plans and emergency response plans are updated for the purpose of protecting drinking water sources. Municipal emergency services are often the first responders to events that may adversely impact a source of municipal drinking water. Therefore, spill prevention and contingency/response plans should be updated to include maps that clearly detail the vulnerable areas.

Quick and effective response to spills could prevent an emergency from affecting a municipal drinking water source. Additionally, updates to the current spill prevention and contingency/response plans could act as a communication tool for the municipalities and the public, as well as ensure that people are aware of the location of wellhead protection areas and knowledgeable regarding the appropriate response in the event of a spill in these areas.

Transport Pathways: Abandoned Wells

To ensure that groundwater vulnerability is not increased due to future transport pathways with respect to an abandoned well, the policies typically support the provincial efforts to encourage the decommissioning of abandoned wells as per O. Reg. 903. Often these wells are located on private property and the cost to properly decommission or upgrade the structure may be prohibitive. A specific transport pathway policy to support ongoing stewardship programs to decommission abandoned wells could reduce the ability of contaminates to enter the groundwater within the vulnerable areas. This may further reduce the vulnerability of an area and the number of enumerated threats.

4.2 Part IV, Section 59: Restricted Land Use

The intent of these polices is to designate all land uses where activities have been designated for the purposes of Section 57 and/or 58 of the Clean Water Act, 2006 as Restricted Land uses under Section 59 of the Clean Water Act, 2006.

These policies were developed to require all applications made under the Planning Act, Condominium Act and Building Code Act, for areas where activities could be significant drinking water threats, to be reviewed by the Risk Management Official. The Risk Management Official would then advise the applicant if Section 57 (prohibition) or Section 58 (Risk Management Plans) of the Clean Water Act, 2006 apply. The policies enable the Risk Management Official to pre-screen applications for land uses and activities identified as a significant drinking water threat within vulnerable areas.

4.3 Implementation and Timing

The timing policies were grouped according to Section 40, 43, 57, 58, 59; under the Clean Water Act, 2006, and education and outreach. Each policy grouping was assigned an implementation deadline.

All policies in the first Source Protection Plan came into effect on January 1, 2015. The effective date for amended policies, including but not limited to the addition of new drinking water threats and regulated areas and activities, is the date of posting of the Notice of Approval of the amended provisions on the Environmental Bill of Rights Registry.

The provincial ministries' request for a three (3) year implementation timeline was included in the policies. However, the Ministry of the Environment, Conservation and Parks provided further comment regarding their desired timeframe for implementation of the prescribed instrument tool and Director discretion to determine the timeline for implementation. The request for allowing the Director to determine the timeline for implementation was not included in the Source Protection Plan policies. The policy development team felt that it was not reasonable to allow this flexibility for the Ministry of the Environment, Conservation and Parks and not have this discretion available for other implementing bodies.

4.4 Annual Reporting and Monitoring

Monitoring and Annual Reporting policies were included for each policy which addresses significant drinking water threats. In some instances, one monitoring policy may apply to a number of different policies as the same information is required from the monitoring body. The intent of these policies is to provide the Source Protection Authority with the appropriate information to complete the required Annual Report.

To gauge the effectiveness of the policies within the Source Protection Plan, it is imperative that the Source Protection Authority track the Plan's policy implementation. In most instances, this is accomplished by requiring the implementing body to report details of their accomplishments to the Source Protection Authority. In general, this information is to be provided to the Source Protection Authority before February 1st of each year so that an annual report can be provided to the Ministry of the Environment, Conservation and Parks as required by the Clean Water Act, 2006.

These policies also require the municipalities to amend their Official Plans and Zoning By-laws to ensure conformity with the Source Protection Plan. The purpose of the

monitoring policy is to provide notice as to what was amended/included in the Official Plan and Zoning Bylaw to implement the Source Protection Plan.

4.5 Incentive Programs

The intent of including policies for incentive programs is to encourage the development and implementation of incentive programs to aid in the implementation of Source Water Protection initiatives. During the development of the first Source Protection Plan, policy developers and the Source Protection Committee felt strongly that the Ministry of the Environment should be requested to continue to fund the Ontario Drinking Water Stewardship Program to assist landowners to manage or cease activities that are identified as significant drinking water threats on their properties. Provincial funding of the program has since ceased. An updated incentive policy requests that the Ministry of the Environment, Conservation and Parks re-instate funding of the program as it is one of the most effective tools available to eliminate existing significant drinking water threats.

4.6 Interpretation of the Source Protection Plan

The Lake Erie Region Project Team discussed the need for an Interpretation section in order to assist the reader in understanding what was to be considered the legal part of the Source Protection Plan policy. This included adding additional text to Volume I and II to aid the reader in how to read the policies using the policy applicability mapping and sidebars. It was important to note in the Source Protection Plan policy section (Volume II), that the Source Protection Plan consists of both the written policy text and Schedules.

The interpretation policy is intended to ensure the Schedules become a legal component of the Source Protection Plan. This policy was adapted from similar policies which appear in current Official Planning documents and was included in the Source Protection Plan under Section 29 of O. Reg. 287/07.

The intent of the Schedules in the Source Protection Plan is to identify the areas where the policies of the Source Protection Plan apply. The boundaries for circumstances shown on the Plan Schedules are general and more detailed interpretation of the boundaries rely on the mapping in the approved Assessment Report and the Specific Circumstances found in the Technical Rules under the Clean Water Act, 2006.

The second part of this policy addresses updates to Acts and regulations that may occur at any time. This part allows for these updates to occur without triggering a need for an update to the Source Protection Plan policies.

5.0 KETTLE CREEK SOURCE PROTECTION AREA

5.1 Overview

The following sections present the intent and rationale of the policies presented in the Source Protection Plan for the Kettle Creek Source Protection Area, and the necessary information that guided the policy development process. The objectives of the policies are to ensure that future activities within the significant threat areas do not become significant drinking water threats. Where existing significant threats are present, the policies were created to manage these threats to municipal drinking water supplies.

5.2 Municipal Support

To date, the municipalities within the Kettle Creek Source Protection Area and the Kettle Creek Conservation Authority have been actively involved with the development and update of the Source Protection Plan policies. Two members of the Lake Erie Region Source Protection Committee are closely connected to the Kettle Creek Source Protection Area. The Manager of Development and Compliance for the Municipality of Central Elgin and the Director, Regional Water Supply for the Lake Huron and Elgin Area Primary Water Supply Systems have been members since the inception of the Source Protection Committee. They serve on the Source Protection Committee as a municipal and public interest representative, respectively. Their intimate involvement with source water protection at the committee level has meant that the Municipality of Central Elgin and the member municipalities of the Elgin Area Primary Water Supply are well-informed throughout the planning process.

5.3 Financial Considerations

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. In the Kettle Creek Watershed, the Elgin Area Primary Water Supply System Intake is located in the Municipality of Central Elgin but supplies water to residents in other municipalities. In this case, it may not be fair for the Municipality of Central Elgin to bear the full cost of source protection implementation. Similarly, rural landowners who operate their own wells may be indirectly paying for the protection of municipal drinking water if the funding of Plan implementation is achieved through increased municipal taxes.

Within the Clean Water Act, 2006, provisions are set out for financing various aspects of source protection implementation including stewardship programs and application of fees for Part IV policies. The financial implications, and the question about what agency would ultimately be responsible for funding source water protection implementation in the Kettle Creek Source Protection Area, was strongly considered in the development of the source protection policies.

The majority of drinking water threats within the Kettle Creek Source Protection Area are future significant threats. Moreover, the activities identified – specifically with regard to the Belmont Wellhead Protection Area - are not currently established and were viewed as unlikely to occur based on the current land use. Therefore, the Municipality of Central Elgin felt that the most cost-effective method of ensuring that significant threats are never established was to use Part IV Prohibition, except where existing prescribed instruments could adequately mitigate the threat. While the argument could be made that Part IV Risk Management Plans may adequately mitigate future significant threats, the Municipality of Central Elgin feels strongly that significant threats that do not currently exist should be prevented from occurring. Hence, Risk Management Plans have only been proposed to address existing threats in the Elgin Area Primary Water Supply System's Intake Protection Zone (IPZ) 2. Moreover, Risk Management Plans are more time consuming and financially burdensome on the municipality than prohibition.

Finally, the financial implications on other agencies have also been considered in the development of the policies. The majority of policies included in this Plan are requesting implementing bodies to review the Wellhead Protection Areas (WHPAs) and Intake Protection Zones (IPZs) and - in their approval process - either deny the approvals, provide for measures that would address concerns within the WHPAs and IPZs, or enhance existing programs and services to have regard to significant threat policies and source protection. In many cases, it was decided that these policies should have no financial implications for the implementing body, except for those already assumed within their own internal processes.

5.4 Part IV Policies, Clean Water Act, 2006

Section 57 Prohibition

Intent:

Prohibit activities under Section 57 of the Clean Water Act, 2006 in vulnerable areas where the activities would be significant drinking water threats if they were established.

Rationale: Belmont Wellhead Protection Area

The Belmont Wellhead Protection Area (WHPA) had no existing significant threats identified in the Assessment Report; however, future threats are possible within WHPA-A to C. The majority of land within the WHPA-A is owned by the Municipality of Central Elgin and the Kettle Creek Conservation Authority. The current land use is primarily natural heritage or parkland with only a small portion in residential use.

The list of prohibited activities for the Belmont WHPA - A include:

- The application of agricultural source material to land;
- The storage of agricultural source material to land;
- The application of non-agricultural source material to land;
- The handling and storage of non-agriculture source material;

- The application of commercial fertilizer;
- The handling and storage of commercial fertilizer;
- The application of pesticide to land;
- The handling and storage of pesticide;
- The handling and storage of road salt – exposed to precipitation or runoff;
- The handling and storage of road salt – potentially exposed to precipitation or runoff
- The storage of snow;
- The handling and storage of fuel;
- The handling and storage of an organic solvent;
- The use of land as livestock grazing or pasturing land, an outdoor confinement area of a farm-animal yard; and
- The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act where a prescribed instrument is not required.

None of the above listed activities are expected to be established or are desired by the municipality at this location, based on the current land-use. Therefore, the municipality decided that Part IV Prohibition was the best means to ensure that these future threats to drinking water are never established.

The same approach was recommended for the protection against the future threat of dense non-aqueous phase liquids (DNAPLs). However, this is a potential future threat in WHPA-A, B and C. As WHPA-C extends out into the municipalities of Thames Centre and Malahide Township, staff from Kettle Creek Conservation Authority and the Municipality of Central Elgin pre-consulted with these two municipalities to gain staff-consensus on the approach. Based on current land uses and zoning in the WHPA-B and C, it is anticipated that prohibition policies will have a minimum impact to future development.

The Ministry of the Environment raised concerns during the public consultation process for the first Source Protection Plan that there is no minimum threshold identified within the DNAPLs prohibition policy, meaning that even a tiny quantity of DNAPLs that might be found in a household product would be prohibited. The policy developers noted that the Ministry did not identify an exemption quantity in the provincial threat table, meaning that even a tiny quantity of DNAPLs is regarded as a significant drinking water threat. It was determined that identifying and defending an exemption quantity would be very difficult. However, it is recognized that the Risk Management Official may have discretion in enforcing this policy during implementation.

Rationale: Elgin Area Primary Water Supply Intake Protection Zone

In the first Source Protection Plan, there were two areas in the Elgin Area Primary Water Supply Intake Protection Zone that were identified through events-based modelling where specific activities could be significant drinking water threats. These were identified as hatched areas in Schedule B of Volume II. The modelled drinking water threats were the handling and storage of commercial fertilizer greater than 5,000 cubic metres and the handling and storage of fuel greater than 6,000 litres. One of the Events Based Areas has since been removed as the significant drinking water threat that triggered the modelling is no longer present.

There are financial implications with this policy, as a Risk Management Official is required. The Municipality of Central Elgin is committed to maintaining the safety and security of the source water for its municipal drinking water systems. Central Elgin has appointed municipal staff to fulfill the role of RMO and the cost to provide this service is born through water and sewer rates, garbage cart fees and the recycling program. The Risk Management Official has the dual role of monitoring prohibited activities and developing risk management plans for existing activities. The appointment of the Risk Management Official is therefore seen as a cost-effective means of managing both existing and future drinking water threats.

Section 58 Risk Management Plans

Intent:

Manage activities under Section 58 of the Clean Water Act, 2006 in vulnerable areas where the activities are significant drinking water threats.

Rationale: Belmont Wellhead Protection Area

A 500 litres fuel storage tank that supplies the generator at the pump house for the Belmont wells was identified as a significant drinking water threat. The fuel tank is double-walled and already regularly inspected by the Municipality. A Risk Management Plan mirrors and builds upon measures previously implemented by the Municipality and does not create any additional implementation burden.

Rationale: Elgin Area Primary Water Supply Intake Protection Zone

The handling and storage of fuel was identified as a significant drinking water threat at the Elgin Area Water Treatment Plant in the Intake Protection Zone-2, as determined by the event based modelling. The significant threat activity is identified on the map in Schedule B of Volume II of the Source Protection Plan. The hatched area identifies where the activity is a significant drinking water threat as per the threshold determined by the modelling as described in the approved Kettle Creek Assessment Report. The hatched area also identifies where future activities could become significant drinking water threats.

The Municipality’s goal is to prohibit all future threats related to the modelled handling and storage of fuel above the threshold, while mitigating the current existing threat. This

approach means the cost associated with the creation of a Risk Management Plan is manageable for the Municipality.

There are financial implications to this policy for both the landowner and the implementing body – in this case the municipality – as it requires a Risk Management Official. Central Elgin has appointed existing staff to fulfill the role of RMO and the cost to provide this service is born through water and sewer rates, garbage cart fees and the recycling program.

Section 59 Restricted Land Use

Intent:

Designate all land uses in areas where activities designated under Section 57 and 58 of the Clean Water Act, 2006 could be significant drinking water threats as Restricted Land uses under Section 59 of the Clean Water Act, 2006.

Rationale:

This policy was developed to require all land use applications under the Planning Act and Condominium Act for areas where activities could be significant drinking water threats to be reviewed by the Risk Management Official, who would then advise the applicant if Section 57 (prohibition) or Section 58 (Risk Management Plans) of the Clean Water Act, 2006 apply. These policies only apply to the Wellhead Protection Area (WHPA) 'A' and areas within Intake Protection Zone (IPZ) 2 as presented in Schedule A and B of Volume II.

There are financial implications for the municipality with this policy in terms of staff time required to review applications and serve notices when required to the Risk Management Official.

These policies are considered to apply to both the Belmont Wellhead Protection Area and the Elgin Area Primary Water Supply System Intake Protection Zones.

5.5 Prescribed Instruments

Ministry of the Environment, Conservation and Parks: Future Environment Compliance Approvals

Intent:

Require the Ministry of the Environment, Conservation and Parks to prohibit future activities within the Environmental Compliance Approval process relating to sewage systems and waste disposal sites listed as follows, where the activity would be a significant drinking water threat in the Belmont WHPAs under Subsection 39 of the Clean Water Act, 2006:

- Industrial effluent discharges;
- Wastewater collection facilities and associated parts: outfall of a combined sewer overflow (CSO), or a sanitary sewer overflow (SSO) from a manhole or wet well;

- Wastewater treatment facilities and associated parts;
- Storage, treatment and discharge of tailings from mines;
- Landfilling of petroleum refining waste;
- Landfilling (hazardous waste or liquid industrial waste);
- Landfilling (municipal waste);
- Liquid industrial waste injection into a well;
- PCB waste storage;
- Transfer/processing sites approved to receive hazardous waste or liquid industrial waste;
- Transfer/processing site approved to receive only municipal waste under Part V of the Environmental Protection Act;
- Storage of subject waste at a waste generation facility: site requires generator registration under Section 3 of O. Reg. 347;
- Storage of subject waste at a waste generation facility: site that is exempt or excluded from generator registration requirements;
- Disposal of hauled sewage to land;
- Storage of hauled sewage;
- Application of processed organic waste to land; and
- Storage of processed organic waste or biomass.

Rationale:

There are currently no existing significant threats related to sewage and waste disposal activities in the Belmont WHPA enumerated in the Assessment Report. There is the potential for significant threats to develop as a result of activities related to sewage systems and waste disposal sites for the Belmont WHPA-A where the vulnerability score is 10 and WHPA-B where the vulnerability score is 8.

To be consistent with not allowing other future significant threat activities in the most vulnerable WHPAs, the Municipality of Central Elgin desired to prohibit these activities. However, Part IV under the Clean Water Act, 2006 cannot be used to prohibit all sewage and waste disposal threats, as existing instruments are available as a policy tool (e.g., Environmental Compliance Approvals). Hence, it was decided that the best approach to prevent activities of this nature in the future was to require the Ministry of the Environment, Conservation and Parks to prohibit any future activities related to sewage systems and waste disposal sites where these activities would be a significant drinking water threat within the Environmental Compliance Approvals process.

The majority of land within the WHPA-A is owned by the Municipality of Central Elgin and the Kettle Creek Conservation Authority and the current land use is primarily natural heritage or parkland. Therefore, it is anticipated that restricting approvals within the

Environment Compliance Approval process will have a negligible impact to future development.

There are no financial implications to this policy beyond those already assumed by the Ministry of the Environment, Conservation and Parks' internal processes.

Ministry of the Environment, Conservation and Parks: Future Environment Compliance Approvals (with exceptions)

Intent:

Require the Ministry of the Environment, Conservation and Parks to prohibit activities relating to sewage activities where they would be significant drinking water threats in the Belmont WHPA 'A' under Subsection 39 of the Clean Water Act, 2006 within the Environment Compliance Approvals process, unless conditions are imposed that, when implemented, will ensure that the following sewage activities never become significant drinking water threats:

- Onsite sewage works;
- Storm water management facilities and drainage systems: outfall from a storm water management facility or storm water drainage system;
- Storm water management facilities and drainage systems: storm water infiltration facility;
- Wastewater collection facilities and associated parts: sanitary sewers; and
- Wastewater collection facilities and associated parts: sewage pumping station or lift station well, a holding tank or a tunnel.

Rationale:

There are currently no existing significant threats related to sewage activities in the Belmont WHPA as identified in the Assessment Report. There is the potential for significant threats to develop as a result of sewage activities for the Belmont WHPA-A where the vulnerability score is 10. Therefore, these future activities are to be managed by ensuring that appropriate terms and conditions are placed on approvals to protect municipal drinking water sources so these activities never become significant drinking water threats.

As there may be a potential for future development in the significant drinking water threat areas that would require these sewage activities, prohibition of this activity is not appropriate. Therefore, allowing these activities as part of the approval of the required Environmental Compliance Approval, with specific terms and conditions to reduce the risk to drinking water sources, would effectively manage the future activities.

This policy recognizes that for certain sewage subcategories, terms and conditions can be imposed to ensure the safety of the municipal drinking water system.

There are no financial implications to this policy beyond those already assumed by the Ministry of the Environment, Conservation and Parks' internal processes.

5.6 Land Use Planning

Intent:

Identify to implementing municipalities the requirement under the Clean Water Act, 2006 to amend Official Plans, Zoning and/or By-laws to reflect land use planning policies in areas where activities could be significant drinking water threats.

Rationale:

These policies were developed to require all applications under the Planning Act and Condominium Act for areas where activities could be significant drinking water threats to be identified through municipal planning documents. Further, the update of these documents will aid staff in the review of any municipal planning applications received for the vulnerable areas. The timeline presented for this updated is consistent with the current Official Plan planning cycle of 5 years.

It is understood that land uses where the activity could occur will be identified in the Official Plan, not the specific activity.

There are financial implications for the municipality with this policy in terms of staff time required to review applications and serve notices when required to the Risk Management Official.

These policies are considered watershed-wide policies, applying both to the Belmont Wellhead Protection Area and the Elgin Area Primary Water Supply System Intake Protection Zones.

5.7 Education and Outreach and Stewardship Programs

Intent:

Request the Municipality of Central Elgin to work with other implementing bodies where desirable to develop, continue or enhance stewardship and outreach and education programs directed at any, or all, significant drinking water threat activities prescribed under the Clean Water Act, 2006 where it may be deemed necessary and subject to funding.

The Source Protection Committee is confident that there are no existing significant threats in the Belmont Wellhead Protection Area and only identified two for the Elgin Primary Water Supply System intake at the time the first Source Protection Plan was approved in 2014. As such, the Committee is of the opinion that these education and outreach policies will promote the achievement and objectives of the Source Protection Plan and that policies to regulate or prohibit these activities, unless otherwise stated, are not required.

Rationale:

Education and outreach programs were originally discussed separately for individual drinking water threats. It was found that the same requirements were being repeated for each education and outreach policy. To minimize duplication, this single policy wording was developed to list all of the activities for which it was decided that education and outreach should be used as a policy approach.

Both the Municipality of Central Elgin and the Kettle Creek Conservation Authority have existing outreach and education programs that could be tailored or enhanced to deliver the required source protection message to the target audience. For instance, messaging could be included in the Central Elgin Buzz newsletter, tax bills, web sites and social media, thereby minimizing costs.

The source protection message would be best delivered by an agency whose mandate is watershed-wide such as the Kettle Creek Conservation Authority, provided funding is available.

Alternate funding sources may also have to be explored to ensure consistent and equitable distribution. For instance, while the Elgin Area Primary Water Supply System Intake is located in the Municipality of Central Elgin, a number of other municipalities benefit from the supply of water. Therefore, it would be reasonable that all benefitting municipalities would share the full costs of an outreach and education campaign or stewardship program that would help protect a shared water supply.

5.8 Incentive Programs

Intent:

Encourage the Ministry of the Environment, Conservation and Parks to reinstate funding for the Ontario Drinking Water Stewardship Program, to assist landowners to manage or cease activities that are identified as significant drinking water threats on their properties. Further, to Encourage the Municipality of Central Elgin, together with other implementing bodies, to develop and implement incentive programs directed at significant threat activities where it is deemed necessary and appropriate subject to funding.

The Source Protection Committee is confident that there are no existing significant threats in the Belmont Wellhead Protection Area and only identified two for the Elgin Primary Water Supply System intake at the time the first Source Protection Plan was approved in 2014. As such, the Committee is of the opinion that these incentive policies will promote the achievement and objectives of the Source Protection Plan, and that policies to regulate or prohibit these activities, unless otherwise stated, are not required.

Rationale:

Source water protection is a provincial initiative and affects the entire province. Municipalities feel strongly that the Province of Ontario should reinstate funding for the Ontario Drinking Water Stewardship Program, as this program is one of the most effective tools available to eliminate existing significant drinking water threats.

Incentives for stewardship programs within the Kettle Creek Source Protection Area would recognize that the source water for the Elgin Area Primary Water Supply System is impacted by activities far beyond the Intake Protection Zone-1 and Intake Protection Zone-2. Ongoing support is required to aid landowners with the process of implementing measures to protect municipal drinking water supplies.

5.9 Specify Action

Design Standards for New Airports: Airport Authority

The first Kettle Creek Source Protection Plan included a specify action policy that addressed the management of runoff that contains chemicals used in the de-icing of aircraft. This policy was removed under s.31 of O. Reg. 287/07 (significant threat policies) as part of an update to the Kettle Creek Source Protection Plan. The Municipality of Central Elgin confirmed that there is no reasonable prospect that this activity will ever be engaged in the WHPA-A given the current and projected land uses and proximity (100 metres) to municipal drinking water wells.

Vulnerable Area Signage

Intent:

Recommend that the Ministry of Transportation, should maintain source protection signs on Provincial highways to identify the locations of Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ) within the Kettle Creek Source Protection Area. This policy is a recommendation, and the implementing body is not legally bound to enact the policy.

Rationale:

While local residents may be aware of the general location of the IPZs and WHPAs, visitors to the area and emergency personnel may not. Signs located along major roads would be a visual reminder to all that they are entering a vulnerable area and that there is a need to use caution to protect the drinking water source. Signage would ensure that in the event of a contaminant release near a municipal drinking water source appropriate and timely response for both pollution containment and closure of the public water supply will occur before human health and lives are endangered. Signs currently exist within the Kettle Creek Source Protection Area, and these would be replaced with the provincial signs over time. The aim of this policy is to maintain consistency in the Source Water Protection messaging across the province.

A number of signs were erected as part of an outreach and education grant. Therefore, financial implications are expected to be minimal concentrating on maintenance and

replacement. In the future, the Municipality aims to utilize signs that are standardized by the Province of Ontario.

Liquid Hydrocarbon Pipelines

During the initial round of source protection planning, liquid hydrocarbon pipelines were not included in regulation as a prescribed drinking water threat. For threats relating to oil pipelines, the Lake Erie Region Source Protection Committee applied to the Director of the Source Protection Programs Branch to consider a request to add this as a local threat. The application was made in February 2011 and the Director approved the conveyance of oil by way of underground pipeline in June 2011 as a local threat in the Grand River, Long Point Region, Catfish Creek and Kettle Creek source protection areas. In July 2018, the “establishment and operation of a liquid hydrocarbon pipeline” was added as a prescribed drinking water threat to General Regulation (O. Reg. 287/07) under the Clean Water Act.

Within Lake Erie Source Protection Region hydrocarbon pipelines cross the Grand River upstream of several surface water intakes (Dunnville Emergency Intake, Brantford Intake, and Ohsweken Intake). The pipeline crossings are in an area of low vulnerability; therefore, no policies are currently applied to these drinking water threats. Although the likelihood of a pipeline rupture is low, the consequences of a rupture could have significant impacts on downstream drinking water intakes. Due to the likely high impacts in case of a hydrocarbon pipeline rupture, moderate and low policies were developed for both existing and future hydrocarbon pipelines within WHPAs and IPZs across the Lake Erie Source Protection Region. The pipeline policies are non-legally binding and address future threat activities; there are no existing pipeline crossing vulnerable areas in Kettle Creek Source Protection Area.

Consideration of Drinking Water Source Protection in Decision-Making Framework for Liquid Hydrocarbon Pipelines

Intent:

Recommend that bodies responsible for assessment and / or regulation of liquid hydrocarbon pipelines in Ontario consider drinking water source protection in their decision-making framework.

Rationale:

As the liquid hydrocarbon pipeline industry is heavily regulated both federally and provincially, the policy focusses on the need for source protection integration into the decision-making framework. The responsibility for assessment and to make decisions that incorporate source protection lies with the regulatory bodies. Some implementing bodies may already consider source protection and the policy would act as a formal confirmation of their efforts.

Use of Source Protection Information when Developing, Operating and Maintaining Liquid Hydrocarbon Pipelines.

Intent:

Recommend that pipeline owners ensure that best available source protection information is used when developing, operating and maintaining liquid hydrocarbon pipelines.

Rationale:

The policy focusses on the need for source protection integration into the decision-making framework of pipeline owners. The responsibility is on the pipeline owners to ensure that they have the latest and best information, such as vulnerable areas, in the development, operation and maintenance of liquid hydrocarbon pipelines. Some pipeline owners may already consider source protection and the policy would act as a formal confirmation of their efforts.

Notification of Proposed New Liquid Hydrocarbon Pipeline

Intent:

The location and siting of liquid hydrocarbon pipelines is not controlled by the local municipalities, therefore managing this activity through direction and recommendations to the appropriate approval authority is the most effective approach for this threat.

Rationale:

The primary concern regarding this threat relates to a potential spill from a pipeline. Encouraging the Canada Energy Regulator and the Ontario Energy Board to advise the Source Protection Authority and the municipality of any proposed pipeline will assist the municipality in identifying early in the process whether a proposed pipeline will affect the municipal drinking water supply. Directing the policy at the Canada Energy Regulator and the Ontario Energy Board also encourages the regulators to formally integrate source protection into their processes to ensure that the policy is implemented.

Reimbursement of Costs Incurred by Municipality

Intent:

Liquid hydrocarbon pipeline owners, where appropriate, reimburse costs incurred by the Municipality if specific work to be done or for any due diligence that is required by a regulator to protect public health and municipal drinking water sources.

Rationale:

The operation and maintenance of liquid hydrocarbon pipelines is not controlled by the local municipalities, nor are they the owners of the pipelines. In the event of a spill, for example, significant costs may be incurred by municipalities and should be reimbursed by pipeline owners as they are responsible for operations and maintenance. Pipelines regulated through the Canada Energy Regulator are required to bear all costs

associated with the consequences of a spill; however, the Ontario Energy Board has no such requirements for provincially regulated pipelines.

5.10 Strategic Action

Transport Pathways: Improperly Abandoned Wells

Intent:

Encourage the Municipality of Central Elgin to notify the Ministry of the Environment, Conservation and Parks when it becomes aware of improperly abandoned wells in Wellhead Protection Area ‘A’ and ‘B’ to aid in the enforcement of Ontario Regulation 903.

Rationale:

Unused and poorly constructed wells are known transport pathways that may facilitate the movement of contaminants vertically or laterally below grade, resulting in a more widespread distribution of a drinking water threat. Often these wells are located on private property and the cost to properly decommission or upgrade the structure is cost prohibitive.

Spill Prevention, Contingency or Response Plans along Highways, Railways or Shipping Lanes

Intent:

Recommend that certain implementing bodies within the Kettle Creek Source Protection Area take action with regard to legislation or policy and procedures under their care that may help to reduce the risk of activities becoming significant threats. These policies are recommendations and the implementing bodies are not legally bound to enact them.

Rationale:

Ministry of the Environment, Conservation and Parks notification protocol

The Province of Ontario and the Canadian government have a one-window agreement called the Canada-Ontario Environmental Occurrences Notification Agreement. Any spill in Ontario, whether in provincially or federally regulated areas such as the Great Lakes, is to be reported to the Spills Action Centre (SAC). The SAC has specific source protection-related procedures which triggers notification to municipal water treatment plant operators, including municipal drinking water system owners, if the following applies:

- the spill has occurred in a WHPA-A, B, C or E or an IPZ-1, 2, or 3;
- has a vulnerability score equal to or greater than 8; and
- consideration of the type and quantity of the material discharged.

There is no requirement for the SAC to notify municipal drinking water systems outside of these parameters; however, the SAC may notify municipal drinking water systems

outside of source protection areas depending on the material and quantity of the material spilled as well as the proximity to municipal drinking water intakes. This policy requests that the Elgin Area Primary Water Supply duty officer be notified of any kind of incident that may affect the treatment system and / or water quality, within or near the IPZ-1 and 2, regardless of the vulnerability score or whether or not it is within the vulnerable area. This will ensure that the treatment plant can take appropriate action(s) if there is a spill in the Great Lakes that affects the drinking water intake.

Update contact information/Procedure Cards: Ministry of the Environment, Conservation and Parks

In the event of a spill, the first phone call should always be to the Ministry of the Environment, Conservation and Parks' Spills Action Centre. It is imperative that this Centre has the most up to date mapping to effectively deal with a spill that may impact a municipal drinking water source.

Emergency Management Plans: Municipality of Central Elgin, Thames Centre, Township of Malahide

Municipal emergency services are often the first responders to events that may adversely impact a source of municipal drinking water. Therefore, emergency management plans should be updated to include maps that clearly detail the vulnerable areas. Such plans should also include requirements to contain water and chemicals used to suppress fires and respond to spills from septic haulage, highway accidents, railway derailments and IPZ-2 boating accident.

6.0 SUMMARY OF COMMENTS RECEIVED

6.1 Summary of Comments Received During Pre-Consultation

In accordance with O. Reg. 287/07 made under the Ontario Clean Water Act, 2006, the Grand River Conservation Authority acting as the Grand River Source Protection Authority on behalf of Kettle Creek Source Protection Authority, the Municipality of Central Elgin and the Source Protection Committee, completed pre-consultation for the Kettle Creek Source Protection Plan update with the various implementing bodies affected by the plan.

The pre-consultation process began on January 25 to February 28, 2023. This update included map amendments for the Municipality of Central Elgin. For a complete draft of the Source Protection Plan, agencies were directed to the Lake Erie Source Protection Region website.

Implementing agencies were given until February 28, 2023 to provide comments. This period was the first opportunity for agencies to provide comments on the draft updates to the Plan. **Table 6-1** summarizes comments received and responses, during the pre-consultation period.

6.2 Summary of Comments Received During Public Consultation

In accordance with O. Reg. 287/07 made under the Ontario Clean Water Act, 2006. The Grand River Conservation Authority acting as the Grand River Source Protection Authority on behalf of the Kettle Creek Source Protection Authority, the Municipality of Central Elgin and the Lake Erie Source Protection Committee, will post the draft updated Source Protection Plan for a 35-day public consultation period between April 5 and May 9, 2023.

No comments were received during the 35-day public consultation period.

Table 6-1: Summary of Pre-Consultation Comments Received between January 25 to February 28, 2023 on the Kettle Creek Source Protection Plan s.36 update

Summary of Comments	Response
Source: MECP Removal of Aircraft De-icing Policy (BE-NB-5.1) • This policy is directed to the Airport Authority to consider appropriate design standards and management practices for new airports within the Belmont Wellhead Protection Area (WHPA) to ensure the management of runoff that contains chemicals used in the de-icing of aircraft never becomes a significant drinking water threat. This policy was only applicable to the WHPA-A scoring 10 area of the Belmont wellfield. • Please confirm that the SPA is intending to use the exemption included in 2018 to s.31 of O.Reg. 287/07 for this activity: where a source protection plan is not required to include a significant threat policy under subsection 22 (2) of the Act in respect of an activity that would be a significant drinking water threat in an area identified in the assessment report if the activity has not been engaged in in that area; and there is no reasonable prospect that the activity will ever be engaged in in that area. • Ensure that the explanatory document is updated for this activity to include rationale for the change in policy approach (e.g., based on current land uses, etc.).	The Source Protection Authority is using the s.31 exemption from O. Reg. 287/07. Rationale has been added to the explanatory document regarding the proposed removal of the policy.

Summary of Comments	Response
Source: MECP Policy BE-NB-5.2 and PS-NB-9.2 • The policy requests pipeline owners to ensure that the best available source protection information is used when developing, operating and maintaining liquid hydrocarbon pipelines, including developing and updating emergency planning zones. • Although hydrocarbon pipeline owners take source protection plan policies seriously, they are under federal jurisdiction. The enforceability of policies on federal land would need to be discussed further with your legal representatives. Given this, you may want to consider revising the policy to direct the municipality or SPA to provide pipeline owners with the best available source protection information to ensure the intent of the policy is being implemented, and that drinking water source protection can be considered in design, operational, and maintenance standards. • This action would also support the ability of pipeline owners and regulators to consider drinking water source protection as a risk factor as included in policies BE-NB-5.1 and PS-NB-9.1.	This policy is non-binding and as such, is not enforceable. Despite this, the Source Protection Authority felt that it is important that the responsibility is on the pipeline owners to ensure that they have the latest and best information, such as vulnerable areas, in the development, operation and maintenance of liquid hydrocarbon pipelines. Some pipeline owners may already consider source protection and the policy would act as a formal confirmation of their efforts. This rationale is included in the explanatory document.

Summary of Comments	Response
Source: MECP Policy BE-NB-5.3 and PS-NB-9.3 • This policy has two parts, part one is directed at CER, OEB and pipeline proponent to ensure that the Source Protection Authority and the Municipality of Central Elgin are provided the location of any new proposed pipeline. Part two of the policy is directed at the SPA to document in the annual report the number of new pipelines proposed within vulnerable areas if a pipeline has been proposed and/or application has been received. • Please note the differences in effect of the policy: part one is a request upon the regulators, while part two is legally binding on the municipality. Consider revising the should to shall for this section. • As indicated for comment #2, you may also want to consider directing all actions for this policy to the SPA to ensure it is being implemented. For example: The Source Protection Authority shall engage CER, OEB and pipeline proponents once per calendar year and request the location of any new proposed pipeline applications. The SPA shall document in the annual report the number of new pipelines proposed within vulnerable areas if a pipeline has been proposed and/or application has been received.	This policy is only directed at the CER and OEB and uses the term “should” as it is non-binding. Directing the policy at the CER and the OEB encourages the regulators to formally integrate source protection into their internal processes to ensure that the policy is implemented. This rationale is included in the explanatory document.

Summary of Comments	Response
Source: MECP Policy BE-NB-5.4 and PS-NB-9.4 • The policies request pipeline owners to reimburse costs borne by the municipality where work in relation to this activity is required by a regulator with regards to protecting drinking water sources, or where the work identified by the drinking water system owner is supported based on due diligence and best practices as it relates to source protection and the protection of public health. • Please note that for any spills, the pipeline owner is already responsible for any cost associated with spill clean up. • Our branch would like to discuss this policy further to get some additional information and context. It is currently unclear how this policy would be implemented and for what items; for example, “where work is required” is very broad. Providing some more specific examples would be helpful.	Policy discussed with the MECP as requested. Specific examples of “where work is required” have been added to the policy. Rationale as to why the policy is directed at the pipeline owner is included in the explanatory document.

Summary of Comments	**Response**
Source: MECP The Spills Action Centre has standard operating procedures to follow when they become of a spill to land or water or may pose a concern within a source protection area. Please see requested revisions that would align with the existing process at Spills Action Centre: PS-NB-8.1: The Ministry of the Environment Conservation and Parks should follow their standard operation procedures for source protection and spills to land or water, and notify the Elgin Area Primary Water Supply System ~~duty operator~~ when the ministry becomes aware of ~~there are~~ boating accidents or other incidents that may affect the drinking water treatment system and/or water quality within or near an the Intake Protection Zone~~, 1 (IPZ-1) and Intake Protection Zone 2 (IPZ-2),~~ through the Spills Action Centre. ~~or the Canada-Ontario Environmental Occurrences Notification Agreement.~~	Policy PS-Nb-8.1 amended as suggested.
Source: MECP • Formatting errors for Clean Water Act, 2006. Inconsistent italics used throughout. • Page 8-3 duplication: The annual progress report and supplemental form. The annual progress reports and supplemental form rely on several sources for information. • The SPP (Volume 1, Page 2) and AR (Page 2) indicate that amendments were made using the 2021 Director's Technical Rules. Please revise any to reference the 2021 version as just the '2021 Technical Rules'.	Consistent formatting used for Clean Water Act, 2006". Duplication on page 8-3, Volume 1, removed. "Director" removed from the "2021 Technical Rules", as requested, in the AR and SPP.