

# BACKGROUND **REPORT**

SOURCE PROTECTION PLAN IMPLEMENTATION

## ELGIN COUNTY

Date:

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Prepared for:

**Elgin County**

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Our File 1491B

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# 1.0

## INTRODUCTION

MHBC Planning has been retained by Elgin County to assist in the implementation of Source Protection Plan (SPP) policies through the preparation of new policy text that will form the basis of future amendments to the County Official Plan and to the Official Plans and Zoning By-laws of lower-tier municipalities that have municipal drinking water systems that are regulated by a Source Protection Plan. As part of this undertaking, mapping to implement the policies of the Source Protection Plans applicable to the County and relevant local municipalities will be prepared. Zoning regulations and mapping will also be prepared for relevant local municipalities to implement the SPP and related Official Plan policy frameworks.

The following four (4) Source Protection Plans apply within Elgin County:

- Kettle Creek Source Protection Plan;
- Long Point Region Source Protection Plan;
- Thames, Sydenham & Region Source Protection Plan; and
- Catfish Creek Source Protection Plan.

There are three (3) municipal drinking water systems regulated by a Source Protection Plan located within Elgin County as follows:

<b>Central Elgin</b>	Belmond (2 wells)
	Lake Erie Intake
<b>Bayham</b>	Richmond (2 wells)

These municipal drinking water systems are owned and operated by the local municipalities and are regulated by either the Kettle Creek or Long Point Region Source Protection Plan.

The WHPA-C associated with the Richmond well and the WHPA-C associated with the Belmont well extends into the Township of Malahide. Malahide therefore has two WHPA-Cs associated with municipal wells located outside their municipal boundary. Each WHPA is regulated by a different SPP.

The Thames, Sydenham and Region and Catfish Creek Source Protection Plans do not regulate any drinking water systems within the County.

The preparation of a general water resources policy framework is also included as part of this work to ensure Official Plans of all lower-tier municipalities contain a broad policy approach for the protection, restoration and maintenance of water resources consistent with the Provincial Policy Statement, 2014.

The County will be undertaking SPP implementation in conjunction with its upcoming 5-year Official Plan Review required under Section 26 of the *Planning Act*. Lower-tier municipalities will be implementing new SPP and general water resources policies through either their upcoming Official Plan Reviews or as stand-alone amendments. As such, the purpose of this Background Report is to provide:

- a general overview of Source Protection Planning;
- the Source Protection Plan policies to be implemented through Official Plan policy, and subsequent Zoning By-laws (where applicable);
- a review of existing water resource/source water protection policies in the Official Plans of the County and lower-tier municipalities;
- a comparative analysis of Source Protection Plan and Official Plan policies;
- a comparative analysis of existing water resource policies in lower-tier municipal Official Plans;
- policy implementation options and recommendations for the source water policy framework of the County and lower-tier municipal Official Plans, taking into consideration requirements under the *Clean Water Act*, the applicable Source Protection Plans and the scope of the County Official Plan in comparison to local municipal Official Plans;
- zoning implementation options and recommendations for the Zoning By-laws of Central Elgin, Bayham and Malahide, based on the Official Plan policy implementation options; and
- a recommended general water resource policy framework for inclusion in all lower-tier municipal Official Plans.

The recommendations contained in this report will form the basis of the draft Source Water Protection policy framework of the Elgin County, Central Elgin, Bayham and Malahide Official Plans, draft text of the Central Elgin, Bayham and Malahide Zoning By-laws, and also as a general water resources policy framework for inclusion in the Official Plans of all local municipalities.

# 2.0

## LEGISLATIVE & PROVINCIAL POLICY FRAMEWORK

### 2.1 The Clean Water Act, 2006 & Purpose of Source Protection Plans

The *Clean Water Act, 2006* (the “Act”) came into effect on July 3, 2007 and is intended to ensure the protection of municipal drinking water sources from rivers, lakes and groundwater, and subsequently human health and the environment. The Act sets out a risk-based process, on a watershed basis, to identify vulnerable areas and associated drinking water threats and issues through the preparation of Assessment reports, and the subsequent development of policies and programs to eliminate or reduce the risks posed by identified drinking water threats through the preparation of Source Protection Plans. This process is implemented on a watershed basis and involves a risk-based assessment approach to identify vulnerable areas and associated drinking water threats through the preparation of Assessment Reports. Assessment Reports form the scientific and technical foundation for the development of policies and programs to eliminate or reduce the risks posed by identified drinking water threats through the preparation of Source Protection Plans.

The Act divides southern Ontario and parts of Northern Ontario into 19 Source Protection Regions, which are further divided into 38 Source Protection Areas for the purposes of preparing Assessment Reports and Source Protection Plans. As shown in the table below, Elgin County is located within two Source Protection Regions, five Source Protection Areas and subject to four Source Protection Plans.

Source Protection Region	Source Protection Area	Source Protection Plan
Lake Erie	Kettle Creek Source Protection Area	Kettle Creek
	Long Point Region Source Protection Area	Long Point Region
	Catfish Creek Source Protection Area	Catfish Creek
Thames - Sydenham	Lower Thames Valley Source Protection Area	Thames Sydenham and Region
	Upper Thames River Source Protection Area	

Source Protection Plan areas in Elgin County are illustrated in **Figure 1**.

The overall objective of Source Protection Plans under Section 22(2) of the *Act* is to ensure that, for every area identified in an Assessment Report as an area where an activity is or would be a significant drinking water threat; the activity never becomes a significant drinking water threat. In the event the activity is occurring when the Source Protection Plan takes effect, policies of the Source Protection plan ensure that the activity ceases to be a significant drinking water threat. Drinking water threats are an activity or condition that adversely affects, or has the potential to adversely affect the quality or quantity of any water that is, or may be used, as a source of drinking water. Drinking water threats are prescribed by Regulations under the *Act*. Assessment Reports identify those drinking water threats that pose, or have the potential to pose, a significant threat to drinking water sources.

Drinking water threats may only be significant in *vulnerable areas*, which are defined by O.Reg 287/07 of the *Act* as follows:

- **Wellhead Protection Area (WHPA):** an area that is related to a wellhead and within which it is desirable to regulate and monitor drinking water threats.
- **Intake Protection Zone (IPZ):** in reference to a surface water intake protection zone. A surface water intake protection zone means an area that is related to surface water intake and within which it is desirable to regulate or monitor drinking water threats.
- **Highly Vulnerable Aquifer (HVA):** an aquifer on which external sources have or are likely to have a significant adverse effect, and include the land above the aquifer.
- **Significant Groundwater Recharge Area (SGRA):** an area within which it is desirable to regulate or monitor drinking water threats that may affect the recharge of an aquifer.

Vulnerable areas are identified through the preparation of Assessment Reports.

With respect to land use planning, the *Act* provides direction on planning decisions within Source Protection areas where a Source Protection Plan has taken effect. Under Section 39(1), a decision under the *Planning Act* or the *Condominium Act, 1998* shall conform to the significant threat policies and designated Great Lakes policies set out in the Source Protection Plan and have regard to other policies set out in the Source Protection Plan. In the case of conflict between the policies of the Source Protection Plan and Official Plans and Zoning By-laws, Source Protection Plan policies shall prevail as per Section 39(2) of the *Act*. In the case of conflict between the policies of the Source Protection Plan and those of a policy statement issued under Section 3 of the *Planning Act*, the policy that provides the greatest protection to the quality and quantity of any water that is or may be used as a source of drinking water prevails.

Sections 40 and 42 of the *Act* require the council of a municipality or municipal planning authority to amend its Official Plan and Zoning By-law to conform to the significant threat policies and designated Great Lakes policies set out in the Source Protection Plan. As such, **amending Official Plans and Zoning By-laws to conform to Source Protection Plan significant threat policies is not voluntary under the *Clean Water Act, 2006*.**



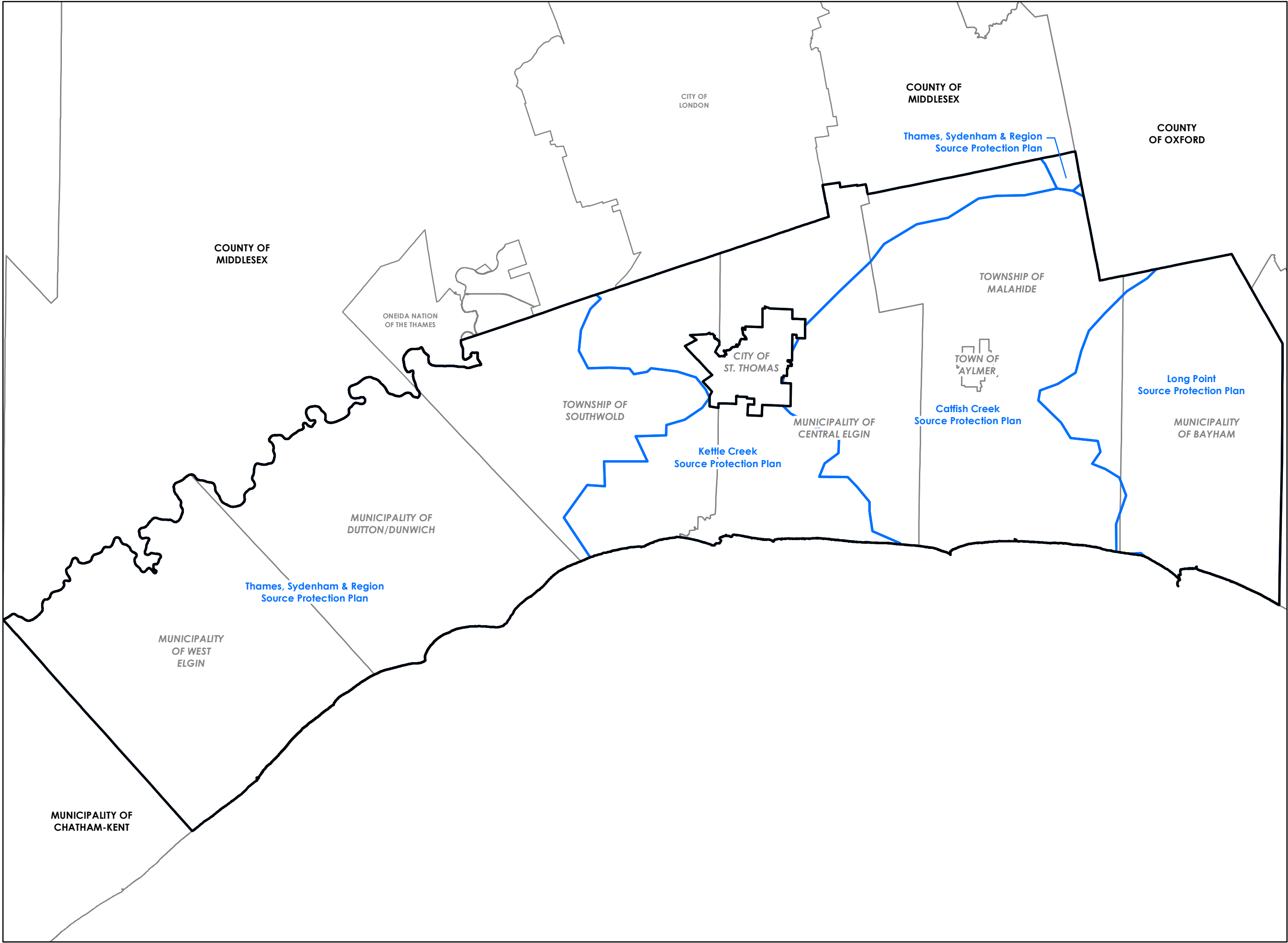


Figure 1

**Source Protection Plan  
Areas -  
Elgin County**

**Legend**

- County of Elgin
- Source Water Protection Plan

Source: GRCA - Oct. 2011

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## 2.2 Provincial Policy Statement, 2014

Vulnerable areas identified in Assessment Reports and as defined in the *Clean Water Act* are *designated vulnerable areas* as defined in the Provincial Policy Statement, 2014 (PPS). Policy 2.2.1 of the PPS states the following:

2.2.1 *Planning authorities shall protect, improve or restore the quality and quantity of water by:*

*...e. implementing necessary restrictions on development and site alteration to:*

1. *protect all municipal drinking water supplies and designated vulnerable areas; and*
2. *protect, improve, restore vulnerable surface and groundwater, sensitive surface water features, and sensitive groundwater features, and their hydrologic functions;...*

To be consistent with the PPS, planning decisions, such as the implementation of Source Protection Plans through amendments to municipal Official Plans and Zoning By-laws, should take into consideration information from the local Assessment Report. While a planning decision to protect drinking water sources could still be appealed to the Ontario Municipal Board, the Assessment Report can be used to support decisions to restrict new uses in vulnerable areas. Section 39(1) of the *Clean Water Act* also requires decisions of the Ontario Municipal Board to conform to the policies of the Source Protection Plan.

**The Provincial Policy Statement, 2014 gives municipalities the authority to protect, improve and restore the quality and quantity of water resources.**

# 3.0

## UNDERSTANDING SOURCE PROTECTION PLANS

The County and the local municipalities of Central Elgin, Bayham and Malahide are subject to policies of the Kettle Creek Source Protection Plan ("Kettle Creek SPP"), the Long Point Region Source Protection Plan ("Long Point SPP") and the Thames Sydenham and Region Source Protection Plan ("TSR SPP"). Municipal drinking water sources in the County that are regulated by Source Protection Plans include Wellhead Protection Areas (WHPAs) and Intake Protection Zones (IPZs) for the following systems:

- **Kettle Creek SPP:** Belmont WHPA (Central Elgin)  
Lake Erie IPZ (Central Elgin)
- **Long Point SPP:** Richmond WHPA (Bayham)

While drinking water systems within Malahide are not regulated by an SPP, the WHPA-C associated with the Richmond Well and the WHPA-C associated with the Belmont Well extend into the Township of Malahide. The Township therefore has a portion of two WHPAs associated with municipal wells located outside their municipal boundary. Each WHPA is regulated by a different SPP as noted above.

The TSR maps Highly Vulnerable Aquifers (HVAs) and portions of Significant Groundwater Recharge Areas (SGRAs) that are located within the County. The Kettle Creek and Long Point Region SPPs do not map these specific vulnerable areas.

### 3.1 Vulnerable Areas in Elgin

#### **3.1.1 WHPA Delineation and Vulnerability**

A Wellhead Protection Area is an area that is related to a wellhead and within which land use activities have the potential to affect the quality and quantity of groundwater that flows into the well. Generally, WHPAs are modelled based on two factors – the time related capture zones of each well and the vulnerability of the aquifer. The time related capture zones for wells located within the County include the following:

- a 100-metre radius surrounding the well (WHPA-A);
- a 2 year travel time for water to enter the well (WHPA-B);
- a 5 year travel time for water to enter the well (WHPA-C); and
- a 25 year travel time for water to enter the well (WHPA-D).

The “travel time” relates to the time it takes a particle of water already in the aquifer to reach the well.

The vulnerability of a WHPA is defined by the “vulnerability score”, with vulnerability being related to how easily a source of water can become contaminated. The vulnerability score is a function of the surficial geology underlying the WHPA. The vulnerability score of a WHPA can range from 1 to 10, with 10 being the most vulnerable. WHPAs that are considered to be the most vulnerable to certain land uses and activities are assigned a vulnerability score of 8 to 10, with the degree of vulnerability generally decreasing the further away from the wellhead. WHPA-As are the most vulnerable areas surrounding a well and are always assigned a vulnerability score of 10. The vulnerability score is used, together with the Table of Drinking Water Threats published by the Ministry of Environment and Climate Change, to determine whether a drinking water threat is significant, moderate or low.

**Figure 2** illustrates the extent and vulnerability of WHPAs identified in the Kettle Creek and Long Point Region SPPs.

WHPA-D areas are not mapped in Source Protection Plans as there are no significant drinking water threats that can occur in WHPA-D areas, based on their low vulnerability.

### **3.1.2 Intake Protection Zones (IPZs)**

IPZs are the area around a municipal surface water intake within which a spill or leak may enter the intake too quickly prior to implementing measures to prevent pollutants from entering the municipal water system.

Similar to WHPAs, the vulnerability of an IPZ is also defined by a vulnerability score. IPZs that are considered to be the most vulnerable are assigned a vulnerability score of 8 to 10. The vulnerability score is used, together with the Table of Drinking Water Threats published by the Ministry of Environment and Climate Change, to determine whether a drinking water threat is significant, moderate or low.

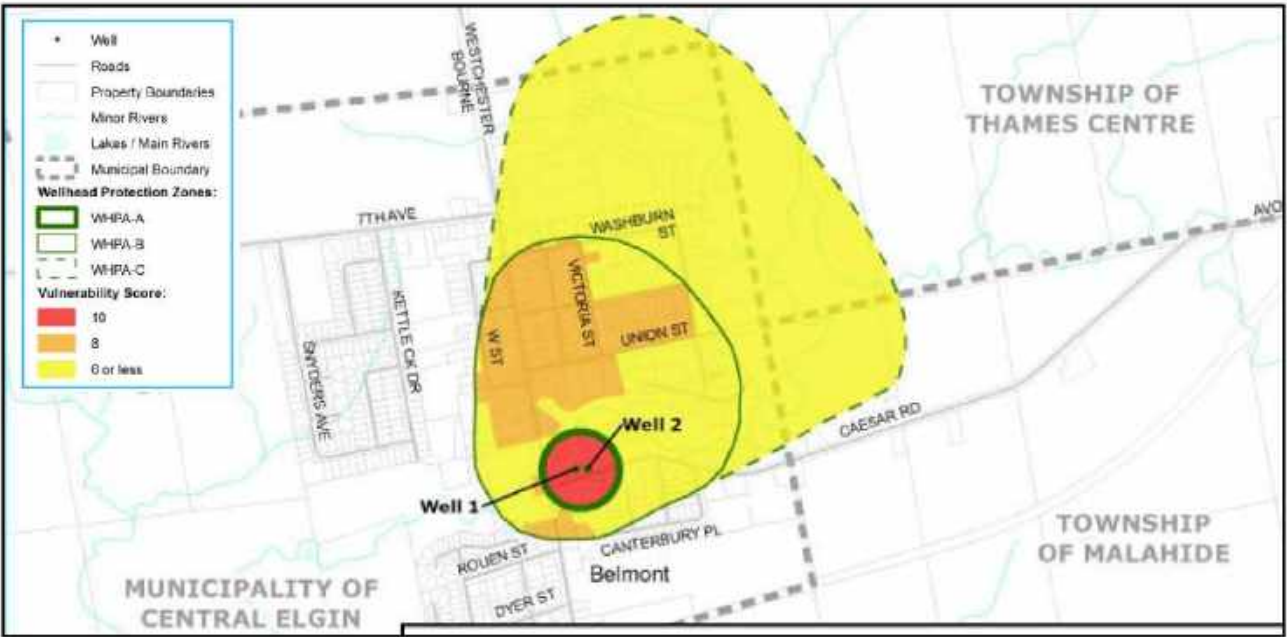
**Figure 3** illustrates the extent of the Elgin Primary Intake Protection Zone identified in the Kettle Creek SPP.

### **3.1.3 Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs)**

HVAs are an aquifer upon which external sources have or are likely to have a significant adverse effect, and include the land above the aquifer. SGRAs are a specific type of vulnerable area, which have a hydrologic connection to a surface body of water or an aquifer that is a source for a municipal drinking water system.

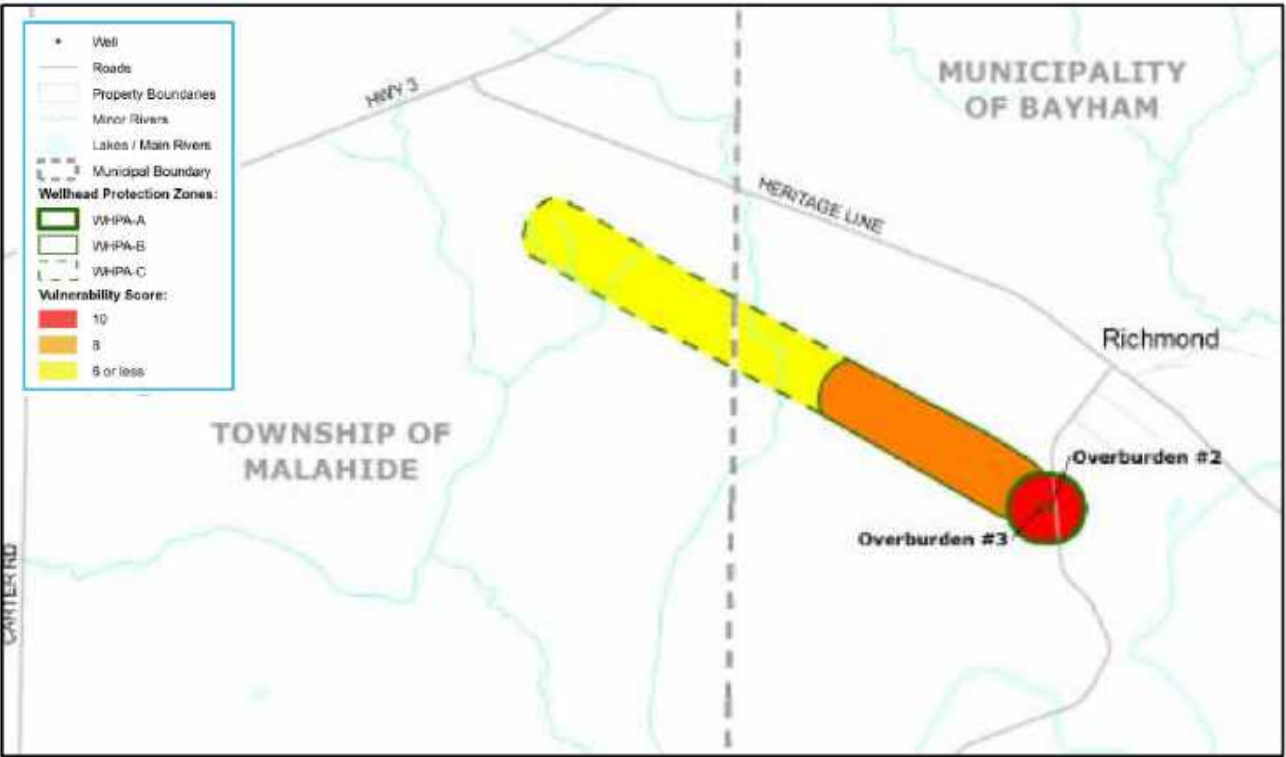
Similar to WHPAs, the vulnerability of an HVA or SGRA is defined by a vulnerability score, with vulnerability being related to how easily the source of water can become contaminated with a hazardous material. Under the Technical Rules prescribed by the *Clean Water Act*, HVAs located outside of WHPAs are assigned a vulnerability score of 6 (moderate vulnerability). SGRAs that overlay with HVAs are assigned a vulnerability score of 6 under the Technical Rules. All remaining SGRAs are assigned a vulnerability of 2 or 4 (low vulnerability).

HVAs and SGRAs cannot be classified as highly vulnerable areas under the *Clean Water Act*.



Belmont WHPA as Identified in Kettle Creek SPP

The Belmont WHPA contains two wells and is located within the Village of Belmont. Community and Emergency Service uses (i.e. Belmont Community Park and Central Elgin Fire Station No. 4) are located within the WHPA-A. Commercial and residential uses are located within the WHPA-B. The WHPA-C area extends into the Township of Malahide as well as the Township of Thames Centre, which is located in Middlesex County. The WHPA-C outside of Central Elgin is characterized by agricultural uses.



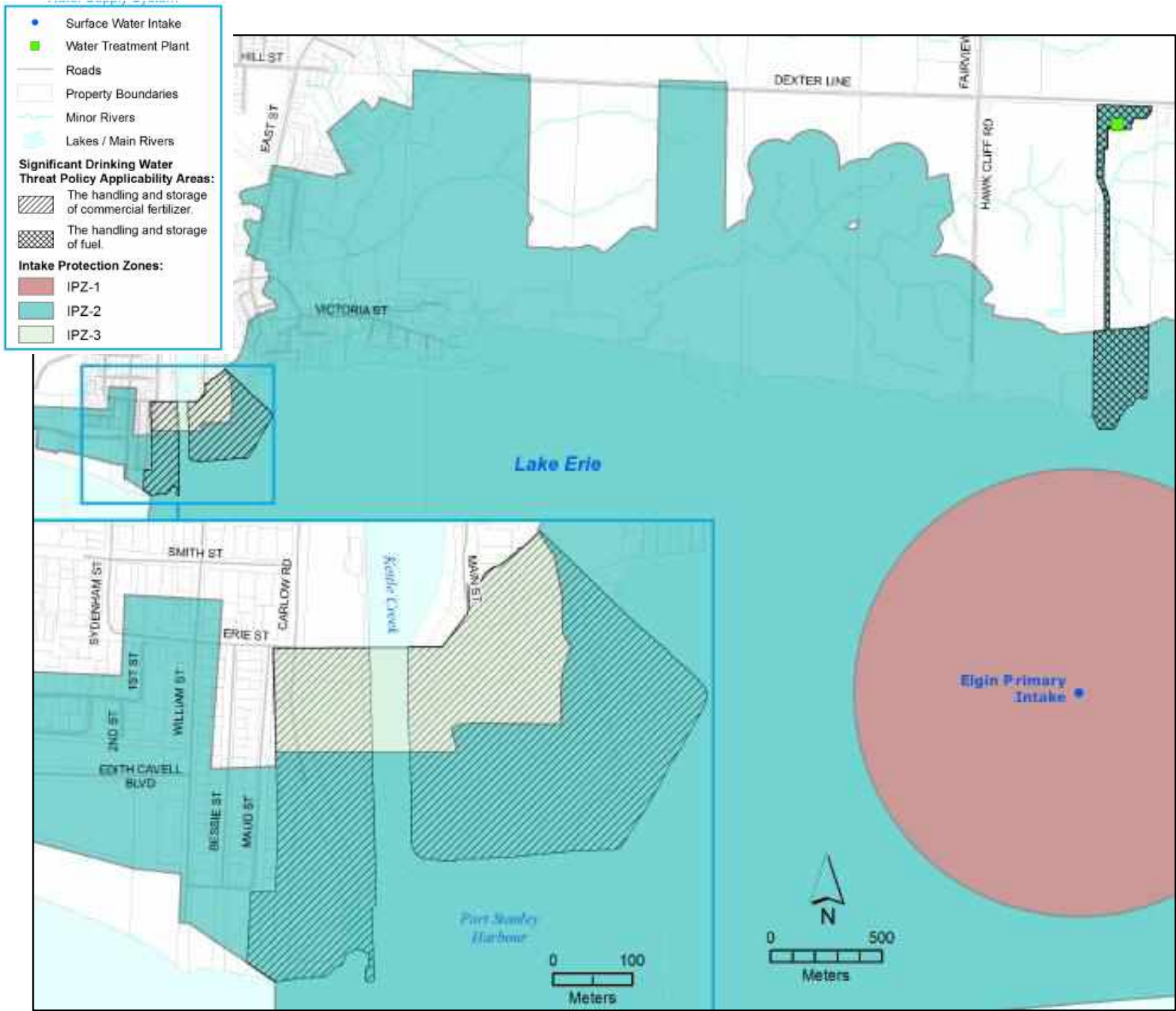
Richmond WHPA as Identified in Long Point SPP

The Richmond WHPA is comprised of two wells and is located on the southern edge of the Village of Richmond. The WHPA is generally compact and is characterized primarily by agricultural uses. The WHPA-C extends into the Township of Malahide. Malahide therefore contains a portion of the WHPA-C areas associated with both the Richmond and Belmont well.





Figure 3  
Intake Protection Zones  
Elgin County



Elgin Area Primary (Lake Erie) Intake as Identified in Kettle Creek SPP

The Elgin Area Primary Intake is located in Lake Erie, 1,200 metres offshore. The IPZ-1 is defined as the 1000 metre radius centred on the crib of the intake and in the case of the Elgin Area IPZ, does not reach the shoreline. The Kettle Creek Assessment Report determined the vulnerability of the IPZ-1 is moderate given the depth of the intake, its removed location from the shoreline, and few water quality concerns were identified at the intake. The IPZ-2 was assigned a low vulnerability in the Assessment Report. The handling and storage of significant amounts of commercial fertilizer and fuel (5,000 cubic metres and 6,000 litres, respectively) is prohibited within certain areas of the IPZ-2 and shoreline of Kettle Creek near Port Stanley Harbour.

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Similar to WHPAs, HVAs and SGRAs are initially mapped and evaluated in the Assessment Report. The TSR SPP maps HVAs and SGRAs with a vulnerability of 6 in Elgin County as illustrated in **Figure 4**. HVAs and SGRAs are located in all lower-tier municipalities, not just those with municipal drinking water systems.

The Kettle Creek and Long Point Region SPPs do not map HVAs and SGRAs.

## 3.2 Prescribed Drinking Water Threat Activities & Significance

Land use activities which may pose a drinking water threat to municipal water supplies are defined by the *Clean Water Act* as an activity or condition that adversely affects, or has the potential to adversely affect, the quality and quantity of any water that is or may be used as a source or drinking water. Drinking water threat activities are prescribed by Ontario Regulation 287/07 of the *Clean Water Act* and include the following:

1. Waste disposal sites within the meaning of Part V of the Environmental Protection Act.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid (DNAPL).
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.

Threats 1 to 18 and 21 are threats to water *quality*, whereas threats 19 and 20 relate to water *quantity*. The significance of a prescribed drinking water threat activity listed above depends on the characteristics of the activity and where the activity is occurring within a vulnerable area (i.e. WHPA or IPZ). The vulnerability score is used, together with a Table of Drinking Water Threats published by the Ministry of

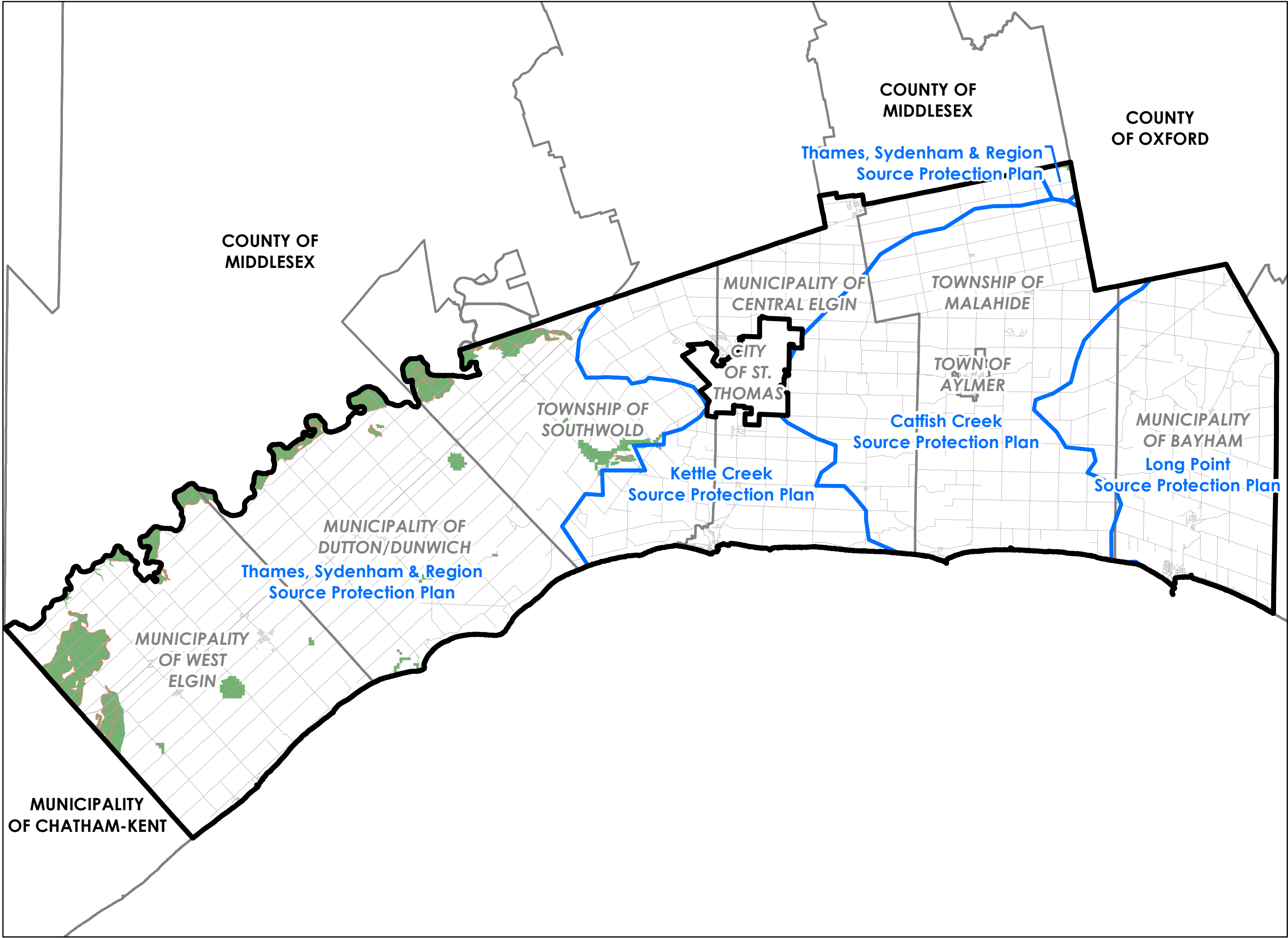


Figure 4

**HVAs and SGRAs in the  
Thames Sydenham and  
Region Source Protection  
Plan**

- Legend**
- Elgin County
  - Source Water Protection Plan
  - SGRAs
  - HVAs

**Note:**  
The HVAs and SGRAs as identified  
in this figure are referred to as  
"Moderate and Low Threat Policy  
Applicability Area" in the Source  
Protection Plan

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SCALE: 1:250,000





Environment and Climate Change, to determine whether a drinking water threat is either significant, moderate, or low. Significant drinking water threat activities most often occur closest to the wellhead (i.e. in WHPA-A and –B areas) or intake, with the highest vulnerability (i.e. vulnerability score of 8 to 10).

Drinking water threat activities cannot be classified as significant in HVAs or SGRAs and instead may only be classified as moderate or low threats.

### 3.3 Source Protection Plan Policies

With respect to WHPAs, the Long Point Region and Kettle Creek SPPs employ a range of policy tools enabled under the *Clean Water Act* to protect municipal drinking water systems. Given these policy tools have varying levels of restriction, they can be categorized as Regulatory or Non-Regulatory. The policies in the SPPs apply to prescribed activities that are deemed significant drinking water threats through the preparation of Assessment Reports.

The SPPs generally have the same conformity requirements and require municipalities to amend Official Plans and Zoning By-laws to:

- Identify the vulnerable areas in which a significant drinking water threat can occur;
- Identify the *significant* drinking water threats and require that any use or activity that is, or would be, a significant drinking water threat, conform to all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by the policies contained in the Source Protection Plan; and
- Incorporate any other amendments required to conform to the threat-specific *land use* policies identified in the SPP.

Considering the conformity requirements of the *Clean Water Act, 2006*, and applicable SPPs, amendments to municipal Official Plans and Zoning By-laws to implement Source Protection policies are generally concerned with the following **regulatory** policies of the Source Protection Plans:

- **Section 57 (Prohibition) Policies:** under Part IV of the *Clean Water Act*, these policies prohibit existing and future activities that pose a significant threat to drinking water sources.
- **Section 58 (Risk Management Plan) Policies:** under Part IV of the *Clean Water Act*, these policies regulate existing and future activities through a Risk Management Plan. Risk Management Plans are to be negotiated between a Risk Management Official and a land owner. A Risk Management Plan may be imposed by a Risk Management Official where an agreement cannot be reached. Risk Management Plans are used to ensure that threats to drinking water sources do not become significant.
- **Section 59 (Restricted Land Uses) Policies:** under Part IV of the *Clean Water Act*, this policy tool is intended to function as a screening tool in order to ensure that activities do not occur within a specified area that have the potential to result in a significant drinking water threat.
- **Land Use Planning Approval Policies:** land use planning tools issued under the *Planning Act* and *Condominium Act* can be used to prohibit or regulate land uses. Land use planning policies of a Source Protection Plan must be implemented through Official Plans and in some cases, Zoning By-laws, as specified by the Source Protection Plan.

Source Protection Plans also use Prescribed Instrument policies, which are regulatory, as well as Specify Action policies, which can be regulatory. Furthermore, 'Education and Outreach', 'Incentive', and 'Monitoring' policies are the non-regulatory policies included in Source Protection Plans to address significant drinking water threats. The non-regulatory policies are not mandatory for inclusion in the Official Plan under the *Clean Water Act, 2006*.

The TSR SPP also includes "Moderate and Low" threat policies that apply to HVAs and SGRAs. These policies are only recommendations and do not have any legal effect under the *Clean Water Act* requiring municipalities, property owners and other implementing bodies to comply. However, when included in an SPP, implementing bodies, such as municipalities, should have regard for Moderate and Low threat policies. Moderate and Low threat policies are not required for inclusion in Official Plans or Zoning By-laws.

### 3.4 Purpose of Official Plan & Zoning By-law Amendments

Elgin County is a two-tier municipality with in-effect Official Plans at the County and local municipal levels. The Elgin County Official Plan establishes a broad upper-tier land use policy framework that provides guidance to local municipalities in the preparation of local Official Plans and Zoning By-laws. As such, the County Official Plan does not duplicate the policies of the lower-tier Official Plan. Local Official Plans therefore implement the policy guidance of the County Official Plan by providing more detailed strategies, policies and land use designations for planning and development at the local level.

Considering the role and function of the County and local Official Plans, the requirements of the *Clean Water Act*, and the relevant policies of the Long Point and Kettle Creek SPPs, the policy of the draft Official Plan Amendments to implement Source Protection Plans **will need to address** the following:

For the County –

- Include mapping that identifies Source Protection Plan areas that apply within the County;
- Provide a general policy framework related to source water protection; and
- Provide the direction for amendments to local municipal officials plans to implement SPP significant threat policies.

For Central Elgin, Bayham and Malahide Official Plans –

- Include mapping that identifies the vulnerable areas (WHPAs and IPZs) where the prescribed drinking water threats would be significant;
- Conformity to the significant threat policies of the Source Protection Plans, including an indication that within vulnerable areas, any use or activity that is, or would be, a significant drinking water threat is required to conform to all applicable Source Protection Plan policies and, as such, may be prohibited, restricted, or otherwise regulated by those policies.

Consideration will also be given to the moderate and low threat policies of the TSR SPP given HVAs and SGRAs are included in the definition of "vulnerable areas" under the Provincial Policy Statement, 2014.

Based on the above, the implementing Official Plan Amendment policy frameworks for the lower-tier municipalities will primarily address the significant threat policies of the SPPs described in Section 3.3 of this Report, whereas the amendment to the County Official Plan will contain general or 'directive' policies that outline how lower-tier Official Plans shall be amended to implement Source Protection Plan policies.

Amendments to the local municipal Zoning By-laws will implement the Official Plan Amendments to meet the conformity requirements of the SPPs.

Each Source Protection Plan identifies timelines in which Official Plans and Zoning By-laws must be amended to conform to the significant threat policies of that SPP. The timelines for amendments to implement the SPPs applicable to Elgin County are as follows:

SPP	Municipality	OP Conformity	ZBL Conformity
Kettle Creek (effective 01/01/15)	Central Elgin	5 years from effective date or next OP Review (01/01/20)	5 years from effective date or next conformity exercise (01/01/20)
	Malahide		
Long Point Region (effective 07/01/16)	Bayham	5 years from effective date or next OP review (07/01/21)	3 years from passing of implementing OPA/OP
	Malahide		
Thames, Sydenham & Region (effective 12/31/15)	Does not regulate any drinking water systems	3 years from effective date or next OP Review, whichever is first (12/31/18)	3 years from passing of implementing OPA/OP
Catfish Creek (effective 01/01/15)	Does not regulate any drinking water systems	5 years from effective date or next OP review (01/01/20)	2 years from passing of OP conformity amendment

# 4.0

## ANALYSIS & OPTIONS FOR THE OPA FRAMEWORKS

The policy structure and framework for the Official Plan amendments will need to consider the *Clean Water Act* Section 57, 58 and 59 and land use policies of both Source Protection Plans, the current policies of the Official Plan that is being amended, and the function of the Official Plan document (County Official Plan vs. Local Official Plan). Consideration is also given to moderate and low threat policies of the TSR SPP as HVAs and SGRAs are identified as “vulnerable areas” in the Provincial Policy Statement, 2014.

The following provides a review of the relevant policies of the SPPs, County and Local Municipal Official Plans, and an analysis of available policy implementation options that form the basis of the policy recommendations in Section 6 of this report.

### 4.1 Section 57 and 58 Policies

The Kettle Creek and Long Point Region SPPs identify those existing and future uses and activities that are either prohibited or regulated (require Risk Management Plans) based on the degree of vulnerability of WHPAs within the County. Only future threat policies were reviewed as these are the only policies that can be regulated and/or managed through land use planning tools such as the Official Plan. The charts contained in **Appendix A** illustrate the application of the Section 57 and 58 policies (and other regulatory tools) in the Kettle Creek and Long Point Region SPPs for future threats by vulnerable area to which they apply (i.e. WHPA-A, WHPA-B v.10, WHPA-B v.8, etc.). The following conclusions were drawn from the Section 57 and 58 policy analysis:

- The greatest range of threats regulated by Section 57 or 58 are in WHPA-A, which is the most vulnerable area in the Source Protection Plan.
- There are differences in Section 57 (Prohibit) applications to significant threats in WHPA-A between the two SPPs, with some prohibitions relying on prescribed instruments.
- For some threats, one SPP prohibits the activity while the other requires a risk management plan or other form of management (i.e. pesticide application, livestock grazing/pasturing, storage/handling of road salt, septic systems).
- The Kettle Creek SPP applies Section 57 or 58 to majority of threats in WHPA-A, whereas the Long Point SPP does not.
- A limited number of threats are regulated by Section 57 or 58 in the less vulnerable areas (i.e. WHPA-B v.8 and v.6, WHPA-C).

- There is a difference in the application of Section 57 and 58 with respect to DNAPLs in WHPA-C between the Kettle Creek and Long Point Region SPPs.

Where the comparison is important is for the Township of Malahide, which has WHPA-C v.6 areas for two wells, each of which are regulated by a different SPP. As noted in the WHPA-C v.6 table in **Appendix A**, the storage and handling of DNAPLs is prohibited in WHPA-C areas under the Kettle Creek SPP, whereas the activity only requires an RMP in the same vulnerable area under the Long Point Region SPP.

**Section 57 and 58 policies must be implemented through Official Plans and Zoning By-laws.**

## 4.2 Section 59 Policy

Each SPP contains a *Restricted Land Uses (RLU)* that applies within vulnerable areas and requires the issuance of a written Notice from the Risk Management Official prior to approval of any Building Permit, *Planning Act*, or *Condominium Act* application. The policy is intended to function as a screening tool in order to ensure that activities do not occur within a specified area that have the potential to result in a significant threat, allowing for development applications to be reviewed by a Risk Management Official prior to being approved by the planning or building authority. As such a Section 59 Notice is required from the Risk Management Official before a planning or building application can be approved. The RLU Policy was developed to integrate the issuance of the Section 59 Notice with the existing review functions of a municipal planning or building department.

The Restricted Land Use Policy of the Long Point Region SPP excludes residential uses from requiring a Section 59 Notice. In contrast, the Kettle Creek RLU policy designates all land uses as Restricted Land Uses and requires a Section 59 Notice prior to any building permit or *Planning Act* approval. This distinction between the Kettle Creek and Long Point Region SPPs will need to be addressed in the Malahide Official Plan.

The Section 59 Policy does not apply to HVAs and SGRAs. **The Section 59 Policy must be implemented through Official Plans and Zoning By-laws.**

## 4.3 Land Use Planning Policies

There are three (3) land use policies that apply within the County from the applicable SPPs. These policies are contained in the Long Point Region SPP and apply to WHPA-A areas involve septic systems and the storage/handling of road salt. These policies are as follows:

- EC-MC-3.2** To ensure that any replacement or new septic system and/or holding tank, with a design flow of less than or equal to 10,000 Litres per day and subject to approval under the *Ontario Building Code Act* or the *Ontario Water Resources Act*, never becomes a significant drinking water threat, the Municipality shall amend their Official Plan and Zoning By-law to direct land uses relying on these activities to a location on the same property where these activities would not be a significant drinking water threat.
- EC-MC-3.4:** To ensure that the establishment of a new septic system and/or holding tank with a design flow of greater than 10,000 Litres per day and regulated under the *Ontario Water Resources Act*, never becomes a significant drinking water threat, where this activity would be a significant drinking water threat, the Municipality shall amend their Official

Plan and Zoning By-law to prohibit new development which relies on this type of on-site sewage system.

- EC-MC-11.1:** To ensure that the future handling and storage of road salt never becomes a significant drinking water threat, where such activities would be significant drinking water threats, future road salt storage facilities, where permitted by the Official Plan and Zoning By-law, will only be permitted if the road salt is contained in covered roof storage facilities and a salt impact assessment and/or salt management plan has been completed to the satisfaction of the Municipality.

The Kettle Creek SPP does not contain any Land Use Planning policies.

**The Land Use Policies must be implemented through Official Plans and Zoning By-laws.**

## 4.4 Discretionary and Moderate & Low Threat Policies

SPPs include non-regulatory (discretionary) policies related to education and outreach, incentives, specific actions and monitoring. These are discretionary policies that are part of the SPP but have no legal effect and are not required for implementation through Official Plans and Zoning By-laws. However, some discretionary policies may complement existing Official Plan policy frameworks and can be related to best management practices, specific land use matters and considerations, and stewardship efforts. These policies should be considered for inclusion in the Official Plans of lower-tier municipalities with municipal drinking water systems.

The Long Point Region SPP contains the following discretionary policies:

- **Policy EC-CW-1.5:** Municipality may develop and implement education and outreach programs directed at any, or all, significant drinking water threat activities where such programs are deemed necessary and/or appropriate.
- **Policy EC-NB-1.6:** In Bayham and Malahide, ensure that spill prevention plans, contingency plans and emergency response plans are updated for the purpose of protecting drinking water sources with respect to spills that occur within a wellhead protection area along highways, railway lines or shipping lanes.
- **Policy EC-NB-1.17:** Municipality is requested to support ongoing programs which encourage the decommissioning of abandoned wells where such activities could be a significant drinking water threat.
- **Policy EC-CW-3.1:** Municipality shall implement an on-site sewage system maintenance inspection program, as required under the *Building Code Act*.

The Kettle Creek SPP contains the following discretionary policies:

- **Policy KCSPPA-NB-1.15:** Central Elgin, Thames Centre and Malahide should review and update Emergency Management Plans as necessary to identify vulnerable areas and include requirements to contain firefighting run off and responses to spills from septic haulage, highway accidents and railway derailments.

The TSR SPP also includes moderate and low threat policies. These policies address activities that have been identified as moderate or low threats within vulnerable areas, including HVAs and SGRAs. These

policies are optional for inclusion in Source Protection Plans under the *Clean Water Act*, and are not required for implementation through amendments to Official Plans and Zoning By-laws. However, if moderate and low threat policies are included in a Source Protection Plan, implementing bodies should have regard to these policies.

Like discretionary policies, some moderate and low threat policies may complement existing Official Plan policy frameworks and can be related to best management practices, specific land use matters and considerations, and stewardship efforts, and could be considered for inclusion in the Official Plans of lower-tier municipalities with municipal drinking water systems.

The TSR SPP contains moderate and low threat policies related to the following:

- Under the authority of the Ontario Building Code, the local approval agency of septic systems should consider including these systems as part of the discretionary sewage system maintenance inspection program, with priority given to areas where septic systems are known to fail and where older systems predominate (Policy 3.01).
- The Ministry of Environment should consider reviewing and, if necessary, amending Pesticide Permits under the *Pesticides Act*, to incorporate conditions to address the protection of municipal drinking water sources where the application of pesticides is or would be a low or moderate drinking water threat (Policy 3.02).
- To reduce the risk to municipal drinking water sources from new activities that would be subject to one or more Prescribed Instruments [i.e. Nutrient Management Plan, Pesticide Permit, Environmental Compliance Approval, etc.] in an area where the activity would be a moderate or low drinking water threat, the province should consider incorporating terms and conditions that, when implemented, should manage the activity such that it does not become a significant drinking water threat (Policy 3.03).

The discretionary and moderate and low threat policies apply to a range of significant drinking water threats and utilize a variety of tools available under the *Clean Water Act*, such as monitoring and prescribed instruments (ECAs). It is important to note the difference in the responsible implementing body between the two sets of policies – municipalities are generally the implementing body for the discretionary policies, whereas the majority of the moderate and low threat policies are to be implemented by provincial ministries and *not* the municipality. This will be considered in the policy implementation analysis contained in Section 4.6 of this Report.

## 4.5 Upper and Lower-Tier Official Plans

### 4.5.1 County of Elgin Official Plan

Generally, the purpose of the County of Elgin Official Plan is to establish an upper-tier policy framework that provides guidance to the preparation of local municipal Official Plans and Zoning By-laws. Section D2.2 of the Official Plan contains the policy framework related to the improvement, protection and restoration of water resources within the County. These policies reflect those of Section 2.2 of the Provincial Policy Statement, 2014 and require local municipalities protect, improve or restore the quality and quantity of water through a variety of means, including:

- Minimizing potential negative impacts on water resources;

- Identifying water features and functions and maintaining linkages between them;
- Promoting efficient and sustainable use of water resources; and
- Utilizing stormwater management best practices, and low impact development stormwater strategies and practices.

Section D2.3 restricts development and site alteration in or near sensitive surface and groundwater features to protect their hydrologic function, and requires the use of mitigative measures as needed to protect, improve or restore water resources. The preparation of Source Protection Plans is noted in Section D2, indicating that relevant policies and mapping of Source protection Plans will be implemented by a future amendment to the Official Plan.

Other related policies in the County Official Plan include the following:

- Section E4 – Sanitary Sewers and Water: contains high-level policies regarding the improvement of existing systems, accommodating development on full services, monitoring and maintenance of private sewage systems, water conservation measures, correction of failed systems.
- Glossary – ‘groundwater’, ‘hydrologic functions’, and ‘surface water features’ are defined terms in the Official Plan.

#### **4.5.2 Official Plan of the Municipality of Central Elgin**

Section 3.3.3 of the Municipality of Central Elgin Official Plan provides the policy framework for source water protection. The policies of this section generally describe the following:

- the Source Protection planning process;
- vulnerable areas within the municipality, being the Belmont WHPA and Lake Erie IPZ; and
- the need to amend the Official Plan when Source Protection Plans are completed.

Section 3.3.3 also contains an interim policy that requires the submission of a disclosure report, hydrogeological report and spill prevention and contingency plan in WHPA and IPZ areas where a proposed development includes activities identified by the Ministry of Environment and Climate Change as a potential drinking water threat. Schedules SW1 and SW2 show the limits of the Belmont WHPA and Lake Erie IPZ as mapped in the Kettle Creek Assessment Report.

The remaining policies of Section 3.3 Water Resources include policy goals related to the protection of water resources from contamination and degradation associated with certain land use activities and general policies regarding the preparation of watershed and subwatershed study preparation and stormwater management.

Section 2.8.1 provides the policy framework for Water and Wastewater Systems and describes the Belmont and Port Stanley (Lake Erie Intake) drinking water systems. Policy 2.8.1.4.1 applies to communal septic systems and holding tanks. Communal servicing and holding tanks are generally not permitted for new development by this policy and instead will only be considered as a ‘last resort’ alternative to solve a deficient on-site system.



### **4.5.3 Municipality of Bayham Official Plan**

Section 2.3 provides the policy framework related to water resources in the Official Plan of the Municipality of Bayham. The policies in this section generally reflect the water policies of Section 2.2 of the Provincial Policy Statement, 2014 and generally:

- encourage the designation of surface and groundwater features;
- encourage efficient and sustainable use of water resources;
- discourage development in or adjacent to surface and groundwater features;
- identify the use of *Planning Act* tools, including conditions of subdivision approval and consent, site plan approval processes, and zoning by-laws to protect, improve and/or restore the quantity and quality of water; Policies section (Section 2) of the Official Plan;
- do not permit development in *designated vulnerable areas*; and
- do not permit development adjacent to surface and groundwater features where development may have a negative impact on hydrologic functions.

The preamble to the water resource policies note that surface and groundwater features will be designated on Schedule A1 to the Official Plan when such information is made available.

It is noted that Policy 5.1.4.1 states that the hamlet of Richmond is serviced by individual on-site sewage systems and water services.

### **4.5.4 Township of Malahide Official Plan**

Section 2.6 provides the policy framework related to water resources in the Official Plan of the Municipality of Bayham. The majority of policies in this section are the same as the water resource policies of the Bayham Official Plan. Additional policies include the following:

- reference to the 2004 Elgin-Middlesex Groundwater Study; and
- the requirement for an Environmental Impact Statement (EIS) for development or site alteration adjacent to designated surface and ground water resources.

The preamble to the water resource policies also note that surface and groundwater features will be designated on Schedule A1 to the Official Plan when such information is made available.

## **4.6 Policy Implementation Options**

The policy implementation options presented below takes into consideration the requirements of the *Clean Water Act* and applicable SPPs; the existing policy framework of the County, Central Elgin, Bayham and Malahide Official Plans; and the best practices review of other municipalities that have implemented Source Protection Plan policies through amendments to their Official Plans as summarized in **Appendix B**.

### **4.6.1 Section 57, 58 and 59 Policies**

As previously indicated, the Section 57 and 58 policies of the Kettle Creek and Long Point Region SPPs apply to the two WHPAs and IPZ within the County. There is an overlap of the Kettle Creek and Long Point Region SPPs within the Township of Malahide, which has WHPA-C areas for the Belmont and Richmond Wells. There are three approaches to implementing Section 57 and 58 policies. These approaches are as follows:

**Option 1. Prohibit all uses associated with significant drinking water threat activities through the OP policy framework.** This approach attempts to mimic the pre-SPP approach to regulating uses in WHPAs found in OP policy frameworks of municipalities such as the Region of Waterloo, County of Oxford, and County of Wellington, among others. This approach would involve specifically identifying prohibited uses in WHPAs and the IPZ and require the development of a comprehensive list of land uses that could involve a prescribed drinking water threat.

The challenge with preparing such a list is that some land uses will ultimately be missed. A notwithstanding clause would need to be included in the policy framework in the event a use associated with a prescribed drinking water threat is mistakenly excluded.

Another challenge is that a given land use may or may not be associated with a significant drinking water threat based on the nature of the use, the details of the operation, and the activities associated with the operation. For example, a car dealership with a service bay that provides a rust-proofing service could be considered a significant threat depending on its location within a WHPA and its associated vulnerability score. The car dealership and service bays (the use) may not be an issue however the activities within the use (i.e. rust proofing/handling and storage of organic solvents) may be a significant drinking water threat. Therefore, to prohibit a land use that may or may not be associated with a threat activity could be considered overly restrictive because the use is being prohibited whether or not a significant threat activity is being undertaken in a specific case.

The Best Practices review of other conformity amendments undertaken by other municipalities did not reveal any municipality that is taking this approach through their approved or draft Official Plan amendments for SPP implementation.

**Option 2. Identify specific threat activities that are prohibited by Section 57, prohibited by prescribed instrument, or managed by vulnerable area (i.e. WHPA-A, B, C, IPZ) as prescribed by the relevant SPP.** This approach involves identifying how individual threats are regulated by the SPP within each vulnerable area. The threats, regulatory approach (Section 57 or Section 58), and vulnerable area could be arranged in a quick reference table within the policy framework as follows:

WHPA-A v.10		
Section 57 Prohibit	Prescribed Instrument Prohibit	Section 58 Risk Management Plan
Storage/Handling of Commercial Fertilizer	Discharge of stormwater from a SWM facility	Application of Pesticide
Application of NASM	Sewage/Septic Systems – Storage of Sewage	Use of land as livestock grazing/pasturing land

*\*not a complete list*

This approach would allow readers to understand how individual threats are regulated without having to refer to the appropriate SPP. Official Plan policy could describe what each regulatory approach is and how it is applied. The WHPA-C application of Section 57 and 58 differs between the Long Point Region and Kettle Creek SPPs as they apply in Malahide and therefore would have to be distinguished in the reference table.

The Best Practices review did not reveal any municipality that is taking this approach through their approved or draft OPAs for SPP implementation.

**Option 3. Establish a general policy that defers determination as to whether a land use is restricted or prohibited to the Risk Management Official and establish ‘notwithstanding’ policies and defer/refer directly to relevant SPP.** This approach involves listing the prescribed significant drinking water threat activities and outlining the process requirements for the RMP review and its relationship to the planning application process. The Section 59 Notice could be identified as a requirement prior to an application being deemed complete or required prior to the approval of an application. This option would capture the inclusion of the Restricted Land Use Policy in the OP framework.

Based on our review of other jurisdictions, the Town of Innisfil and Town of Midland have taken this approach in their OP policy frameworks.

The notwithstanding policy could address both prohibited and restricted uses. An additional policy statement would direct plan readers to the appropriate SPP based on geographic location (such as through an Official Plan Schedule) in Malahide. Notwithstanding policies could read as follows:

*“Notwithstanding the land use activities permitted by the underlying land use designations, land use activities which have been identified by a Source Protection Plan as being prohibited within vulnerable areas shall not be permitted.” (Prohibited Uses)*

*“Notwithstanding the uses permitted by the underlying land use designations, uses/activities may only be permitted within vulnerable areas if the applicant demonstrates to the satisfaction of the lower tier municipality that the proposed use/activity is in conformity with the policies contained within the relevant Source Protection Plan.” (Restricted/RMP uses)*

This approach is taken in the County of Lennox & Addington and Wellington County Official Plans. Lennox & Addington is an upper-tier municipality that is subject to three different SPPs, whereas Wellington, also an upper-tier municipality, is subject to five SPPs. This approach is also taken in the Norfolk County draft OPA. Norfolk County is a single-tier municipality.

### **Recommendation:**

In our opinion, Option 3 may be the most desirable option for addressing the Section 57 and 58 policies of the individual SPPs at the Official Plan level. This opinion considers the complexity of Options 1 and 2 and the responsibility of the local municipalities under the *Clean Water Act* with respect to the amending of Official Plans and Zoning By-laws to conform to SPPs. Option 3 also appropriately addresses the Malahide situation of having WHPAs regulated by different Source Protection Plans.

The **Section 59** policies can be built into the Section 57 and 58 policy implementation approach, requiring the issuance of a Notice to Proceed from the Risk Management Official prior to an application under the *Planning Act* being deemed complete by the local municipalities. A Schedule to the Malahide Official Plan would be required to identify the boundaries of the Kettle Creek and Long Point Region Source Protection Plans to reference the appropriate Section 59 policy.

#### **4.6.2 Land Use Planning Policies**

There are three (3) land use planning policies from the Long Point Region SPP to be implemented in Official Plans and Zoning By-laws. Given that these land use policies apply to WHPA-A areas only, these land use policies will be included only in the Official Plan and Zoning By-law of the Municipality of Bayham.

#### **4.6.3 Discretionary Policies**

There are a number of discretionary policies in the Long Point Region and Kettle Creek SPPs that relate to education and outreach, updating of emergency management/response plans, decommissioning of abandoned wells, and implementing on-site sewage system maintenance inspection programs. The policies differ somewhat between the SPPs.

**Option 1. Include discretionary policies of each SPP in the Official Plan policy framework for each respective municipality.** This approach involves including the following discretionary policies for each respective local municipality:

- Malahide: Long Point SPP and Kettle Creek SPP
- Bayham: Long Point SPP
- Central Elgin: Kettle Creek SPP

The discretionary policies are not onerous on the municipality or landowner and represent best practices that could be undertaken for the protection and improvement of drinking water sources.

A number of municipalities included in the best practices review included some discretionary policies of SPPs in the OP frameworks.

**Option 2. Include discretionary policies of each SPP in the Official plan policy framework for the municipalities of Central Elgin and Bayham, and the Township of Malahide.** Generally, the discretionary policies between the two Source Protection Plans only overlap with respect to education and outreach and emergency response plans. There are policies in the Long Point Region SPP related to the decommissioning of abandoned wells and other matters that could also be extended to the Central Elgin in the interest of best practices for source water protection. The policies are not restrictive and encourage actions to further protect drinking water resources and water resources in a general sense.

**Option 3. Do not include discretionary policies in the Official Plan framework.** The discretionary policies are non-regulatory and municipalities are not required to include them in Official Plans under the *Clean Water Act*.

#### **Recommendation:**

Whether the discretionary policies of the SPPs are implemented in the Official Plan should be left to the discretion of the municipality. Under the *Clean Water Act*, municipalities shall have regard to the discretionary policies of the Source Protection Plan in their decision-making processes. Furthermore, the discretionary policies discussed in Section 4.4 of this Report relate to other municipal and legislative processes that are not necessarily addressed by Official Plans.

#### **4.6.3 Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs) and Associated Moderate and Low Threat Policies**

The TSR SPP maps HVAs and SGRAs and includes moderate and low threat policies for these areas. As discussed previously, SPPs do not include significant threat policies for HVAs and SGRAs and Section 40 of the *Clean Water Act* requires that Official Plans and Zoning By-laws be amended to conform only to the significant threat policies set out in the SPP. The province has not provided any direction, policy or otherwise, on how to implement or use the HVA and SGRA mapping outside of the applicable policy of the PPS. However, municipalities shall have regard to any moderate and low threat policies that are included in an individual SPP, whether or not they are included in the Official Plan.

**Option 1. Map HVAs and SGRAs at the County level only, with a placeholder policy in the event SPPs are amended in the future to include significant threat policies for these areas. This could be applied at the local municipal level as well.** This approach would involve including the HVA and SGRA mapping from the TSR SPP, Kettle Creek and Long Point Assessment Reports. A 'placeholder' policy can be included within the Official Plan that states the County and local Official Plans will be amended when policies specific to these vulnerable areas are added to Source Protection Plans. General policies based on the policy framework of Section 2.2 of the PPS could also be included. This approach would require additional mapping and directive policies in the County Official Plan.

The Township of Huron Kinloss has taken this approach to HVAs and SGRAs in their Official Plan.

**Option 2. Include the moderate and low threat policies of the TSR SPP for HVAs and SGRAs in local municipal plans.** This approach would be combined with Option 1 and apply only to the local municipalities of Dutton-Dunwich, Southwold, and West Elgin, as TSR SPP does not apply to Central Elgin, Malahide or Bayham and HVAs and SGRAs are not mapped in any other SPP that applies to the County.

**Option 3. Map HVAs and SGRAs at the County level for information purposes only. Local municipal plans could also include this mapping.** This approach is similar to Option 1 but would not involve the inclusion of a placeholder policy. The Schedule would be referenced in Official Plan text only.

Bluewater and Innisfil take this approach in their Official Plan frameworks.

**Option 4. Do not include HVA/SGRA mapping.** The purpose of amending the Official Plan is to ensure conformity with the significant threat policies and mapping of Source Protection Plans. The inclusion of HVAs and SGRAs are not required under the *Clean Water Act* as there are no 'significant threat' policies associated with these vulnerable areas.

#### **Recommendation:**

It is recommended that HVA/SGRA mapping not be included at this time. In addition to the reasons for excluding HVA/SGRA mapping provided above, the inclusion of these vulnerable areas is more representative of a conformity exercise with the PPS. As such, if the intent is to implement SPP policy through a stand-alone SPP conformity Official Plan Amendment, then the HVA/SGRA mapping does not need to be included to meet the minimum requirements of the *Clean Water Act*. If SPP implementation is to occur through a 5-year review of the Official Plan, then the review process also constitutes a

conformity exercise under the PPS and as such the Ministry of Municipal Affairs and Housing may require the inclusion of these vulnerable areas in the new Official Plan. If this does occur, the respective municipality can re-evaluate the implementation options presented above.

#### **4.6.3 Considerations from Existing Official Plan Policy Frameworks**

The Central Elgin Official Plan contains existing policies related to source water protection. Some of the existing policies in this Official Plan are similar to those in other municipalities that have implemented SPP policies through Official Plan amendments (although these existing policies will require modification) and represent a best practice approach that goes beyond the requirements of the *Clean Water Act*. As such some of these policies could be considered for implementation in the Bayham, Malahide, and Elgin County Official Plans and include the following:

**Option 1. Retain existing Official Plan policies regarding the need for the submission of a Disclosure Report.** Requiring the submission of a Disclosure Report as part of a complete application for development or site alteration within WHPAs and IPZ would provide detailed information to the RMO and local municipality in evaluating proposals within these vulnerable areas. Requirements for Disclosure Reports are already established in the Central Elgin Official Plan. Many other municipalities in their SPP implementation policy frameworks include requirements for Disclosure Reports, such as County of Wellington, Norfolk County, Barrie and Niagara Region. The submission of a Disclosure Report could be considered a best practice approach to implement in applicable local municipalities.

The need to submit a Disclosure Report in WHPAs and the IPZ in Central Elgin could remain in the policy framework or be deleted. A requirement for Disclosure Reports could also be extended to Bayham and Malahide.

**Option 2. Include within the policy framework a description of WHPAs, vulnerability scores, source water protection and SPPs, assessment reports, etc. in policy text.** SPPs are science based and difficult to read/interpret for the average person. Conversely, the Official Plan is a much more reader-friendly document that is referenced by a wide range of people including professionals, politicians and members of the public, among others and is the most-referenced document with respect to land use planning. The Official Plan therefore provides an opportunity to explain in simple terms the role of SPPs, their effect on land use and their relation to development and site alteration regulated by the Official Plan and familiarize the process for Plan readers and users.

#### **Recommendation:**

Implementing both options identified above are recommended at this time. The requirement for a Disclosure Report is already established in the Central Elgin Official Plan, can easily be adopted by Bayham and Malahide, and is a best management practice used by many other municipalities. The submission of a Disclosure Report would also assist the Risk Management Official in their responsibilities of issuing Section 59 Notices and preparing Risk Management Plans. Including a plain language description of Source Protection planning in Official Plans and defining key terms assists in framing Source Protection Plan policies, providing background information as to their effect and purpose and increases understanding of the overall process.

### **4.6.3 SPP Implementation at County vs. Local Municipal Level**

Generally, applicable SPPs require amendments to local municipal Official Plans and Zoning By-laws to conform to Source Protection Plan policy. However, the function of the County Official Plan as a policy guidance document and the function of local municipal Official Plans as containing detailed land use policies must also be considered. As such, two general options are presented with respect to SPP implementation at the County level:

**Option 1. Minimal policy framework at the County level, and include the mapping of Source Protection Plan Areas and WHPAs.** This approach involves limiting the policy framework of the Elgin County Official Plan to including general policies related to Source Protection planning and providing direction with respect to establishing detailed SPP implementation policies at the local Official Plan level. New schedules would be introduced that map the Source Protection Plan Area boundaries as they apply to the County and existing WHPAs primarily for information purposes.

**Option 2. Policy framework at the County level to include a detailed implementation of relevant SPP policies.** This approach involves establishing the detailed policy framework at the County level to implement Source Protection Plans. Local municipal Official Plans would include schedules/mapping identifying WHPA and IPZ area(s) within their boundaries and refer to appropriate section(s) and policies of the County Official Plan.

#### **Recommendation:**

To maintain consistency with the format of the existing County Official Plan framework, Option 1 is recommended. Mapping the boundaries of SPP areas within the County will assist in navigating what SPP(s) are applicable within which lower-tier municipalities, as this consolidated mapping can be difficult to find on provincial and conservation authority websites given the information is usually fragmented.

### **4.6.3 Official Plan Schedules**

New Schedules to Official Plans will be required to meet the implementation requirements of the SPPs and serve as a reference for the new policy framework. Considering the policy implementation options presented above, these schedules should:

- **For Elgin County, identify the boundaries of the Long Point Region, Thames-Sydenham & Region, Kettle Creek, and Catfish Creek Source Protection Plans as they apply to the County and the location and extent of WHPAs and the IPZ within Central Elgin, Bayham and Malahide.**
- **For Central Elgin, Bayham and Malahide, identify the vulnerable areas (WHPAs and IPZ) as delineated in the SPPs and their associated vulnerability scores.**
- **For Central Elgin, Bayham and Malahide, identify the boundaries of the applicable Source Protection Plan Areas.** Including a reference schedule that identifies what Source Protection Plan applies to certain areas of the municipality will assist in referring Plan users to the appropriate Source Protection Plan and implementing the SPP-specific land use policies through the Official Plan. This is especially important for Malahide, which contains WHPAs regulated by two different SPPs with differing policies related to WHPA-C areas.



# 5.0

## ANALYSIS & CONSIDERATIONS FOR THE ZBA FRAMEWORKS

The Zoning By-laws for Central Elgin, Bayham and Malahide do not contain any zoning schedules, regulations or appendices related to groundwater or source water protection and as such, new regulations and schedules will need to be added to each Zoning By-law. This 'clean slate' starting point allows for a consistent approach to zoning implementation.

A best practices review has been undertaken of zoning implementation approaches being employed by lower-tier municipalities in the implementation of SPP policies and is enclosed as **Appendix C**. Most examples reviewed are still in a draft stage. Some municipal Zoning By-laws have been reviewed that currently implement the former approach to groundwater protection, pre-Source Protection Plan. The specific nature of the regulations included in the zoning frameworks that were reviewed reflects the structure and content of the Official Plan Amendment policy framework. The following were common characteristics between the zoning frameworks reviewed:

- A zoning overlay is established to identify WHPAs, either in the Schedule A zoning maps or as a separate schedule to the Zoning By-law; and
- The regulatory framework that applies to the overlay is located in the General Provisions Section of the Zoning By-law.

Unique characteristics between the zoning frameworks reviewed include:

- Listing of the significant drinking water threats and deeming any non-residential use that involves a significant drinking water threat as prohibited until it is demonstrated to the Risk Management Official that the use does not represent a significant threat to drinking water;
- Requirement of a Disclosure Report prior to the issuance of a Building Permit
- Regulations provide that any application under the *Planning Act* cannot be made within WHPAs until the issuance of a Section 59 Notice to Proceed; and
- Applying a Holding Provision to uses and activities associated with the significant drinking water threats on lands within a WHPA, to be lifted following confirmation from the Risk Management Official that the use does not represent a significant threat to drinking water.



Generally, specific regulations are implementations of the Official Plan policy framework and as such are unique to individual municipalities.

The zoning overlay approach is currently being used by all municipalities included in the best practices review. It is noted that the Source Protection Plan is intended to be a restrictive policy document that regulates uses and activities within vulnerable areas in the interest of protecting drinking water sources. Zoning By-laws are also considered restrictive planning documents. The degree to which the implementing Zoning By-law regulations are restrictive can be addressed in the structure of the regulatory framework and is ultimately determined by the structure of the Official Plan Amendment. Our opinion is that the zoning overlay approach is a well-used approach in other municipalities and as such it is recommended as the most appropriate option to implement the new Official Plan Source Protection policies within the Zoning By-laws for Central Elgin, Bayham and Malahide.

The more 'unique' characteristics of individual zoning frameworks listed above also present options for SPP implementation in the Zoning By-laws. Generally, the regulatory frameworks of the Zoning By-law Amendments will need to conform to the requirements of the Long Point Region and Kettle Creek SPPs, meaning the amendments will need to:

- Identify the vulnerable areas in which a significant drinking water threat can occur;
- Identify the *significant* drinking water threats and require that any use or activity that is, or would be, a significant drinking water threat, conform to all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by the policies contained in the Source Protection Plan; and
- Incorporate any other amendments required to conform to the threat-specific *land use* policies identified in the SPP.

The Zoning By-law Amendments will therefore have to include the Section 57, 58 and 59 policies of the Long Point Region and Kettle Creek SPPs and the land use policies of the Long Point Region SPP, at a minimum, in addition to carrying forward the mapping of WHPAs and the IPZ within the three municipalities.

It is not recommended that the holding provision approach employed in the Township of Tiny be considered as a zoning implementation option for Central Elgin, Bayham or Malahide given:

- The added process to remove the holding provision once a Section 59 Notice is issued;
- The potential for appeal;
- Zoning regulations can be structured to achieve the same outcome with requiring the need for a holding provision if so desired and/or required by the Source Protection Plan; and
- Challenges of removing a hold on a property that may have multiple significant drinking water threats over time.

# 6.0

## RECOMMENDED POLICY FRAMEWORK & SCHEDULES

The Official Plan is the land use policy document that landowners, businesses, professionals, and other members of the public are most familiar with when trying to determine the policies governing the use of particular piece of land within the County. A policy framework that both properly implements the policies of the SPP and provides general information on Source Protection planning in the County will generate greater awareness about Source Protection and vulnerable areas while also conforming to the requirements of the *Clean Water Act* and the Long Point Region and Kettle Creek SPPs.

Considering that planning decisions must conform with the significant threat policies of the Source Protection Plan, and the Source Protection Plan prevails in the case of conflict with Official Plans and Zoning By-laws, there is no need to duplicate Source Protection policies, or process, through the Official Plan policy framework beyond what is required by the *Clean Water Act, 2006* and the individual SPPs. Instead, the Official Plan primarily becomes a policy document that directs readers to the appropriate Source Protection Plan(s) and defers to the policies of the SPP as required.

A meeting was held with the County's Manager of Planning and the Risk Management Official for Central Elgin in the afternoon of Friday, January 13<sup>th</sup>, 2017 to discuss the analysis and recommended policy options contained in this report. The primary purpose of this meeting was to obtain input from those staff members that are primarily responsible for the implementation of Source Protection Plans and Official Plans on the recommended policy implementation options and comments on the general proposed approach to the preparation of the draft Official Plan Amendments.

The range of policy options, mapping considerations and zoning approaches were presented and discussed with staff and general agreement was expressed, with a few exceptions, for the recommendations outlined in Section 4.6 and 5.0 of this report. As such, the preferred approach for the Official Plan and Zoning Amendment frameworks were determined to be as follows:

- The County Official Plan will contain a general policy framework related to Source Protection planning and groundwater protection, with Source Protection Plans being implemented through the Central Elgin, Bayham and Malahide Official Plans.
- To implement Section 57 and 58 policies in the Official Plan, the policy framework will defer to the Risk Management Official to determine whether a land use is prohibited or restricted and refer directly to the applicable Source Protection Plan(s).
- A Section 59 policy will be implemented in Official Plan frameworks as written in the respective Source Protection Plans as this is required by the *Clean Water Act, 2006*. The Official Plan for

Malahide will contain the Section 59 policy of both the Kettle Creek and Long Point Region Source Protection Plans, and will reference an Official Plan Schedule to identify which Section 59 policy would apply.

- The land use policies of the Long Point Region Source Protection Plan will be incorporated into the Official Plan and Zoning By-law of Bayham.
- Discretionary policies of the Source Protection Plans will not be included in Official Plan Policy.
- Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers will not be mapped in Official Plans.
- Existing source water protection/groundwater policies in Official Plans will be retained to the greatest extent possible. 'Best Practice' policy with respect to water resource protection, conservation and enhancement will be extended through the policy framework of all Official Plans.
- Generally, the Official Plan policy frameworks will address the requirements of Section 2.2 of the Provincial Policy Statement, 2014.
- Official Plans will contain new and/or revised schedules to identify the applicable Source Protection Plans that apply within their jurisdiction.
- Zoning By-law Amendments will reflect the draft Official Plan Amendments and be limited to Section 57, 58, 59 and land use planning policies of the respective Source Protection Plans.
- A zoning overlay approach will be used to identify WHPAs and the IPZ and implement new regulations in municipal Zoning By-laws.

# 7.0

## DRAFT OFFICIAL PLAN POLICY & ZONING BY-LAW TEXT

Based on the analysis of the policies of the applicable Source Protection Plans, the requirements for amending Official Plans and Zoning By-laws under the *Clean Water Act*, the content of existing Official Plan policies, and the feedback received from the January 2017 meeting with senior planning staff and the Risk Management Official for Central Elgin, proposed first drafts of the Source Protection Plan implementing Official Plan and Zoning By-law Amendments were prepared for Elgin County, Central Elgin, Bayham and Malahide Official Plans. A new 'Source Water Protection' regulatory framework for the Zoning By-laws of Central Elgin, Bayham and Malahide was also prepared. A workshop was held with the Manager of Planning for Elgin County, planning staff for Central Elgin and the Risk Management Official for Central Elgin on February 23, 2017. The primary purpose of the workshop was to obtain input from staff on the first draft of amendments and comments on the proposed policy and regulatory frameworks. Comments on the draft amendments were minor and were limited to word changes and definitions contained in the proposed policy and regulatory text. Following the workshop, comments on the first drafts were received from the planning consultants undertaking the Official Plan Review for the Municipality of Bayham.

Following the February Workshop, the draft policy and zoning texts were refined and finalized, taking into consideration the input received from County and municipal staff. A Preamble for each future Official Plan Amendment was also prepared. The draft amendments were then circulated to the relevant Conservation Authorities for review and comment. Comments were received from the Kettle Creek Conservation Authority and Long Point Region Conservation Authority and were generally minor in nature. The draft amendments have been revised in response to the comments received and resulted in a refinement of the proposed policy and regulatory text. It is intended that the finalized Official Plan and Zoning By-law texts, which are enclosed herein as **Appendices D** and **E** respectively, will serve as the basis of consultation with the public, relevant agencies, neighbouring municipalities (as required) and applicable Source Protection Authorities, when these amendments are brought forward for inclusion in their respective Official Plans and Zoning By-laws.

The applicable schedules of the respective Source Protection Plans have been included herein with the proposed Official Plan and Zoning By-law texts in lieu of formal schedules for reference purposes when reviewing the draft amendments. When amendments are brought forward by local municipalities,

schedules to the amendments will need to be prepared that conform to the mapping of the applicable Source Protection Plan by identifying and are properly titled as per the reference in the amendment text.

Details of each proposed policy text and direction related to the preparation of amendment schedules are discussed in the following subsections.

## 7.1 Elgin County

Based on the recommended policy option approaches and input from County planning staff, the proposed implementing Official Plan Policy text will:

- Add a policy statement to the beginning of Section D2 'Water Resources' that describes the importance of protecting and managing water resources in the County;
- Revise Policy D2.2 d) to reference Source Water Protection Policy conformity;
- Incorporate Policy D2.3 regarding restricting development and site alteration in or near sensitive surface and groundwater features into Policy D2.2;
- Delete reference to the ongoing preparation of Source Protection Plans in Policy D2.2;
- Rename Policy D2.3 to 'Source Water Protection' and new policies that:
  - Describe the role of the *Clean Water Act, 2006* and the process of Source Protection planning;
  - Identify the Source Protection Plans that apply to the County;
  - Identify the location of municipal drinking water systems in the County that are regulated by a Source Protection Plan; and
  - Provide guidance to local municipalities in amending their Official Plans to promote the efficient use of water resources, encourage sustainable stormwater management practices, restrict development and site alteration to protect municipal drinking water supplies, identify vulnerable areas (Wellhead Protection Areas and Intake Protection Zones), conform to the significant drinking water threat policies and threat-specific land use policies as required by applicable Source Protection Plan(s); and encourage agricultural practices that protect water resources.
- Add the following terms to Schedule 'A' – Defined Terms:
  - Assessment Report
  - Drinking Water Threat
  - Highly Vulnerable Aquifer
  - Intake Protection Zone
  - Section 59 Notice
  - Significant Drinking Water Threat
  - Significant Groundwater Recharge Area
  - Source Protection Plan
  - Vulnerable Area
  - Wellhead Protection Area

- Add a new Schedule D – Source Protection Plan Areas, which identifies the limits of the four Source Protection Plan Areas within the County to facilitate Source Protection Plan reference within the Official Plan policy text. **Figure 1** of this report should be used as the basis for the preparation of Schedule D.

The Official Plan policy text for Elgin County is enclosed as **Appendix D1**.

## 7.2 Municipality of Central Elgin

Based on the recommended policy option approaches and input from County planning staff and the Risk Management Official, the **proposed implementing Official Plan Amendment will:**

- Modify Section 3.3 Water Resources to:
  - Identify the municipal drinking water supply systems in the Municipality; and
  - Expand policy goals to address sustainable use of water resources and protecting surface and groundwater quality through restricting and influencing land uses and activities.
- Modify the policies of Section 3.3.3 to:
  - Describe the role of the *Clean Water Act, 2006* and the process of Source Protection planning;
  - Identify the Source Protection Plans that apply to the Municipality;
  - Describe vulnerable areas (WHPAs and IPZ) and associated vulnerability scores;
  - List the prescribed drinking water threats;
  - Defer direction to the relevant Source Protection Plan where applicable through the use of a 'notwithstanding' policy, describe determination of prohibited and restricted uses to the Risk Management Official, and include the Section 59 policy of the Kettle Creek Source Protection Plan; and
  - Require the submission of a Disclosure report as part of a complete application under the *Planning Act* within WHPAs and the IPZ, at the discretion of the Municipality.

The following terms will be italicized in the policy framework, with reference to be made to the Elgin County Official Plan for definitions:

- Activity
- Assessment Report
- Drinking Water Threat
- Intake Protection Zone
- Highly Vulnerable Aquifer
- Section 59 Notice
- Septic System
- Significant Drinking Water Threat
- Significant Groundwater Recharge Area
- Source Protection Plan
- Vulnerable Area

- Wellhead Protection Area

The following schedules will need to be prepared to accompany the amendment:

- Add a new Schedule SW – Source Protection Plan Areas, which identifies the limits of the Kettle Creek and Catfish Creek Source Protection Plan Areas to facilitate Source Protection Plan reference within the Official Plan policy text.
- Modify Schedules SW1 and SW2 as follows:
  - Schedule SW1 – Community of Belmont Wellhead Protection Area to be revised to illustrate and conform to the limits of the WHPA-A, B and C areas and associated vulnerability scores as per '*Schedule A - Municipality of Central Elgin, Village of Belmont Water Supply*' of the Kettle Creek Source Protection Plan;
  - Schedule SW2 – Community of Port Stanley to be revised to illustrate and conform to the limits of the IPZ and associated vulnerability scores as per '*Schedule B – Municipality of Central Elgin, Elgin Area Primary Water Supply System*' of the Kettle Creek Source Protection Plan.

The Official Plan policy text for Central Elgin is enclosed as **Appendix D2**. Given revisions were required to expand the policy goals of Section 3.3 and identify the municipal drinking water systems in the County, the full revised text of Section 3.3 has been included in the Appendix. Schedules A and B of the Kettle Creek Source Protection Plan are included with the amendment text for reference purposes.

The Village of Belmont, Village of Port Stanley and Township of Yarmouth Zoning By-laws will need to be amended to implement the applicable policies of the Kettle Creek Source Protection Plan. **The proposed text for the Village of Belmont Zoning By-law** will establish a new Section (Section 4.19) in the General Regulations that:

- Identifies and describes the Belmont WHPA and the associated vulnerability score;
- Lists the prescribed drinking water threats;
- Prohibits any land use that involves a significant drinking water threat within a vulnerable area until it is determined by the Risk Management Official that the use does not represent a significant drinking water threat or a Section 59 Notice has been issued; and
- Adds the following terms to Section 2 - Definitions:
  - Drinking Water Threat
  - Section 59 Notice
  - Significant Drinking Water Threat

Schedule A mapping will need to be revised to include an overlay that illustrates and conforms to the limits of the WHPA-A, B and C areas and associated vulnerability scores as per '*Schedule A - Municipality of Central Elgin, Village of Belmont Water Supply*' of the Kettle Creek Source Protection Plan.

The Zoning By-law for the Village of Belmont is enclosed as **Appendix E1**. Schedule A of the Kettle Creek Source Protection Plan is included with the amendment text for reference purposes.

**The proposed text for the Village of Port Stanley Zoning By-law** will establish a new Section (Section 4.29) in the General Regulations that:

- Identifies and describes the Lake Erie Primary Intake; and
- Prohibits any land use that involves the handling and storage of commercial fertilizer in an amount greater than 5,000 cubic metres or the handling and storage of fuel greater than 6,000 litres in accordance with the Kettle Creek Source Protection Plan; and
- Adds the following term to Section 2 - Definitions:
  - Significant Drinking Water Threat

Schedule A mapping will need to be revised to include an overlay that illustrates and conforms to the limits of the Intake Protection Zone and associated vulnerability scores as per '*Schedule B – Municipality of Central Elgin, Elgin Area Primary Water Supply System*' of the Kettle Creek Source Protection Plan.

The Zoning By-law text for the Village of Port Stanley is enclosed as **Appendix E2**. Schedule B of the Kettle Creek Source Protection Plan is included with the amendment text for reference purposes.

**The proposed text for the Township of Yarmouth Zoning By-law** will establish a new Section (Section 7.1.2.7) in the General Regulations that:

- Identifies and describes the Lake Erie Primary Intake; and
- Prohibits any land use that involves the handling and storage of commercial fertilizer in an amount greater than 5,000 cubic metres or the handling and storage of fuel greater than 6,000 litres in accordance with the Kettle Creek Source Protection Plan; and
- Adds the following term to Section 2 - Definitions:
  - Significant Drinking Water Threat

Schedule A mapping will need to be revised to include an overlay that illustrates and conforms to the limits of the Intake Protection Zone and associated vulnerability scores as per '*Schedule B – Municipality of Central Elgin, Elgin Area Primary Water Supply System*' of the Kettle Creek Source Protection Plan.

The Zoning By-law text for the Township of Yarmouth is enclosed as **Appendix E3**. Schedule B of the Kettle Creek Source Protection Plan is included with the amendment text for reference purposes.

## 7.3 Municipality of Bayham

Based on the recommended policy option approaches and input from planning staff and the Risk Management Official, the **proposed implementing Official Plan Amendment will:**

- Modify Section 2.3 Water Resources to:
  - Expand the preamble to the policy section to include additional policy wording from Section 2.2 of the Provincial Policy Statement, 2014 to address the implementation of necessary restrictions on development and site alteration to protect municipal drinking water supplies.
  - Add general water resource policies to Section 2.3.1 regarding the maintenance and enhancement of water resources and the protection of vulnerable areas.
  - Establish a new Source Water Protection Policy Framework to:



- Describe the role of the *Clean Water Act, 2006* and the process of Source Protection planning;
- Identify the Source Protection Plans that apply to the Municipality;
- Describe vulnerable areas (WHPAs and IPZ) and associated vulnerability scores;
- List the prescribed drinking water threats;
- Defer direction to the Long Point Region Source Protection Plan through the use of a 'notwithstanding' policy, describe determination of prohibited and restricted uses to the Risk Management Official, and include the Section 59 policy of the Long Point Region Source Protection Plan;
- Include the land use policies of the Long Point Region Source Protection Plan related to septic systems and holding tanks and the storage of road salt and apply to the Richmond WHPA; and
- Define the terms: 'septic system and/or holding tank', 'small on-site septic system or holding tank', and 'large on-site septic system or holding tank' in the policy text.

The following terms will be italicized in the policy framework, with reference to be made to the Elgin County Official Plan for definitions:

- Activity
- Assessment Report
- Drinking Water Threat
- Highly Vulnerable Aquifer
- Section 59 Notice
- Significant Drinking Water Threat
- Significant Groundwater Recharge Area
- Source Protection Plan
- Vulnerable Area
- Wellhead Protection Area

The following schedules will need to be prepared to accompany the amendment:

- Add a new Schedule E – Source Protection Plan Areas, which identifies the limits of the Long Point Region and Catfish Creek Source Protection Plan Areas to facilitate Source Protection Plan reference within the Official Plan policy text.
- Add a new Schedule E1 – Richmond Wellhead Protection Area, which illustrates and conforms to the limits of the WHPA-A, B and C areas and associated vulnerability scores as per '*Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)*' of the Long Point Region Source Protection Plan.

The Official Plan policy text for Bayham is enclosed as **Appendix D3**. Schedule A of the Long Point Region Source Protection Plan is included with the amendment text for reference purposes.

The **proposed Zoning By-law Amendment** will establish new Sourcewater Protection Provisions (Section 4.58) that:

- Identifies and describes the vulnerable area (Richmond WHPA) within the municipality and the associated vulnerability score;
- Lists the prescribed drinking water threats;
- Prohibits any land use that involves a significant drinking water threat within a vulnerable area until it is determined by the Risk Management Official that the use does not represent a significant drinking water threat or a Section 59 Notice has been issued
- Implements the septic system/holding tank and road salt storage facility land use policies of the Long Point Region Source Protection Plan
- Adds the following terms to the Definitions:
  - Drinking Water Threat
  - Large On-Site Septic System and/or Holding Tank
  - Section 59 Notice
  - Significant Drinking Water Threat
  - Small On-Site Sewage System and/or Holding Tank

Schedule A mapping will need to be revised to include an overlay that illustrates and conforms to the limits of the WHPA-A, B and C areas and associated vulnerability scores as per *'Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)'* of the Long Point Region Source Protection Plan.

The Zoning By-law text for Bayham is enclosed as **Appendix E4**. Schedule A of the Long Point Region Source Protection Plan is included with the amendment text for reference purposes.

## 7.4 Township of Malahide

Based on the recommended policy option approaches and input from planning staff and the Risk Management Official, the **proposed implementing Official Plan Amendment will:**

- Modify Section 2.6 Water Resources to:
  - Expand the preamble to the policy section to include additional policy wording from Section 2.2 of the Provincial Policy Statement, 2014 to address the implementation of necessary restrictions on development and site alteration to protection municipal drinking water supplies.
  - Add general water resource policies to Section 2.6.1 regarding the maintenance and enhancement of water resources and the protection of vulnerable areas.
  - Establish a new Source Water Protection Policy Framework (Section 2.6.2) to:
    - Describe the role of the *Clean Water Act, 2006* and the process of Source Protection planning;
    - Identify the Source Protection Plans that apply to the Municipality;
    - Describe vulnerable areas (WHPAs), associated vulnerability scores and note they address drinking water systems in neighbouring municipalities;
    - List the prescribed drinking water threats;

- Defer direction to the applicable Source Protection Plan through the use of a ‘notwithstanding’ policy, describe determination of prohibited and restricted uses to the Risk Management Official, and reference the Section 59 policy of the applicable Source Protection Plan;
- The following terms will be italicized in the policy framework, with reference to be made to the Elgin County Official Plan for definitions:
  - Activity
  - Assessment Report
  - Drinking Water Threat
  - Highly Vulnerable Aquifer
  - Section 59 Notice
  - Septic System
  - Significant Drinking Water Threat
  - Significant Groundwater Recharge Area
  - Source Protection Plan
  - Vulnerable Area
  - Wellhead Protection Area

The following schedules will need to be prepared to accompany the amendment:

- Add new Schedule D – Source Protection Plan Areas, which identifies the limits of the Source Protection Plans applicable to the Township, to facilitate Source Protection Plan reference within the Official Plan policy text.
- Add new Schedule D1 – Richmond WHPA, which illustrates and conforms to the limits of the WHPA- C area and associated vulnerability score as per ‘*Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)*’ of the Long Point Region Source Protection Plan.
- Add new Schedule D2 – Belmont WHPA, which illustrates and conforms to the limits of the WHPA-C area and associated vulnerability score as per ‘*Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply*’ of the Kettle Creek Source Protection Plan.

The Official Plan policy text for the Township of Malahide is enclosed as **Appendix D3**. Schedule A of the Long Point Region Source Protection Plan and Schedule A of the Kettle Creek Source Protection Plan have been included within the amendment text for reference purposes.

The **proposed Zoning By-law Amendment** will establish new Sourcewater Protection Provisions (Section 4.47) that:

- Identifies and describes the vulnerable area (WHPAs) within the municipality and the associated vulnerability score, and identifies the municipal drinking water wells as being located outside of the Township;
- Identifies Dense Non-Aqueous Liquids (DNAPLs) as the only prescribed drinking water threat;
- Implements the Restricted Land Use Policy of both the Kettle Creek and Long Point Region Source Protection Plans, prohibiting land uses that involve the handling and storage of DNAPLs

until it is determined by the Risk Management Official that the use does not represent a significant drinking water threat or a Section 59 Notice has been issued; and

- Adds the following terms to Section 2 - Definitions:
  - Drinking Water Threat
  - Section 59 Notice
  - Significant Drinking Water Threat
- Schedule A mapping will need to be revised to include an overlay that illustrates and conforms to the limits of the WHPA-C areas and associated vulnerability scores as per '*Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)*' of the Long Point Region Source Protection Plan and '*Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply*' of the Kettle Creek Source Protection Plan.

The Zoning By-law text for Malahide is enclosed as **Appendix E5**. Schedule A of the Long Point Region Source Protection Plan and Schedule A of the Kettle Creek Source Protection Plan have been included within the amendment text for reference purposes.

# 8.0

## GENERAL WATER RESOURCES POLICY FRAMEWORK

As part of our review and implementation of the applicable SPP policies in Elgin County, we have also assessed the general water resources policy framework for all municipalities within the County to ensure a consistent policy framework between those municipalities that do and do not have municipal drinking water systems that are regulated by a Source Protection Plan. The following municipalities within Elgin County do not have municipal drinking water systems that are regulated by a Source Protection Plan:

- Municipality of Dutton-Dunwich
- Municipality of West Elgin
- Town of Aylmer
- Township of Southwold

Section 2.2 of the Provincial Policy Statement provides the policy guidance for water resource policies of municipal Official Plans and states:

*2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:*

- a) using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development;*
- b) minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;*
- c) identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed;*
- d) maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas;*
- e) implementing necessary restrictions on development and site alteration to:*
  - 1. protect all municipal drinking water supplies and designated vulnerable areas; and*
  - 2. protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;*

- f) *planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality;*
  - g) *ensuring consideration of environmental lake capacity, where applicable; and*
  - h) *ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces.*
- 2.2.2 *Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored. Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.*

The purpose of the general water resources policy framework is to ensure that the Official Plans of all local municipalities conform to Section 2.2 of the Provincial Policy Statement, 2014. The following was undertaken to prepare draft amendments for the above-noted local municipalities to implement a general water resources policy framework:

1. Review of existing water/groundwater/water resource policies
2. Development of a 'list' of general water resource policies, based on the 'Water' policy framework of the Provincial Policy Statement, best practices review and existing policies of local municipal Official Plans; and
3. The preparation of draft amendments to implement the general water resource policies 'list' in local municipalities, and modify/delete irrelevant or outdated policies

The following subsections outline the approach to the preparation of the general water resources policy framework and draft Official Plan Amendments for those municipalities that do not have municipal drinking water systems regulated by a Source Protection Plan within Elgin County.

## 8.1 Existing Water Resource Policies

The existing water resource policies of West Elgin, Aylmer and Southwold range with respect to breadth and depth in individual Official Plans and are compared in the chart enclosed as **Table 1**. Currently, the Official Plan of Dutton-Dunwich does not have a water resources policy framework. Generally, the Official Plan policy frameworks can be described as:

- Referencing source water protection/source water protection planning under the *Clean Water Act, 2006* (West Elgin, Southwold);
- Promoting cooperation with local conservation authorities (Southwold, West Elgin)
- Implementing some water resources policies of the Provincial Policy Statement, 2014 (West Elgin); and
- Containing minimal policies regarding Water Resources (Aylmer), or no water resources policies at all (Dutton-Dunwich).

## 8.2 General Water Resource Policies

Based on the existing water resource policy frameworks described in Section 7.1 above, the best practices review summarized in **Appendix B** and the policy framework of Section 2.2 of the Provincial



Table 1. Existing Water Resource Policies of Official Plans of Other Local Municipalities		
West Elgin	Aylmer	Southwold
<p><b>3.4 WATER RESOURCES</b> The water resources of West Elgin include the Thames River which bounds the Municipality on the north and Lake Erie which bounds the Municipality on the south as well as numerous streams and creeks which flow into these respective water bodies. Also included are groundwater resources on which a large part of the ‘Rural Area’ depends as a source of water. Measures and practices are necessary to reduce or eliminate the potential for impairment of the <b>quality and quantity</b> of the Municipality’s surface and groundwater resources</p> <p><b>3.4.1 Source Water Protection Plan</b> The Municipality shall actively participate in the preparation and implementation of a source water protection plan in accordance with the Clean Water Act and led by the conservation authorities designated for these purposes.</p> <p><b>3.4.2 Adverse Impacts</b> Where development is being proposed that may have an adverse impact on the Municipality’s water resources, the proponent shall be required to submit a report prepared by a person or persons qualified in this field to identify and evaluate such impacts and the measures which are feasible to mitigate these impacts.</p> <p><b>3.4.3 Sustainable Use</b> The Municipality shall <b>promote efficient and sustainable use of its water resources</b> by adopting water conservation measures and sustaining water quality through such measures as maintaining appropriate sewage rates in areas served by municipal treatment plants, the preparation and implementation of nutrient management plans for livestock operations, requiring stormwater management plans for new development and promoting appropriate use and maintenance of individual and communal waste disposal systems and the use of low nitrate generating systems.</p> <p><b>3.4.4 Partnerships</b> The Municipality shall co-operate with the Lower Thames Valley Conservation Authority and other interested groups to identify and implement cost effective measures for protecting, <b>improving and restoring the quality and quantity</b> of the water resources of West Elgin.</p> <p><b>3.4.5 Stormwater</b> Management Studies may be required for undeveloped areas prior to development to minimize stormwater runoff and contaminant loads as well as to maintain or enhance <b>vegetative and pervious surfaces</b>. Such studies shall be prepared, where appropriate to do so, on a sub-watershed basis as opposed to a land ownership basis. Stormwater Management facilities shall not be permitted in provincially significant wetlands. In the preparation and evaluation of such studies, the Lower Thames Valley Conservation Authority shall be consulted. All design parameters for stormwater management shall be approved by the Municipality, the Ministry of Environment and the Lower Thames Valley Conservation Authority. A certificate of approval shall be required from the Ministry prior to construction.</p> <p><b>3.4.6 Watershed Boundaries</b> Rodney and West Lorne are situated partially within the watershed of the Thames River and partially within the watershed of Lake Erie. Within these settlements, there are a number of sub-watersheds stemming from a series of drains. In the case of Rodney, these include the Milton Drain and the Wismer Drain while in the case of West Lorne, they include the Trigger Drain and the Wilton Outlet Drain. Modifications to the boundaries of sub-watersheds may be required as a result of minor re-grading to facilitate development. Such modifications shall be subject to the approval of the Municipality and the Lower Thames Valley Conservation Authority.</p>	<p><b>(1) Stormwater Management Studies</b> Prior to development being allowed to proceed, and if required by the policies of this Plan, the Catfish Creek Conservation Authority and/or the Ministry of the Environment, the developer shall undertake a stormwater management study to determine the effect of increased run-off due to development of the site, and to identify stormwater management measures as necessary to control any increases in flows in downstream watercourses, up to and including the 1:100 year design storm. This Plan requires the preparation of a stormwater management study for any new development consisting of more than five residential lots or for commercial or industrial developments with large amounts of impervious area. The study shall identify practices that will minimize stormwater volumes and contaminant loads and determine the appropriate stormwater facilities for the development to achieve these objectives. The developer shall install the stormwater management measures identified in the study as part of the development of the site, to the satisfaction of the Town and the Conservation Authority. In addition to the Catfish Creek Conservation Authority, the Ministry of Environment and the Ministry of Transportation shall be consulted on stormwater management studies in situations where statutory approvals are necessary under the Ontario Water Resources Act and/or in situations where development is proposed adjacent to a Provincial Highway. Stormwater management studies will be considered in light of the Ministry of the Environment’s current Stormwater Management Practices Planning and Design Manual</p> <p><b>(2) Groundwater Studies</b> This Plan acknowledges that studies are being undertaken by the Conservation Authority to identify sensitive groundwater resource areas in the Catfish Creek watershed. Amendments may be required to this</p> <p>Plan to incorporate policies and designations for protecting these groundwater resources as may be recommended by the study.</p>	<p><b>2.5 WATER RESOURCES</b> The Township contains watercourses draining to Lake Erie and the Thames River. Among other resources, wetlands, the lake, river and streams support the natural environment and the existing community. The following will be the policy of the Township: a) The Township will work cooperatively with the Kettle Creek and Lower Thames Valley Conservation Authorities in dealing with land management issues within the subwatersheds draining to Lake Erie, including those that extend beyond the municipal boundaries b) The Township will encourage the preparation of watershed and subwatershed management plans and regional stormwater quality/quantity management facilities to assist in water resource and land use planning on an ecosystem basis. To the extent feasible, the Township will support the Conservation Authorities in the preparation and implementation of watershed and subwatershed plans. c) The Township will encourage the protection and restoration of Natural Heritage Features to <b>improve water quality and quantity</b>. d) Planning applications that propose to make use of a private water source will be required to submit a detailed hydrogeological study to determine the suitability of the lands for groundwater extraction. The hydrogeological study will be prepared to the satisfaction of the Township and the affected Conservation Authority. e) The Township will require the use of stormwater management facilities downstream of new developments, where appropriate, to mitigate development impacts on stormwater quantity and quality. The Township will promote naturalized and unfenced stormwater management facilities, constructed with gentle slopes. Applications for development will be required to be supported by a stormwater quality/quantity management study. The planning and design of stormwater facilities should be undertaken in accordance with the Ministry of the Environment’s Stormwater Management Planning and Design Manual. f) A Permit To Take Water (PTTW), in accordance with the Ontario Water Resources Act is required from the Ministry of Environment where more than 50,000 litres a day of groundwater/surface water will be drawn. g) Environmental Assessment and Certificate of Approval may be required from the Ministry of Environment in connection with stormwater management facilities and permits to take water. h) In cooperation with the private sector and the community, the Township will encourage the reduction of water consumption levels through the promotion of the <b>efficient use of water</b> and may specify appropriate water conservation measures within existing and new development.</p> <p><b>2.6 AQUIFER AND GROUNDWATER PROTECTION</b> The protection, conservation and careful management of groundwater resources is necessary to meet both the present and future needs of residents, businesses and the natural environment. The Township supports initiatives of the Province and the Conservation Authorities, agencies, including the implementation of a Source Water Protection Plan and the Permit to take Water Program to protect groundwater resources. Assurance that groundwater <b>quality and quantity</b> will not be negatively impacted will be required for approval of applications for development. The Township will require groundwater impact assessments for development proposals as appropriate according to the level of susceptibility and potential groundwater contaminants.</p> <p><b>2.6.1 SOURCE WATER PROTECTION</b> In accordance with the Clean Water Act, 2006 and Provincial Policy, the Township will take measures to protect, improve or restore the quantity and quality of groundwater sources to secure long-term hydrologic stability, healthy aquatic habitat and safe drinking water supply. <b>Drinking Water Supply:</b> The Township’s drinking water is supplied from the Elgin Area Primary Water Supply Treatment Plant located in Central Elgin Township. <b>The intake for the Water:</b> Treatment Plant is in Lake Erie. At this time, there are no Intake Protection Zones in Southwold Township according to the draft Kettle Creek Water Assessment Report. There are no Wellhead Protection Areas in Southwold Township according to both the draft Lower Thames and Kettle Creek Source Water Protection Assessment Reports. <b>Aquifers and Groundwater Recharge Areas:</b> Aquifers and Significant Groundwater Recharge Areas have been identified in Source Water Protection Area Assessment Reports as being vulnerable to contaminants. <b>Development Proposals:</b> Development Proposals or changes in use in these areas will require determination of their potential negative impact on the groundwater and appropriate mitigating measures imposed as a condition of approval. <b>Livestock and Poultry Farms:</b> In the interest of protecting the quality of ground and surface waters, new or expanding livestock and poultry operations will satisfy the policies of Section 4.1 Agriculture. <b>Potential for Intake Protection Zone:</b> There may be an Intake Protection Zone in the Township, depending on the outcome of the Source Water Protection Plan process. <b>Intent to Update Mapping and Incorporate:</b> The aquifers and groundwater recharge areas have been mapped by the Source Water Protection Committees. New information may result in a change in the geographic extent of existing aquifers and groundwater recharge areas or possibly an Intake Protection Zone. Changes to the extent of aquifers and groundwater recharge areas or an Intake Protection Zone will be reflected on Source Water Protection Schedules to be incorporated as part of the Official Plan when Source Water Protection Plans are approved and in effect. An Amendment to this Plan may be required to incorporate the outcome of the Source Water Protection processes.</p>

*Note the Dutton-Dunwich Official Plan does not contain an existing water resource policy framework and as such has not been included in the chart*



Policy Statement, 2014, a generic water resources policy framework was developed to incorporate into the individual Official Plans. The draft generic policy framework is as follows:

### *Water Resources*

*Surface water resources, including streams, lakes, ponds and wetlands are normally protected through their inclusion within the Natural Heritage System. Groundwater sources occur throughout the Town and are an essential resource for residents and businesses. It is the intent of this Plan that all development shall be subject to the following policies to ensure that water quality and quantity are not adversely affected. Specifically, it is the Town's intent that the development of public and private uses will not significantly alter groundwater recharge or discharge; impair groundwater or surface water quality, or negatively impact municipal groundwater supply. The Town recognizes a relationship between groundwater and surface water in terms of recharge and discharge functions. The policies of this Plan are intended to address both ground water and surface water protection.*

*With respect to water resources, the Municipality shall endeavour to:*

- (1) Ensure land use decisions advance water conservation efforts and support the efficient use of water resources.*
- (2) Promote efficient and sustainable use of water resources that maintain and enhance water quantity and quality through the retention of vegetation or through re-naturalization.*
- (3) Encourage agricultural practices that protect water resources.*
- (4) Promote sustainable stormwater management practices that protect for, or where feasible, enhance water quality and water quantity control.*
- (5) Identify water resource systems consisting of groundwater features, hydrologic functions, natural heritage features and areas, and surface water features, which are necessary for the ecological and hydrological integrity of the watershed.*
- (6) Maintain linkages and related functions among groundwater features, hydrologic functions, natural heritage features and areas, and surface water features.*
- (7) Protect or enhance the function of sensitive groundwater recharge areas, discharge areas, aquifers and headwaters.*
- (8) Work cooperatively with Conservation Authorities and Provincial Ministries regarding land management issues within the watersheds of the Municipality.*
- (9) Ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.*
- (10) Ensure that development meets provincial water quality objectives;*

- (11) Ensure levels of wastewater treatment that are appropriate for the size, location and scale of development anticipated.*
- (12) Protect wetlands and areas that make significant contributions to groundwater recharge.*
- (13) Ensure the base flow needed to protect streams, fisheries and wetlands are maintained.*
- (14) Support sustainable stormwater management practices that protect, or where feasible, enhance water quantity and quality control.*
- (15) Implement necessary restrictions on development and site alteration to protect municipal drinking water supplies, vulnerable areas, and sensitive surface and groundwater features.*
- (16) Improve or restore sensitive surface and groundwater features through low impact development approaches and restrictions on development and site alteration, where necessary.*

How the generic water resource policy framework is incorporated into the individual Official Plans of Dutton-Dunwich, West Elgin, Aylmer and Southwold is dependent on the structure of the existing water policy frameworks in these documents. A new water resource policy framework was developed for each of these municipal Official Plan using the generic policy framework provided above and taking into consideration existing policy texts of each Plan. Proposed new water resource policy frameworks for each municipality are enclosed as **Appendix F**.

It is noted that the generic water resource policy framework was incorporated, as appropriate, into the new Source Protection policy frameworks for the Central Elgin, Bayham and Malahide Official Plans to ensure a degree of consistency in water resource policy between all local municipal Official Plans in Elgin County.

# 9.0

## SUMMARY & NEXT STEPS

The proposed new Source Protection Official Plan policy frameworks and Zoning By-law texts and associated Schedules for Elgin County, Central Elgin, Bayham and Malahide are included in Appendices D and E and reflect the policy text and Schedule revisions outlined in Section 7.0 of this Report.

The County and local municipalities will be undertaking their Official Plan and Zoning By-law Source Protection Plan conformity exercises either through stand-alone Official Plan Amendments or upcoming Official Plan Reviews, within the timeframes prescribed by the Long Point Region and Kettle Creek Source Protection Plans. The draft Official Plan and Zoning By-law texts will be used as the basis for the preparation of formal Amendments to individual Official Plans and Zoning By-laws. Schedules for both the Official Plan and Zoning By-law Amendments, as described in Section 7 of this Report, will need to be prepared by the County and the local municipalities in order to finalize the Amendments. Once prepared, the Amendments will be circulated to the public, stakeholders, agencies, Conservation Authorities and Source Protection Authorities for review and comment. All comments received on individual Amendments will be recorded and considered in the preparation of the final Amendment(s), to be brought to applicable Committees and Councils for adoption.

With respect to the water resources policy frameworks developed for the remaining local municipalities within the County and enclosed herein as Appendix F, it is anticipated that the policy text will be further refined and incorporated into Official Plans through future Official Plan Reviews or housekeeping Amendments. At that time, the public, agencies and other stakeholders will have the opportunity to review and comment on the proposed water resources policies framework for each local municipality.

We believe the proposed Official Plan and Zoning By-law Amendment text enclosed herein for Elgin County and local municipalities appropriately implements and considers the applicable Source Protection Plans and are consistent with the Provincial Policy Statement, 2014.

Respectfully submitted,

**MHBC**



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Planner

# APPENDIX A

Summary Chart:  
Section 57 and 58 Policies of the  
Kettle Creek and Long Point Region  
Source Protection Plans

PROHIBITIONS & RMP BY VULNERABLE AREA ELGIN		
File 1491B December 2016		
WHPA - A		
Threat	Kettle	Long Point
Waste Disposal Site NOT subject to ECA	Prohibit	-
Waste Disposal Site subject to ECA	PI Prohibit	PI Prohibit
Storage, treatment and discharge of tailings from mines	PI Prohibit	-
Application of untreated Septage to Land	PI Prohibit	-
Sewage/Septic Systems - Septics	PI Prohibit	LU Prohibit <sup>1</sup>
Sewage/Septic Systems - Storage of Sewage, Sewage Treatment Plant Effluent Discharges, Sewage Treatment Plant Effluent Discharge By-pass to Surface Water	PI Prohibit	PI Prohibit <sup>2</sup>
Sewage/Septic Systems - Sanitary Sewers & Related Pipes	RMP	-
Sewage/Septic Systems - Septic System Holding Tank	-	-
Sewage/Septic Systems - Industrial Effluent Discharge & Combined Sewer Discharge	-	-
Discharge of Stormwater from a Stormwater Management Facility	PI Prohibit	-
Application of ASM	Prohibit	Prohibit
Storage/Handling of ASM	Prohibit	Prohibit
Application of NASM	Prohibit	PI Prohibit
Storage/Handling of NASM	Prohibit	Prohibit
Application of Commercial Fertilizer	-	RMP
Storage/Handling of Commercial Fertilizer	Prohibit	Prohibit <sup>3</sup>
Application of Pesticide	Prohibit	RMP
Storage/Handling of Pesticide	Prohibit	Prohibit
Application of Road Salt	-	-
Storage/Handling of Road Salt	Prohibit	LU Manage
Storage of Snow	Prohibit	Prohibit
Storage/Handling of Fuel	Prohibit	Prohibit
Storage/Handling of DNAPLs	Prohibit	Prohibit
Storage/Handling of Organic Solvents	Prohibit	Prohibit
Management of Runoff – Aircraft De-Icing Chemicals	-	-
Use of Land as Livestock Grazing/Pasturing Land, Outdoor Confinement Area or Farm Animal Yard	Prohibit	RMP <sup>4</sup> Prohibit <sup>5</sup>
	<sup>1</sup> Where a Prescribed Instrument is not required	<sup>1</sup> design flow greater than 10,000 L
		<sup>2</sup> storage of sewage or treatment plant effluent discharge
		<sup>3</sup> greater than 2,500 kg
		<sup>4</sup> future livestock grazing/pasturing
		<sup>5</sup> new farm animal yard/outdoor confinement area

<b>WHPA - B v.8</b>		
<b>Threat</b>	<b>Kettle Creek</b>	<b>Long Point</b>
Waste Disposal Site subject to ECA	PI Prohibit <sup>1</sup>	-
Waste Disposal Site not subject to ECA	-	-
Sewage/Septic Systems - Septics	-	-
Sewage/Septic Systems - Storage of Sewage, Sewage Treatment Plan Effluent Discharges, Sewage Treatment Plant Discharge By-pass to Surface Water	PI Prohibit <sup>2</sup>	-
Sewage/Septic Systems -Sanitary Sewers & Related Pipes	-	-
Sewage/Septic Systems - Industrial Effluent Discharge & Combined Sewer Discharge	-	-
Discharge of Stormwater from a Stormwater Management Facility	-	-
Application of ASM	-	-
Storage/Handling of ASM	-	-
Application of NASM	-	-
Storage/Handling of NASM	-	-
Application of Commercial Fertilizer	-	-
Storage/Handling of Commercial Fertilizer	-	-
Application of Pesticide	-	-
Storage/Handling of Pesticide	-	-
Application of Road Salt	-	-
Storage/Handling of Road Salt	-	-
Storage/Handling of Snow	-	-
Storage/Handling of Fuel	-	-
Storage/Handling of DNAPLs	Prohibit	RMP <sup>1</sup>
Storage/Handling of Organic Solvents	-	-
Management of Runoff – Aircraft De-Icing Chemicals	-	-
Use of Land as Livestock Grazing/Pasturing Land, Outdoor Confinement Area or Farm Animal Yard	-	-
	<sup>1</sup> only applies to landfilling of municipal waste and solid non-hazardous industrial or commercial waste, liquid waste injection into a well	<sup>1</sup> for industrial, commercial, institutional and agricultural purposes
	<sup>2</sup> storage of sewage only	

<b>WHPA - B v.6</b>		
<b>Threat</b>	<b>Kettle Creek</b>	<b>Long Point</b>
Waste Disposal Site subject to ECA	-	-
Waste Disposal Site not subject to ECA	-	-
Sewage/Septic Systems - Septics	-	-
Sewage/Septic Systems - Storage of Sewage, Sewage Treatment Plan Effluent Discharges, Sewage Treatment Plant Discharge By-pass to Surface Water	-	-
Sewage/Septic Systems -Sanitary Sewers & Related Pipes	-	-
Sewage/Septic Systems - Industrial Effluent Discharge & Combined Sewer Discharge	-	-
Discharge of Stormwater from a Stormwater Management Facility	-	-
Application of ASM	-	-
Storage/Handling of ASM	-	-
Application of NASM	-	-
Storage/Handling of NASM	-	-
Application of Commercial Fertilizer	-	-
Storage/Handling of Commercial Fertilizer	-	-
Application of Pesticide	-	-
Storage/Handling of Pesticide	-	-
Application of Road Salt	-	-
Storage/Handling of Road Salt	-	-
Storage/Handling of Snow	-	-
Storage/Handling of Fuel	-	-
Storage/Handling of DNAPLs	Prohibit	RMP <sup>1</sup>
Storage/Handling of Organic Solvents	-	-
Management of Runoff – Aircraft De-Icing Chemicals	-	-
Use of Land as Livestock Grazing/Pasturing Land, Outdoor Confinement Area or Farm Animal Yard	-	-
		<sup>1</sup> for industrial, commercial, institutional and agricultural purposes



<b>WHPA - C</b>		
<b>Threat</b>	<b>Kettle Creek</b>	<b>Long Point</b>
Waste Disposal Site subject to ECA	-	-
Waste Disposal Site not subject to ECA	-	-
Sewage/Septic Systems - Septics	-	-
Sewage/Septic Systems -Storage of Sewage, Sewage Treatment Plan Effluent Discharges, Sewage Treatment Plant Discharge By-pass to Surface Water	-	-
Sewage/Septic Systems - Sanitary Sewers & Related Pipes	-	-
Sewage/Septic Systems -Industrial Effluent Discharge & Combined Sewer Discharge	-	-
Discharge of Stormwater from a Stormwater Management Facility	-	-
Application of ASM	-	-
Storage/Handling of ASM	-	-
Application of NASM	-	-
Storage/Handling of NASM	-	-
Application of Commercial Fertilizer	-	-
Storage/Handling of Commercial Fertilizer	-	-
Application of Pesticide	-	-
Storage/Handling of Pesticide	-	-
Application of Road Salt	-	-
Storage/Handling of Road Salt	-	-
Storage/Handling of Snow	-	-
Storage/Handling of Fuel	-	-
Storage/Handling of DNAPLs	Prohibit	RMP <sup>1</sup>
Storage/Handling of Organic Solvents	-	-
Management of Runoff – Aircraft De-Icing Chemicals	-	-
Use of Land as Livestock Grazing/Pasturing Land, Outdoor Confinement Area or Farm Animal Yard	-	-
		1 for industrial, commercial, institutional and agricultural purposes

<b>IPZ</b>		
<b>Threat</b>	<b>Kettle Creek</b>	<b>Long Point</b>
Waste Disposal Site subject to ECA	-	N/A
Waste Disposal Site not subject to ECA	-	N/A
Sewage/Septic Systems - Septics	-	N/A
Sewage/Septic Systems - Storage of Sewage, Sewage Treatment Plan Effluent Discharges, Sewage Treatment Plant Discharge By-pass to Surface Water	-	N/A
Sewage/Septic Systems - Sanitary Sewers & Related Pipes	-	N/A
Sewage/Septic Systems - Industrial Effluent Discharge & Combined Sewer Discharge	-	N/A
Discharge of Stormwater from a Stormwater Management Facility	-	N/A
Application of ASM	-	N/A
Storage/Handling of ASM	-	N/A
Application of NASM	-	N/A
Storage/Handling of NASM	-	N/A
Application of Commercial Fertilizer	-	N/A
Storage/Handling of Commercial Fertilizer	Prohibit <sup>1</sup>	N/A
Application of Pesticide		N/A
Storage/Handling of Pesticide		N/A
Application of Road Salt		N/A
Storage/Handling of Road Salt		N/A
Storage/Handling of Snow		N/A
Storage/Handling of Fuel	Prohibit <sup>2</sup>	N/A
Storage/Handling of DNAPLs		N/A
Storage/Handling of Organic Solvents		N/A
Management of Runoff – Aircraft De-Icing Chemicals		N/A
Use of Land as Livestock Grazing/Pasturing Land, Outdoor Confinement Area or Farm Animal Yard		N/A
	1 greater than 5,000 m3	
	2 greater than 6,000 L	

# APPENDIX B

Best Practices Review Summary  
Official Plans

## Best Practices – Official Plans

The municipal implementation of Source Protection Plans is growing but continues to be relatively limited to date in Ontario despite all Source Protection Plans receiving final approval from the Ministry of Environment and Climate Change. However, some municipalities have adopted an implementing Official Plan Amendment, or incorporated Source Protection policies through recent Official Plan Reviews.

The following sections provide examples of policies and policy frameworks in place or proposed in other jurisdictions currently implementing Source Protection policies.

### *City of Barrie*

The City of Barrie is implementing the Source Protection Plan in two phases. The first phase, undertaken in 2013, involved updating the mapping and policies of the Official Plan based on the information contained in the approved Assessment Report. The City is in the process of preparing a draft Official Plan Amendment to implement applicable Source Protection Plan policies.

The policies reviewed below are associated with the amendment resulting from the first phase of implementation.

The Official Plan currently contains policies related to the protection of Wellhead Protection Areas (WHPAs), and utilizes a Schedule overlay to delineate those areas where drinking water sources are vulnerable. Relevant policies within Section 3.5.2.3.5.1(b) require that:

- Development or site alteration that involves the storage or manufacturing of pathogens, chemicals or dense aqueous phase liquids are prohibited in vulnerable areas where they would be a significant threat;
- The expansion, alteration or redevelopment of existing uses in an area where an activity is or would be a significant threat may be permitted if the Risk Management Official (RMO) is satisfied that the threat ceases to be significant;
- A Threats and Issues Assessment (Water Quality) study is required when it is necessary to determine if a proposed development or use would be a significant threat within a vulnerable area; and
- The Zoning By-law shall prohibit or restrict land uses that involve a significant threat.

Further to the above policies, the City's Official Plan also includes policies related to the application and development process within WHPAs. Key concepts include:

- Any development, site alteration, or Planning Act proposal within a vulnerable area must include a Source Water Information Form
- A Threats and Issues Assessment – Water Quality study is required when it is necessary to determine whether a proposal would be a significant drinking water threat
- The City will seek opportunities through conditions of planning applications, development plans, community improvement plans, or other means to acquire lands, register easements or apply other methods to control activities within lands identified as WHPA-A.

- All industrial, commercial, institutional, open space and high density residential areas within vulnerable areas are subject to Site Plan Control.

## ***Town of Innisfil***

The draft new Official Plan for the Town of Innisfil includes a new policy section “Source Water Protection” to implement and conform to the South Georgian Bay Lake Simcoe Source Protection Plan. The proposed Source Water Protection policies of the new Official Plan:

- Identify and describe the vulnerable areas (WHPAs and IPZs) within the Town, and map these areas in an Appendix to an Official Plan;
- List the prescribed drinking water threats that would be prohibited in a vulnerable area where they would be a significant drinking water threat (Policy 15.4.1);
- Require preconsultation with the Risk Management Official to determine whether a proposed development or site alteration would involve a significant drinking water threat (Policy 15.4.2);
- Require the issuance of a Notice to Proceed (Section 59 Notice) in order for an application to be deemed complete;
- Implement the applicable land use planning policies of the South Georgian Bay Lake Simcoe Source Protection Plan; and
- Direct that the implementing zoning by-law shall contain an overlay zone to identify vulnerable areas.

The Innisfil approach to implementing Section 57 and 58 policies (Policy 15.4.1) is an example of a more ‘flexible’ approach. The requirement to preconsult with the Risk Management Official prior to the issuance of a Section 59 Notice (Policy 15.4.2) is a unique approach among the other municipalities reviewed and provides an example of implementing Section 59 policies, the link to complete application requirements, and how Risk Management Plans can be integrated into the process.

## ***Niagara Region***

The Niagara Peninsula Source Protection Plan was approved by the Ministry of the Environment with an effective date of October 1, 2014. Niagara Region brought forward a final recommendation report for Regional Official Plan Amendment 5 (ROPA 5) regarding source water protection policies and it was adopted by Regional Council on April 22, 2015.

Niagara Region draws its drinking water from surface water sources and as such the policy framework is limited to intake protection zones. The amendment will create a new section in the “Natural Environment” chapter of the Official Plan. Existing policies related to water resources remain unchanged.

The majority of the policy is worded similarly as those of the Source Protection Plan and therefore represent a direct implementation of the Source Protection Plan document. The policies are organized by intake protection zone (i.e. water treatment plant) similar to the Source Protection Plan and include prohibition and restriction policies for significant drinking water threats. Some of the prohibition policies reference the specific tables of circumstances where the activity or use is considered a significant drinking water threat such as policy 7.F.1.3 (DeCew Falls Water Treatment Plant):

*Policy 7.F.1.3      The discharge from wastewater treatment plants or combined sewer overflows, or discharge of industrial effluent is considered a significant threat as defined under the applicable circumstances in table 22 and table 48 in Appendix C of the Assessment Report (2013). Future*

*combined sewers, wastewater treatment facilities, and industrial effluent systems which meet these criteria are not permitted within the DeCew Falls Intake Protection Zone 1.*

This approach is not taken for uses and activities requiring Risk Management Plans.

The amendment also includes an annual reporting/monitoring policy, which outlines the content to be contained in the annual report, as well as new definitions to the definitions section. Included in the amendment are the definitions of the significant drinking water threats identified in the policies of the amendment, to be read in conjunction with the policy framework.

The Niagara Peninsula Assessment Report contained the applicable Tables of Circumstances in an Appendix to the Report.

Niagara Region's approach to prohibition represents another manner in which to address prohibited uses in the Source Protection Plan by incorporating the applicable Tables of Circumstances. Defining threats in the policy framework provides an understanding of the nature of prohibited uses and activities without the need to consult the Source Protection Plan or Assessment Report. The County may want to consider this approach as a means to provide 'lay' information to the public through a document (the Official Plan) that is most often used by the public.

## ***Town of Midland***

The South Georgian Bay Lake Simcoe Source Protection Plan was approved in 2014 and came into effect July 1, 2015. Prior to the in effect date, the Town of Midland prepared official plan and zoning by-law amendments to implement relevant SPP policies which were approved by Council on November 24, 2014. Prior to the amendment, the Official Plan contained a policy section related to groundwater resources and addressed groundwater source protection, wellhead protection areas, groundwater discharge areas and water takings. The amendment involved replacing the majority of the policies in this section with policies from the Town of Midland Source Protection Plan. Generally, the policies:

- Provide a text description of vulnerable areas and delineate wellhead protection areas on the Land Use Plan;
- List the drinking water threats regulated through the *Clean Water Act* and require the Risk Management Official to determine whether uses and activities would be a significant drinking water threat and should be prohibited or require a Risk Management Plan;
- Update existing general policies to include source protection considerations;
- Modify community design policies to address specific SPP policies;
- Add a number of on-site sewage system and stormwater management-related policies that are specific to the Town of Midland SPP;
- Incorporate a Restricted Land Use policy under Section 59 of the *Clean Water Act*, which reads as follows:

*No Planning Act Application may be made and no Building Permit or Change of Use Permit under the Ontario Building Code may be issued to establish the following uses:*

- *Application of agricultural source material to land*
- *Handling and storage of agricultural source material*
- *Application of non-agricultural source material*
- *Handling and storage of non-agricultural source material*

- *Application of commercial fertilizer to land*
- *Handling and storage of commercial fertilizer*
- *Application of pesticide to land*
- *Handling and storage of pesticide*
- *Application of road salt*
- *Handling and storage of road salt*
- *Storage of snow*
- *Handling and storage of fuel*
- *Handling and storage of DNAPLs*
- *Handling and storage of organic solvents*
- *Use of land for livestock grazing, pasturing land, an outdoor confinement, or farm animal yard,*

*unless a Risk Management Official has issued written notice under Subsection 59(2) of the Clean Water Act and the planning approval authority or building official is satisfied that:*

- a) The application complied with circumstances specified in the written notice from the Risk Management Official; and*
- b) The applicant has demonstrated that a significant drinking water threat activity designated for the purposes of Section 57 or 58 will not be engaged in, or will not be affected by the application.*

- Establishes the following policies in their Implementation and Administration section:
  - Requirements for a site plan control agreement where a use or activity may be a significant drinking water threat;
  - Education and outreach policies for individual threats grouped by broader categories (i.e. agriculture-related, chemical-related, weather-related and infrastructure-related threats)

It is noted that in the Midland approach to the implementation of SPP policies, the drinking water threats are referred to as ‘uses’ and the policy framework does not expressly prohibit uses that may be associated with prescribed drinking water threats in vulnerable areas. Instead, the policy leaves the determination of whether a use should be prohibited or requires a Risk Management Plan to the Risk Management Official. An example of the policy language with respect to prohibited uses is as follows:

*7.3.2.3 The following uses and activities are prohibited in accordance with Section 57 and Section 59 of the Clean Water Act, where they are or would be a significant threat to drinking water as determined by the Risk Management Official, or another professional duly qualified through the Clean Water Act...If the Risk Management Official or another person duly qualified through the Clean Water Act determines that there is no significant risk, then a use listed above may be permitted without the need for an amendment to this Plan where such use would otherwise be permitted.*

*7.3.2.4 The following existing uses and activities are designated for the purpose of Section 58 of the Clean Water Act, and require a risk management plan there they are a significant drinking water threat, as determined by the Risk Management Official, or another professional duly qualified through the Clean Water Act...*

The Midland policy approach provides another implementation option with respect to prohibited uses and uses requiring a Risk Management Plan that could be considered as an approach for new Source Protection policies in the County and local municipal Official Plans.



## County of Lennox & Addington

The first draft of the County's Official Plan was released in November 2014; it was approved by County Council on September 30, 2015 and approved by the Ministry of Municipal Affairs and Housing with modifications on March 9, 2016. The effective date of the Official Plan is April 5, 2016.

The Official Plan contained policies for Water Resources. Contained in the Plan are policies that apply restrictions to development and site alteration in Source Protection Areas.

The Development and Site Alteration policies in Section D2.2 state the following:

- a) *Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored.*
- b) *Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.*

With respect to Source Protection Plans, proposed policy D2.3.2 directs readers of the Official Plan to the relevant Source Protection Plan(s) for specific policies that may “restrict or prohibit certain existing and future land uses or activities.”

Section D2.3.3 provides policies for the protection of WHPAs and IPZs and relies on ‘notwithstanding’ policies to indicate that uses may be prohibited or restricted. These policies read as follows:

- a) *Notwithstanding the land use activities permitted by the underlying land use designations, shown on the Schedules to this Plan, land use activities which have been identified by a Source Protection Plan as being prohibited within SPP Policy Applicable Areas shall not be permitted.*
- b) *Notwithstanding the uses permitted by the underlying land use designations shown on the Schedules to this Plan, uses/activities may only be permitted within the SPP Policy Applicable Area if the applicant demonstrates to the satisfaction of the lower tier municipality that the proposed use/activity is in conformity with the policies contained within the relevant Source Protection Plans.*

The policy framework of Section D2.3.3 also addresses existing uses as follows:

- c) *Legally existing uses that are located within a SPP Policy Applicable Area, but which are regulated by the provisions of a Source Protection Plan policy and/or are incompatible with the provisions of this section of the Official Plan may be permitted to expand subject to the policies of this Official Plan and the relevant Source Protection Plan. Such uses shall be required to undertake measures that would protect municipal drinking water sources in the SPP Policy Applicable Area.*

This policy approach represents the simplest and most straightforward implementation of relevant source protection policies through the Official Plan.

## Township of Huron-Kinloss

The Township of Huron-Kinloss adopted a new Official Plan in 2016. The Source Protection policy framework of the new Plan implements the relevant policies of the Maitland Valley and Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Plans and includes the following:

- An overview of Source Protection Planning;
- The identification of vulnerable areas in the Township, including the mapping of Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas for information purposes only (i.e. no policies are provided for these vulnerable areas);
- The list of prescribed drinking water threats;
- The Section 59 and land use policies of the relevant Source Protection Plans;
- Includes the discretionary policies of the Source Protection Plans; and
- Incorporates the Zoning By-law conformity policy of the Source Protection Plans and provides guidance for the development of the implementing Zoning By-law Amendment.

Unique to other examples reviewed, the Huron-Kinloss Official Plan maps highly vulnerable aquifers (HVAs) and significant groundwater recharge areas (SGRAs) consistent with the 'vulnerable areas' definition of the Provincial Policy Statement, 2014. It is noted that Source Protection Plan conformity was undertaken as part as an Official Plan Review under the Planning Act as opposed to a stand-alone conformity amendment.

## ***Municipality of Callander***

The North Bay-Mattawa Source Protection Area Source Protection Plan was approved by the Minister of the Environment and Climate Change on March 5, 2015 and came into effect on July 1, 2015. Shortly after the plan came into effect, the Municipality of Callander approved Official Plan and Zoning By-law Amendments implementing the policies of the Source Protection Plan.

The Official Plan Amendment included establishing long term protection of drinking water through prohibitive policies where a threat was identified and the addition of a new schedule. New sections were added to the Official Plan which introduced policies relating to vulnerable areas within the municipality: Source Water Protection Zone One (SW IPZ-1), Source Water Intake Protection Zone One and Two (SW IPZ-1 and -2) and the Source Water Callander Issue Contributing Area (SW ICA). In addition to the policies, two accompanying Schedules were also introduced.

The new policy framework for the source water intake protection zones provides that:

- 4.21.5 *On the lands identified as hatched on Schedule "C" as Source Water Intake Protection Zone One (SW IPZ-1) the Municipality shall prohibit the future establishment of a land use that involves facilities for the storage of pesticides including the retail sale, manufacturing, processing and wholesaling thereof where the threat from the storage of pesticides is significant. Further the Municipality shall prohibit the future establishment of a salt storage facility greater than 5,000 tonnes where is stored in a manner that may result in its exposure to precipitation or runoff from precipitation or snow melt, as the threat from the open storage of road salt and, as a snow storage facility or snow dump (areas where snow is likely to be transported from offsite) where the threat from their establishment could be significant..*
- 4.21.6 *On the lands identified as cross-hatched on Schedule "C" as Source Water Intake Protection Zone One and Two (SW IPZ-1 and -2) the Municipality shall prohibit the future uses specifically including facilities for the storage of agricultural source material, facilities for the storage or handling of non-agricultural source material, facilities for the storage or handling of commercial fertilizer, and, the use of land as livestock grazing or pasturing land, an outdoor confinement area or farm – animal yard, as the threat from such uses would be significant.*

Furthermore, a policy with respect to Callander's issue contributing area was also added:

- 4.21.7 *On the lands identified as hatched on Schedule "C1" as Source Water Callander Issue Contributing Area (SW ICA), the Municipality shall prohibit the future use of land as storage of tailings from a mine or mine tailings pond, only if related to a circumstance containing phosphorus.*

The policy framework represents a direct implementation of the relevant Source Protection Plan policies.

## **County of Wellington**

The County is a unique area with regards to source water protection as it is governed by a number of source water protection plans including Grand River; Credit Valley, Toronto and Region and Central Lake Ontario (CTC); Saugeen, Grey Sauble, Northern Bruce Peninsula; Halton Region-Hamilton Region; and Maitland Valley Source Protection Plans. In addition to ensuring that Official Plan policies conform to the applicable significant threats and land use policies set out in the individual source protection plans, the Official Plan Amendment for the County of Wellington also established a new "Communal Well Policy Area" to protect and maintain existing communal wells in the Township of Puslinch, as these wells were not assessed or addressed through Source Protection planning.

A number of new Official Plan policies were introduced as part of the amendment which was adopted by County Council on May 26, 2016. The amendment identified the vulnerable areas located in the County including Wellhead Protection Areas (WHPAs), Surface Water Intake Protection Zones (IPZs) and Issue Contributing Areas (ICAs). The amendment also provided the list of prescribed drinking water threats from the *Clean Water Act, 2006*. Applications within vulnerable areas are to be deferred to the Risk Management Official and a Section 59 Notice is required as part of a complete application.

The Amendment also incorporated the applicable land use planning policies of the five Source Protection Plans. An Appendix to the Official Plan was used to refer users to the appropriate Source Protection Plan Area within the County and therefore the appropriate land use policies of a specific Plan.

Furthermore, a number of sections of the existing County Official Plan were modified or deleted by the amendment including policies related to large-scale development on private communal or individual on-site sewage services, small scale residential development on individual on-site sewage services within WHPAs, mineral aggregate resources, communal well policies and implementation. General water resource policies were expanded to address Source Protection and matters addressed by Section 2.2 Water of the Provincial Policy Statement, 2014.

Local municipalities will be responsible for amending their respective Zoning By-laws in accordance with the applicable source protection plans.

The County of Wellington implementing Official Plan Amendment is one of the more recent examples of Source Protection Plan implementation under the Clean Water Act, 2006, having been reviewed by the Ministry of Municipal Affairs and Housing and ultimately adopted by County Council.

## **Town of Carleton Place**

The Mississippi-Rideau Source Protection Plan was approved on August 27, 2014 and came into effect on January 1, 2015. The Source Protection Plan conformity amendment added policies regarding the Town's Intake Protection Zone (IPZ) and included the following:

- 4.3.13
- a. *All development in the IPZ 10 area designated on Schedule A must be connected to municipal services.*
  - b. *Lands shown as Intake Protection Zone on Schedule A are areas where Planning Act and Building Code Act applications shall require a clearance notice from the Risk Management Official.*
  8. *By January 1, 2016, Council shall initiate an education and outreach program for residents within the IPZ areas to raise awareness about drinking water sources and good stewardship practises. This education program shall be ongoing.*

This policy approach is a straight forward implementation of applicable Source Protection Plan policies under the Clean Water Act, 2006, and also implements a discretionary policy of the Source Protection Plan.

## ***Municipality of Bluewater***

The Municipality of Bluewater is subject to the Ausable Bayfield Source Protection Plan, which was approved by the Ministry of the Environment and Climate Change on January 19, 2015 and came into effect on April 1, 2015. As part of its Official Plan Review, the municipality incorporated new policies with respect to source water protection through a new section in the Official Plan.

The policies reference that there are four types of vulnerable areas within Huron County including Wellhead Protection Areas, Intake Protection Zones, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. The policies pledge to protect, improve and restore municipal drinking water resources and the components of the municipality's strategy will include the following:

- Education and Outreach;
- Prohibiting activities that are hazardous to the drinking water supply (OCWA Section 57);
- Developing and Implementing Risk Management Plans (OCWA Section 58);
- Restricted Land Use Notices (OCWA Section 59); and
- Addressing the 21 Drinking Water Threats identified in the OCWA.

The amendment also included policies with respect to private septic systems and municipal sanitary servicing on those properties located within wellhead protection areas and the vulnerability score is 10, which is a direct implementation of the land use planning policies of the Source Protection Plan.

In addition to implementing the significant threat policies of the relevant Source Protection Plan under the Clean Water Act, 2006, the Bluewater Amendment also recognizes the discretionary policies of the Ausable-Bayfield Source Protection Plan and identifies Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas in Official Plan mapping as 'vulnerable areas' under the Planning Act.

## ***York Region***

The South Georgian Bay Lake Simcoe Source Protection Plan came into effect on July 1, 2015 and the Credit Valley, Toronto and Region Central Lake Ontario Drinking Water Source Protection Plan came into effect on December 31, 2015. York Region is subject to the policies contained in both source protection plans.

In anticipation of the approved Assessment Reports and Source Protection Plans, placeholder policies were included in the ROP in 2010. As early as 2005, the York Regional Official Plan included wellhead

protection policies and mapping to be consistent with the Oak Ridges Moraine Conservation Act and the Greenbelt Act. In 2005, the policies were restricted to wellhead protection areas located on the Oak Ridges Moraine but in 2010, the policies and mapping in the ROP encompassed all wellhead protection areas to protect all municipal drinking water supplies. These were temporary measures until the Assessment Reports and subsequently the Source Protection Plans were complete.

In 2013 and in advance of the source protection plans coming into effect, staff proposed a draft amendment to the York Region Official Plan (ROP) 2010, Regional Official Plan Amendment 5, to update the mapping and policies in a number of areas. Policy amendments were required to ensure that policies implemented the mapping information found in the Assessment Reports and to improve policy wording that better reflected the intent of the Clean Water Act. In addition to the changes to the existing mapping, ROPA 5 also introduced two new maps which identified Significant Groundwater Recharge Areas and Highly Vulnerable Aquifers which were not previously identified on existing mapping.

Now that the source protection plans have been approved, a second ROPA will be required to bring the ROP into conformity with the Source Protection Plans. This Amendment has not yet been initiated.

## ***Norfolk County***

Norfolk County is a single-tier municipality and is subject to the Long Point Region Source Protection Plan. Draft amendments to the County's Official Plan and Zoning By-law have been prepared as part of the County's Source Protection Plan conformity exercise to incorporate the significant threat policies of the Long Point Region Source Protection Plan.

The draft Official Plan Amendment will update the County's existing Source Protection/Water Resource policy framework that:

- Identifies the vulnerable areas (WHPAs, IPZs and ICAs) within the County and maps each vulnerable area on a separate schedule to the Official Plan;
- Identifies the prescribed drinking water threat activities and defers the determination of whether a land use activity is a significant drinking water threat to the Risk Management Official;
- Implements the land use planning policies of the Long Point Region Source Protection Plan;
- Updates existing water resource policies with the discretionary policies of the Source Protection Plan (i.e. education and outreach, monitoring); and
- How the Official Plan is to be amended when the Source Protection Plan is reviewed and updated.

The draft Official Plan Amendment has many similar characteristics to those of other municipalities that have implemented Source Protection Plans within their jurisdiction. The Norfolk is somewhat unique in that the policy framework will implement some of the discretionary policies of the Long Point Region Source Protection Plan. It is noted that the Norfolk Official Plan contained policies regarding education and outreach and monitoring in its water resource policy section prior to undertaking the Source Protection Plan conformity exercise.

## ***Township of Tiny***

The Township of Tiny's Source Protection conformity Amendment takes a similar approach to that of the Town of Midland and expressly prohibits uses and activities involving the prescribed drinking water threats where they are or would be a significant threat to drinking water under Section 57 and 59 of the Clean Water Act. Similarly, the prescribed drinking water threats are again listed in the Official Plan policy



framework, and applied to the requirement of Risk Management Plans under Section 58 of the Clean Water Act. Determination as to whether a land use or activity is a significant drinking water threat is deferred to the Risk Management Official, or “another professional duly qualified through the *Clean Water Act*” (Policy C4.1.2 and C4.1.4). The policy framework implements the applicable significant threat and land use planning policies of the South Georgian Bay Lake Simcoe Source Protection Plan, as well as a number of discretionary policies related to education and outreach, incentives, and specific actions.

Vulnerable Areas (WHPAs) and Issue Contributing Areas (ICAs) are mapped as a policy overlay on existing Official Plan Schedules. The full extent of WHPAs, including WHPA-D areas, are mapped in the Official Plan, despite there being no significant threat policies associated with these areas.

## ***Summary of Best Practices***

Municipal approaches to the preparation of Official Plan policy frameworks to implement Source Protection Plan policies under the *Clean Water Act, 2006* varies between municipalities and is dependent on the structure of existing official plan policy and the significant threat policies of the applicable Source Protection Plan(s). With respect to specific policy approaches, the following is noted from the best practices review:

- Some municipalities take a more restrictive approach to significant drinking water threats by prohibiting or restricting specific uses in vulnerable areas, whereas others take a more permissive approach by deferring to the Risk Management Official or to the relevant Source Protection Plan in the policy framework;
- In some cases, individual significant drinking water threats are defined within the source protection policy framework or glossary of the Official Plan, whereas in others the prescribed drinking water threats are simply listed without further definition in the Official Plan;
- Land use planning policies of the relevant Source Protection Plan(s) are directly implemented through Official Plan policy text;
- A schedule is included in the Official Plan where multiple Source Protection Plans apply and is referenced in the policy text to appropriately apply different policies of multiple Source Protection Plans within one municipality;
- Some municipalities map WHPA-D areas even though there are no significant threat policies for these areas contained in Source Protection Plans;
- Vulnerable Areas (WHPAs, IPZs) are either mapped in Official Plans on dedicated Schedules or as policy overlays on existing Official Plan Schedules;
- Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas are mapped for information purposes only in Official Plans where Source Protection Plan conformity amendments are undertaken as part of an Official Plan Review;
- Required studies related to source water protection in vulnerable areas are defined or described within the framework of the Official Plan; and
- The Tables of Circumstances are cited in Official Plan policy, such as in the case of Niagara Region.

# **APPENDIX C**

**Best Practices Review Summary  
Zoning By-laws**

## Best Practices – Zoning By-laws

Only a few best practice examples of Source Protection Plan conformity Zoning By-law Amendments are currently available. As such, these examples, as well as some zoning regulations that implement existing source water protection Official Plan policies (which were established pre-*Clean Water Act*), were examined to understand what, if any, innovative regulatory approaches exist to implement source protection Official Plan policies in a general sense. Existing By-laws that took a two-tier approach to regulating uses in WHPAs were the focus of the review. The following provides examples of how new zoning regulations to implement Source Protection Plan policies could be structured and therefore inform the preparation of Source Protection conformity Zoning By-law Amendments for local municipal Zoning By-laws.

### ***Township of Zorra***

The Township of Zorra has provisions within Section 5.1.2 of Zoning By-law 35-99 related to the protection of Groundwater Recharge Areas. Through these provisions (as associated mapping of such recharge areas on their Zoning Schedules), the Township uses a two-tiered approach to protect such areas. First, permitted uses are outlined as those uses that existed as of the date of the passing of the By-law. Furthermore, all uses permitted within the underlying zone are also permitted, with the exception of a list of uses that are deemed a threat to groundwater resources.

Those uses that are restricted by the By-law, when permitted in an underlying zone, require a Disclosure Report and/or Contingency Report prior to issuing a building permit, and also require the proponent to enter into a Site Plan Control agreement.

The Zoning By-law currently implements the water resource policies of the County of Oxford, which were established pre-*Clean Water Act*.

### ***Town of Midland***

The Town of Midland has prepared a draft Zoning By-law Amendment to implement the draft policies of the new Official Plan with respect to source water protection under their respective Source Protection Plan. The amendment involves establishing a Wellhead Protection Area Overlay Zone and a regulatory framework that restricts non-residential uses or activities associated with non-residential uses that involve any of the significant drinking water threats identified in the *Clean Water Act* until it is demonstrated to the satisfaction of the Risk Management Official, or other qualified professional, that the use does not represent a significant threat to drinking water within the overlay zone.

The amendment also establishes a Wellhead Protection Area *Quantity* Overlay Zone that prohibits non-residential uses that have the potential to impact the supply of water by removing water from an aquifer without returning it to the same aquifer unless it has been demonstrated to the satisfaction of the Risk Management Official, or other qualified professional, that the use does not represent a significant threat to drinking water within the overlay zone.

The Amendment implements the Section 57, 58 and 59 policies of the Source Protection Plan, as well as applicable land use planning policies.



## ***Town of Innisfil***

Section 3.53.1 of the Town of Innisfil Zoning By-law 080-13 contains provisions that prohibit uses in wellhead protection areas and intake protection zones that are identified in the current policy framework of the Official Plan. Wellhead protection areas and intake protection zones are shown on all zoning maps that form Schedule A to the By-law as opposed to being provided on a separate schedule to the Zoning By-law.

Section 3 is the General Provisions section of the Zoning By-law.

## ***Township of Tiny***

The Township of Tiny had approved a draft Zoning By-law Amendment for comment that implements the source protection policies of the South Georgian Bay Lake Simcoe Source Protection Plan and proposed source water policies of the Township's Official Plan. A new section is to be added to the Zoning By-law through the proposed amendment that regulates or prohibits uses in source protection areas. The By-law uses an overlay zone approach to identify water quality and water quantity WHPAs and establishes a holding zone for uses involving the prescribed drinking water threats, which are listed in the amendment. The holding zone is only to be lifted upon confirmation from the Risk Management Official, or other duly qualified professional, that the use does not represent a significant drinking water threat. The same approach to the holding provision is used for drinking water quantity threats.

The overlay zone does not distinguish individual limits of WHPA-A, -B or -C areas, or associated vulnerability scores. New regulations are contained in the General Provisions section of the Zoning By-law.

## ***Norfolk County***

A draft Zoning By-law Amendment has been prepared for Norfolk County to implement the proposed Source Protection Plan conformity Official Plan Amendment and meet the statutory requirements of the *Clean Water Act, 2006*. The draft Amendment replaces the existing Wellhead Protection (Section 3.35) regulations of the By-law (note existing regulations based on the current source protection policy framework of the Official Plan, which was established pre-*Clean Water Act*, and includes the following from the draft Official Plan Amendment:

- Identifies vulnerable areas and describes vulnerability scores;
- Incorporates the Section 59 policy
- Uses the notwithstanding provision to prohibit any land use that may involve a prescribed drinking water threat until it is determined that the use does not represent a significant drinking water threat or a Section 59 Notice has been issued
- Incorporates the land use planning Source Protection Plan policies related to large and small septic systems and holding tanks.

The existing Wellhead Protection Schedule series to the Zoning By-law (Schedule B) will be replaced through the draft amendment with the mapping of vulnerable areas from the Source Protection Plan. Different line types/thicknesses are used to identify the limits of WHPA-A, B and C areas as well as IPZs. Various shades of grey tones are used to identify the vulnerability scores of the WHPAs and IPZ. WHPA limits and vulnerability scores are included in the Schedule mapping to assist in the interpretation of the proposed zoning regulations, mainly the direct implementation of land use planning policies from the Long Point Region SPP.

Source Protection regulations are contained in the General Provisions section of the Zoning By-law.

## Summary

The zoning approach is generally consistent between all reviewed municipal zoning by-laws – an overlay is established, either in individual zoning maps or as a separate schedule to the By-law, and the regulatory framework applying to the overlay is contained in the General Provision section of the Zoning By-law.

The specific regulations are implementations of the Official Plan policy framework and as such are unique to individual municipalities.

The Township of Tiny takes a unique approach by establishing a holding provision on lands within vulnerable areas associated with the prescribed drinking water threats. The use of a holding provision is not recommended as it:

- Continuously requires amendments to the Zoning By-law to remove the holding provision for uses associated with prescribed drinking water threats where they do not constitute a *significant* drinking water threat, resulting in an overlap of process where such overlap is not required; and
- Puts the decision-making power to Council or Committee with respect to permitting the use, through the lifting of the holding provision, where the Risk Management Official is to determine whether the use is permitted subject to the *Clean Water Act* and applicable Source Protection Plan, provide the use is permitted by the underlying land use designation/zoning category.

Regulatory examples from the reviewed Zoning By-laws-noted By-laws that could be applied to the Zoning By-laws of local municipalities within the County include:

- The listing of the prescribed drinking water threats and deferring determination of whether use/activity is permitted to the Risk Management Official (Town of Midland and Norfolk County example);
- Direct implementation of Source Protection Plan land use planning policies; and
- Requirement of a Disclosure Report prior to the issuance of a Building Permit (Zorra example).

The recommended framework for the implementing Zoning By-law Amendment to be undertaken by local municipalities will be further assessed as the structure and content of individual Official Plan Amendments are prepared and refined in consultation with County and municipal staff.

# APPENDIX D

## **Draft Official Plan Policy Text Source Protection Plan Implementation**

1. Elgin County
2. Municipality of Central Elgin
3. Municipality of Bayham
4. Township of Malahide

## **THE PREAMBLE**

### **PURPOSE**

The purpose of the proposed amendment is to establish a policy framework in the Elgin County Official Plan that provides direction to local area municipalities in amending their Official Plans to establish policies to protect water resources and conform to applicable Source Protection Plans that regulate municipal drinking water sources.

### **BASIS**

Elgin County is subject to four Source Protection Plans, including the Kettle Creek Source Protection Plan, the Long Point Region Source Protection Plan, the Catfish Creek Source Protection Plan, and the Thames, Sydenham and Region Source Protection Plan.

Section 40 of the *Clean Water Act* requires municipalities to amend their Official Plans to conform with the relevant significant threat and designated Great Lakes policies and map schedules set out in those Source Protection Plans that regulate their municipal drinking water systems. The Municipalities of Central Elgin and Bayham have municipal drinking water systems that are regulated by the Kettle Creek and the Long Point Region Source Protection Plans, respectively. The Township of Malahide does not have any municipal drinking water systems regulated by a Source Protection Plan, but a portion of the Wellhead Protection Areas associated with drinking water systems in the Municipalities of Central Elgin and Bayham are located within the Township of Malahide and as such the Township Official Plan must also be amended to conform with the Kettle Creek and Long Point Source Protection Plans that regulate these systems.

Remaining municipalities within Elgin County – being the Town of Aylmer, Municipality of Dutton-Dunwich, the Township of Southwold and the Municipality of West Elgin – do not have municipal drinking water systems that are regulated by a Source Protection Plan. However, the extent of existing policies related to the protection of water resources varies between the Official Plans of these municipalities. Providing direction to these municipalities for the establishment of a standard water resources policy framework ensures that water resources are afforded the same level of protection across all municipalities within the County whether or not their drinking water systems are regulated by a Source Protection Plan.

This Amendment includes a new Schedule to the County Official Plan, which identifies the Source Protection Plan Area boundaries of the Kettle Creek, Long Point Region, Catfish Creek and Thames, Sydenham and Region Source Protection Plans as they apply to Elgin County.

### **LOCATION**

The Amendment affects all municipalities within Elgin County.

### **BACKGROUND**

Section 2.2 of the Provincial Policy Statement, 2014 (PPS) establishes a policy framework that provides direction to municipalities in the protection, improvement and restoration of water quality and quantity to which Official Plans must conform. Vulnerable areas related to municipal drinking water resources that are delineated through the Source Protection Planning process under the *Clean Water Act, 2006* meet the definition of *designated vulnerable areas* under the PPS. Policy 2.2.1 of the PPS gives municipalities the authority to protect, improve and restore the quality and quantity of water by implementing necessary restrictions on development and site alteration.

A Background Report was prepared to document the development of the draft policy framework of this

Amendment. The Background Report provides a review of the mapping and policies of the relevant Source Protection Plans that are to be implemented through the Official Plan, a best practices review of approaches to Source Protection conformity Amendments undertaken by other municipalities and an analysis of the existing policy framework of the Elgin County Official Plan. Based on the findings of this work, a range of Source Protection Plan policy implement options and considerations for the draft Amendment were presented to County planning staff and the Risk Management Official in January 2017. The recommended implementation options were then carried forward to form the basis of the drafting of the proposed Amendment. The draft Amendment was further refined with County staff and the Risk Management Official in February 2017 in a Municipal Workshop format prior to being circulated for public and agency comment.

## **THE POLICIES**

### **D2 WATER RESOURCES**

Surface and groundwater sources occur throughout the County and are an essential resource for urban and rural water supplies, agricultural production and the maintenance of the natural heritage system. Surface water sources, including streams, lakes, ponds and wetlands are normally protected through their inclusion within the natural heritage system. Maintaining a sustainable groundwater supply is a priority to meet the needs of current and future residents. The following policies will provide guidance with respect to the protection and management of water resources in the County.

#### **D2.1 Watercourses**

All of the watercourses in the County are considered to be environmentally *significant* since they:

- a) store storm and melt waters;
- b) contain fish and *wildlife habitat* areas;
- c) function as corridors for migrating *wildlife habitat* movement and vegetation dispersal;
- d) serve to maintain the *quality and quantity of water* (surface and ground water resources); and,
- e) assist in the improvement of air quality.

It is the intent of this Plan to protect all watercourses from incompatible *development* to minimize the impacts of such *development* on their function.

#### **D2.2 Improving, Protecting and Restoring**

The County and local municipalities shall protect, improve or restore the quality and quantity of water by:

- a) using a watershed as the ecologically meaningful scale for planning;
- b) minimizing potential negative impacts, including cross- jurisdictional and cross-watershed impacts;
- c) identifying surface water features, ground water features, hydrologic functions and natural heritage features and areas that are necessary for the ecological and hydrological integrity of the watershed;

- d) implementing necessary restrictions on development and site alteration to conform with the Source Water Protection Policies of this Plan;
- e) maintaining linkages and related functions among surface water features, ground water features, hydrologic functions and natural heritage features and areas;
- f) promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality;
- g) ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces;
- h) promoting the use of sustainable and low impact development stormwater strategies and practices;
- i) restricting development and site alteration in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored; and
- j) employing mitigative measures and/or alternative development approaches, where required, to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.

## D2.3

### Source Water Protection

The Clean Water Act, 2006 ensures the protection of municipal drinking water supplies by outlining a risk-based process on a watershed basis to identify vulnerable areas (i.e. wellhead protection areas) and associated drinking water threats through the preparation of Assessment Reports, and develop policies and programs to eliminate or reduce the risks posed by identified drinking water threats through the preparation of Source Protection Plans. This process is otherwise known as Source Protection Planning.

The science-based Assessment Report is the technical basis upon which a Source Protection Plan is prepared. The Source Protection Plan contains policies to address the drinking water threats identified in the Assessment Report. There are four Source Protection Plans that apply within the County of Elgin: the Catfish Creek Source Protection Plan, the Kettle Creek Source Protection Plan, the Long Point Region Source Protection Plan; and the Thames, Sydenham & Region Source Protection Plan. The boundaries of these Source Protection Plans as they apply to the County are identified in Schedule D to this Plan.

The Municipalities of Central Elgin and Bayham have drinking water systems that are regulated by one or more Source Protection Plans. To implement Source Protection Plan policies and ensure the protection, improvement and restoration of the quality and quantity of groundwater resources, local municipalities shall amend their official plans, and where required, zoning by-laws to:

- a) promote water conservation practices, including the efficient and sustainable use of water resources;
- b) encourage stormwater management practices that minimize stormwater volumes and contaminant loads in order to enhance water quality and quantity control;
- c) implement restrictions on development and site alteration to protect all municipal drinking water supplies and sensitive groundwater features;
- d) encourage agricultural practices that protect water resources;
- e) identify the vulnerable areas in which a significant drinking water threat could occur as specified in the applicable Source Protection Plan(s); and
- f) conform to significant drinking water threat policies and threat-specific land use policies as required by applicable Source Protection Plan(s).

**The following terms are to be added to Appendix ‘A’ Defined Terms:**

**Activity**

Means one or a series of related processes that occurs within a geographical area and may be related to a particular land use.

**Assessment Report**

Means a scientific-based document that forms the basis of the Source Protection Plan, by identifying vulnerable areas, assessing vulnerability, identifying source water quality issues, identifying threats to the drinking water, and assessing the risk due to threats.

**Drinking Water Threat**

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

**Highly Vulnerable Aquifer**

Means an aquifer on which external sources have or are likely to have a significant adverse effect, and includes the land above the aquifer. (Ontario Regulation 287/07 under the Clean Water Act, 2006)

**Section 59 Notice**

Refers to the requirements under Section 59 of the Clean Water Act, which requires issuance of a notice from the Municipality’s Risk Management Official before permitting an *activity* that is considered a restricted land use as identified in the *Source Protection Plan*.



### **Significant Drinking Water Threat**

Means a *drinking water threat* that, according to a risk assessment, poses or has the potential to pose a significant risk. (Clean Water Act, 2006)

### **Significant Groundwater Recharge Area**

Means an area within which it is desirable to regulate or monitor drinking water threats that may affect the recharge of an aquifer. (Ontario Regulation 287/07 under the Clean Water Act, 2006)

### **Source Protection Plan**

Means a drinking water source protection plan prepared under the Clean Water Act, 2006. A Source Protection Plan contains policies to reduce the threats (identified in the *Assessment Report*) to drinking water sources.

### **Surface Water Intake Protection Zone**

Means an area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats (Ontario Regulation 287/07 under the Clean Water Act, 2006).

### **Vulnerable Area**

Means a *significant groundwater recharge area*, a *highly vulnerable aquifer*, *surface intake protection zone*, or a *wellhead protection area*. (Clean Water Act, 2006)

### **Wellhead Protection Area**

Means an area that is related to a wellhead and within which it is desirable to regulate to monitor drinking water threats. (Ontario Regulation 287/07 under the Clean Water Act, 2006)

## **THE PREAMBLE**

### **PURPOSE**

In accordance with Section 40 of the *Clean Water Act, 2006*, the purpose of the proposed amendment is to bring the Municipal Official Plan into conformity with the relevant policies and map schedules of the Kettle Creek Source Protection Plan as it applies to the Municipality of Central Elgin. Specifically, the Municipal Official Plan is required to conform to the applicable significant threat and land use policies set out in the Kettle Creek Source Protection Plan. It is noted that the Municipality of Central Elgin is also located within boundary of the Catfish Creek Source Protection Plan Area; however the Source Protection Plan does not contain policies for any municipal drinking water systems within the Municipality.

This Amendment includes revised Schedules to the Municipal Official Plan, which identify a Wellhead Protection Area (WHPA) for the Belmont municipal water supply source and a Surface Water Intake Protection Zone (IPZ) for the Elgin Area Primary intake municipal water supply source, as mapped in the Kettle Creek Source Protection Plan. A new Schedule to the Municipal Official Plan, which identifies the Source Protection Plan Area boundaries of the Kettle Creek and Catfish Creek Source Protection Plans, as they apply to the Municipality, is also included.

### **LOCATION**

The Wellhead Protection Area and Surface Water Intake Protection Zone are identified on Schedule A and affect the Belmont Wellhead and Elgin Area Primary intake, two municipal drinking water supply sources in the Municipality.

### **BACKGROUND**

The *Clean Water Act, 2006* introduced a new level of protection for Ontario's drinking water resources and establishes requirements for protecting vulnerable drinking water resources at-source. The Act establishes roles and responsibilities for the Province, municipalities, and landowners in protecting drinking water resources for current and future generations. The process identified in the *Clean Water Act, 2006* is commonly referred to as 'Source Protection Planning'.

Municipalities are a key partner in Source Protection Planning and are represented on Source Protection Committees. Source Protection Committees lead the process of implementing the *Clean Water Act, 2006* through the preparation of Assessment Reports and Source Protection Plans for the areas they represent.

The preparation of Assessment Reports is required under the *Clean Water Act, 2006*, and form the scientific basis for the preparation of Source Protection Plans. Source Protection Plans contain the policies to address the drinking water threats identified in the Assessment Report. The two main objectives of Source Protection Plans are:

1. To protect existing and future drinking water sources in the source protection area; and
2. To ensure that, for every vulnerable area identified in an Assessment Report as an area where an activity is or would be a significant drinking water threat, the activity never becomes a significant drinking water threat, or if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat.

Vulnerable areas related to municipal drinking water resources that are delineated in Assessment Reports (i.e. Wellhead Protection Areas and Surface Water Intake Protection Zones) meet the definition of *designated vulnerable areas* under the Provincial Policy Statement, 2014 (PPS). Policy 2.2.1 of the PPS gives municipalities the authority to protect, improve and restore the quality and quantity of water by

implementing necessary restrictions on development and site alteration.

Numerous public information sessions and open houses were held by individual Source Protection Committees when preparing the Assessment Reports and subsequent Source Protection Plans that apply to the Municipality of Central Elgin. Sessions were also held to present and receive feedback on the proposed Source Protection Plan policies prior to final approval by the Ministry of Environment and Climate Change. Individual property owners within vulnerable areas were also notified directly by the respective Source Protection Authorities throughout the approval process of the Assessment Reports and Source Protection Plans. Additional property owner contact is conducted through the threat activity verification process and/or Risk Management planning process, as required.

## **THE POLICIES**

### **3.3 WATER RESOURCES**

Central Elgin contains several creeks and streams, draining to Lake Erie. The two major watershed systems include the Kettle Creek watershed and the Catfish Creek Watershed Area. Both watersheds support a diverse, predominantly warm water fishery.

The Community of Belmont and the majority of the rural population rely on municipal groundwater systems or private groundwater wells for residential, agricultural and some commercial/industrial uses. The remaining Urban Settlement Areas of Central Elgin rely on the Lake Erie Primary Supply System, a surface water intake within Lake Erie, as the source for domestic water use. The Municipality recognizes and supports the need to protect ground and surface water sources of drinking water.

Reference shall be made to the Elgin County Official Plan for the definition of those terms italicized in this policy section.

#### **Goals**

- To protect water resources from contamination and degradation associated with certain land uses and activities and encourage agricultural practices that protect water resources.
- To sustain and enhance the surface and ground water resources of the Municipality for the benefit of its current and future residents.
- To ensure that land use decisions advance water conservation efforts and support the efficient use of water resources.
- To encourage the reduction of water consumption levels through the promotion of the efficient use of water.
- To protect, improve or restore the quality and quantity of water.
- To protect surface and groundwater quality through the use of regulatory and voluntary means of prohibiting, restricting or influencing land uses and activities within vulnerable areas, and overlying vulnerable aquifers.
- To identify surface water features, ground water features, hydrologic functions and natural heritage features and areas which are necessary for the ecological and hydrological integrity of the watershed
- To maintain linkages and related functions among surface water features, ground water features, hydrologic functions and natural heritage features and areas.
- To recognize the important role of water resources in sustaining a healthy and diverse fishery.

#### **3.3.1 Watershed and Subwatershed Studies**

Central Elgin recognizes the watershed as an ecologically meaningful scale for planning and supports subwatershed planning as an important tool in promoting the efficient and sustainable use of water resources. The following policies shall apply:

- a) Central Elgin supports the preparation of subwatershed management plans and the use of regional stormwater quality/quantity management facilities to assist in water resource and land use planning

on an ecosystem basis. Central Elgin will work cooperatively with adjacent municipalities, the Conservation Authorities and affected/benefitting landowners as required in the preparation and implementation of watershed and subwatershed plans. Subwatershed studies are required prior to new development outside of the built area in all urban settlement areas.

- b) Subwatershed plans will generally be scoped as to their content prior to study commencement. The Plan shall comprise a program of management strategies, measures and actions designed to protect, enhance and sustain the subwatershed's natural features and ecological functions, restore those features and functions that have been degraded and guide future development to ensure the long term health of the environment is maintained and/or enhanced as the lands are urbanized. The following is provided as general guidance for the preparation of these studies when required:
  1. A description of the location, spatial extent, present status, significance and sensitivity of the natural environment within the subwatershed including;
    - quantity and quality of surface water and ground water;
    - aquatic and terrestrial habitat;
    - fisheries and wildlife communities;
    - soils and geomorphology;
    - their linkages.
  2. The goals and objectives for management of the subwatershed;
  3. Identification of natural features/areas and hazard lands and the recommendation of appropriate environmental management strategies;
  4. Identification of lands where development should not be permitted and where development may be permitted subject to site-specific environmental studies to identify measures to mitigate the potential impacts of development;
  5. Identification of Stormwater Best Management Practices for the subwatershed including options for regional facilities;
  6. Establishment of a subwatershed management strategy and plan for implementing the selected environmental and development practices; and
  7. Identification of implementation mechanisms involving official plan policies, zoning, plans of subdivision, etc.
- c) Where development and/or site alteration is proposed in an area where a subwatershed study has been prepared:
  1. Central Elgin shall determine:
    - (i) in consultation with the appropriate agencies, if the subwatershed study is consistent with policy statements issued under the authority of the Planning Act, and therefore meets Provincial interest, and
    - (ii) if the subwatershed study meets with the policies of this Plan, or
    - (iii) if an update or addendum to the study is required.
  2. Proposed development shall not proceed until any required update/addendum is completed to the satisfaction of the Municipality in consultation with the appropriate agencies.
  3. Development and/or site alteration shall comply with the recommendations and strategies of the subwatershed study and/or its update/addendum.

4. Area specific recommendations from the existing subwatershed study may be found in Subsection 4.7 - Individual Community Land Use Plans to this plan.

### **3.3.2 Stormwater Management**

- a) Central Elgin will require stormwater quality and quantity management control for all proposed developments in accordance with the Ministry of the Environment's Stormwater Planning and Design Manual and the Central Elgin Infrastructure Design Guidelines and Construction Standards, as may be revised from time to time. A Certificate of Approval under the Ontario Water Resources Act may be required prior to the implementation of proposed stormwater management works.
- b) Stormwater management facilities shall be located and designed on the basis of recommendations identified in a subwatershed study or master drainage plan. Where a subwatershed study or master drainage plan has not been completed, Central Elgin shall require that a Stormwater Management Concept Plan be completed to the satisfaction of the Municipality in consultation with the appropriate agencies. The Stormwater Management Concept Plan shall include:
  1. Provisions to mitigate the impact of proposed development on the environment and on existing overland stormwater flow;
  2. Provisions to control erosion, sedimentation, and pollution likely to result from development projects;
  3. Provisions to reduce on-site and downstream surface ponding and flooding;
  4. Provisions to protect and enhance water quality and base flow in receiving watercourses;
  5. Provisions to protect groundwater recharge/discharge areas;
  6. Provisions to ensure that the discharge from stormwater management facilities shall not become a *significant drinking water threat* in accordance with the Kettle Creek Source Protection Plan.
  7. Provisions to reduce the total cost of a stormwater drainage system and its related works; and
  8. Any other criteria or guidelines which may be required to regulate development in order to achieve effective stormwater management in the subcatchment or tributary.
- c) Central Elgin shall encourage minimizing the number of stormwater management facilities, and will encourage the use of regional stormwater management facilities where feasible.
- d) A proponent of development and/or site alteration may be required to submit a Stormwater Management Functional Report to demonstrate how the recommendations of the Subwatershed Study, Master Drainage Plan or Stormwater Management Concept Plan will be implemented. The Stormwater Management Functional Report shall contain any or all of the following information:
  1. An assessment of how the proposed development will address the stormwater management issues, best management practices, development criteria and stormwater targets identified in the applicable Subwatershed Study, Master Drainage Plan or Concept Plan, if such exists;
  2. A plan for the provision of site-specific stormwater drainage facilities to accommodate the proposed development;
  3. A plan for the control of erosion and sedimentation to minimize the impact of the proposed development on any watercourse; and
  4. A grading plan for the proposed development.

- e) A Stormwater Management Plan and/or Report shall be reviewed and approved by the Ministry of Transportation (MTO) for those developments located adjacent to or in the vicinity of a Provincial Highway whose drainage may impact a highway.

### 3.3.3 Source Water Protection

Central Elgin is highly dependent on ground and surface water for its domestic water requirements. The Clean Water Act, 2006, is intended to ensure the protection of municipal drinking water supplies by setting out a risk-based process to identify *vulnerable areas* and associated *drinking water threats* and issues through the preparation of *Assessment Reports*, and develop policies and programs to eliminate or reduce the risks posed by identified *drinking water threats* through the preparation of *Source Protection Plans*. This process is otherwise known as Source Protection Planning.

The science-based *Assessment Report* is the technical basis upon which a *Source Protection Plan* is prepared. The *Source Protection Plan* contains policies to address the *drinking water threats* identified in the *Assessment Report*. There are two *Source Protection Plans* that apply within the Municipality - the Kettle Creek Source Protection Plan and the Catfish Creek Source Protection Plan. The boundaries of these Source Protection Plans as they apply to the Municipality of Central Elgin are identified on Schedule SW to this Plan.

Identified *vulnerable areas* in the Municipality include the *Wellhead Protection Area* (WHPA) surrounding the Belmont wellhead and the *Surface Water Intake Protection Zone* (IPZ) surrounding the Elgin Primary Water Supply Intake within Lake Erie. Schedules SW1 and SW2 identify the *vulnerable areas* for these municipal water supply systems.

A *Wellhead Protection Area* is an area related to a wellhead and within which it is desirable to regulate or monitor drinking water threats because land use activities in these areas have the potential to affect the quality or quantity of water that flows into the well. WHPAs associated with water quality are identified on Schedule SW1 to this Plan as *Wellhead Protection Areas A, B, and C*. WHPA-Ds are not identified on Schedule SW1 as there are no *significant drinking water threat* policies identified in the Kettle Creek Source Protection Plan for WHPA-D areas. The time related capture zones associated with the WHPA include the following:

- WHPA-A: 100m radius surrounding the well
- WHPA-B: 2 year travel time for water to enter the well
- WHPA-C: 5 year travel time for water to enter the well.
- WHPA-D: 25 year travel time for water to enter the well

The ‘vulnerability score’ for the WHPA illustrated in Schedule SW1 identifies the degree to which the WHPA is vulnerable to contamination. The vulnerability score of a WHPA can range from 1 to 10, with 10 being the most vulnerable. The vulnerability score is used, together with a table of *drinking water threats* published by the Ministry of Environment and Climate Change, to determine whether a drinking water threat is significant, moderate or low.

The WHPA-C associated with the Belmont well extends into the Township of Malahide, as well as the Municipality of Thames Centre in Middlesex County. Protection of this WHPA-C within neighbouring municipalities will be governed by the Kettle Creek Source Protection Plan and neighbouring municipal Official Plans.

A *Surface Water Intake Protection Zone* (IPZ) applies to municipal surface water supply sources and are areas within which a spill or leak may enter the intake too quickly prior to implementing measures to

prevent pollutants from entering the municipal water system. The *Surface Water Intake Protection Zone* surrounding the Elgin Primary Intake is identified on Schedule SW2 to this Plan.

Land use activities which may pose a drinking water threat to municipal water supplies are defined by the Clean Water Act, 2006 as an *activity* or condition that adversely affects, or has the potential to adversely affect, the quality and quantity of any water that is or may be used as a source of drinking water. *Drinking water threats* include the following as prescribed by Ontario Regulation 287/07 of the Clean Water Act, 2006, and further defined by the circumstances outlined in the table of drinking water threats, as may be amended:

1. Waste disposal sites within the meaning of Part V of the Environmental Protection Act.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid (DNAPL).
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.

*Significant drinking water threats* within *vulnerable areas* are either prohibited or regulated by the Kettle Creek Source Protection Plan. The significance of a prescribed *drinking water threat* depends on the characteristics of the activity and where the activity is occurring with the *vulnerable area*.

Notwithstanding the land use permitted by the underlying land use designation in this Plan:

- (a) Permitted land uses that involve a *significant drinking water threat* within a WHPA identified in Schedules SW1 and SW2 to this Plan may be either prohibited or regulated by the Kettle Creek Source Protection Plan.
- (b) An application for development, redevelopment or site alteration for any land use within the WHPA or IPZ that may involve a *significant drinking water threat* shall only be deemed complete under the



Planning Act if the Municipality's Risk Management Official has issued a *Section 59 Notice* in accordance with the Clean Water Act, 2006.

- (c) The Risk Management Official shall determine whether a new land use or *activity* is, or involves, a *significant drinking water threat* in accordance with the Clean Water Act, 2006 and whether the use or *activity* is prohibited, or regulated in accordance with the Kettle Creek Source Protection Plan.
- (d) The Risk Management Official may provide guidance to assist the Municipality in screening applications for development, redevelopment or site alteration.
- (e) Where a proposed development includes a prescribed *drinking water threat* within a WHPA or IPZ, the proponent may be required to prepare, in addition to any other supporting documentation required to ensure a complete application as per Subsection 5.4 of this Plan and at the discretion of the Municipality and/or the Risk Management Official, the following:

1. Disclosure Report

This report shall detail the nature, activities and operations of the proposed development/use, including:

- the nature of the proposed use;
- its associated required services and facilities;
- the activities and operations to be conducted on-site; and
- the substances and their quantities to be used or stored on-site.

- 2) Detailed Hydrogeological Study (within WHPAs only)

This study shall be in the form of a technical report prepared by a qualified professional (e.g. hydrogeologist) using protocols acceptable to the Ontario Ministry of the Environment. The study shall:

- predict the net groundwater and/or surface water quality impacts likely to occur on the subject property, on down-gradient properties and on the municipal well;
- address cumulative impacts of development in the Wellhead Protection Area; and
- include mitigating measures for the design, construction and post-construction monitoring of the proposed use.

- 3) Spill Prevention and Contingency Plan

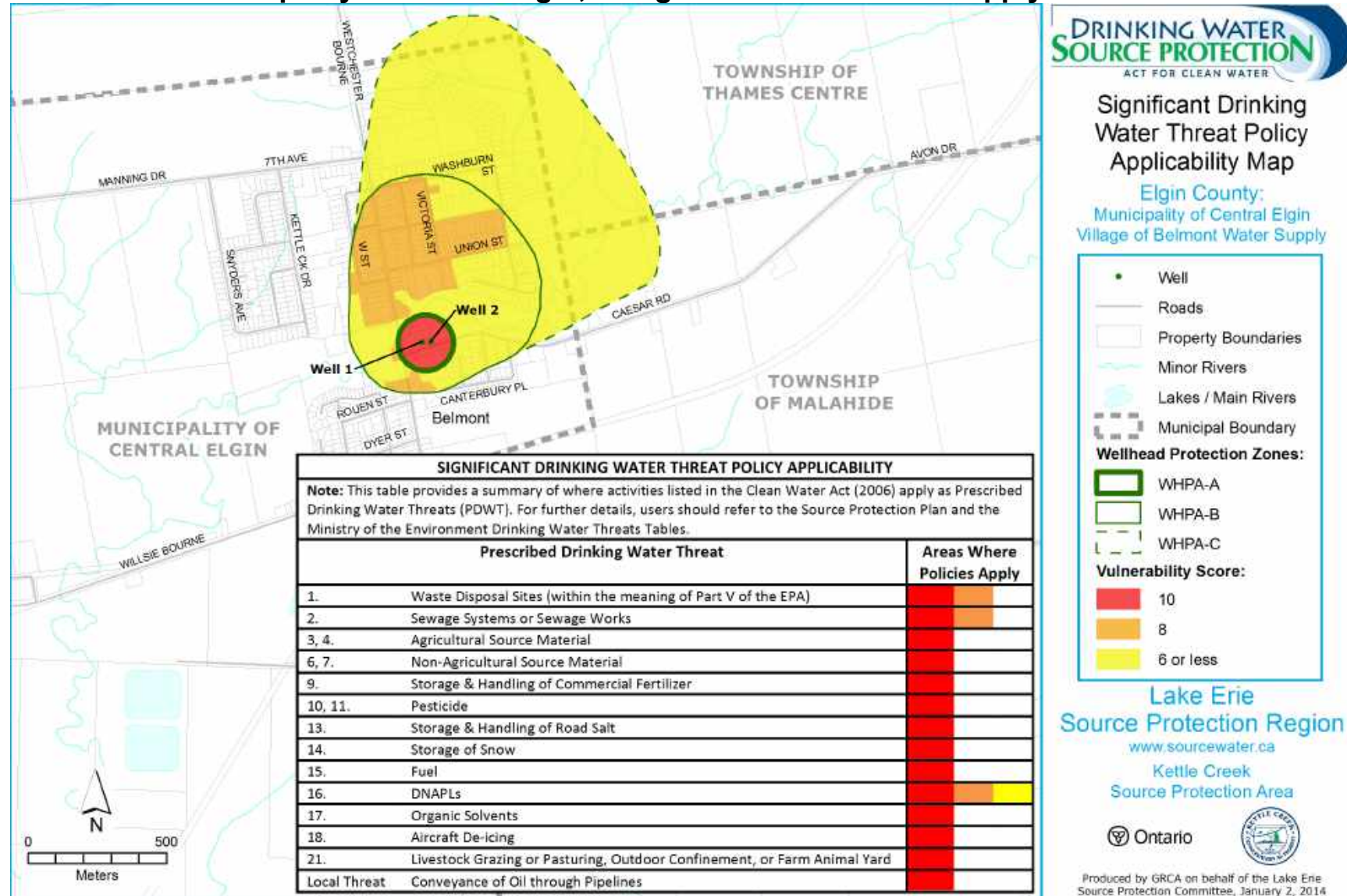
This plan should outline design measures, facilities and procedures to avoid and mitigate the effects of spillage of any contaminants.

**The following terms are italicized in the draft policy text and reference the Elgin County Official Plan for definitions:**

- Activity
- Assessment Report
- Drinking Water Threat

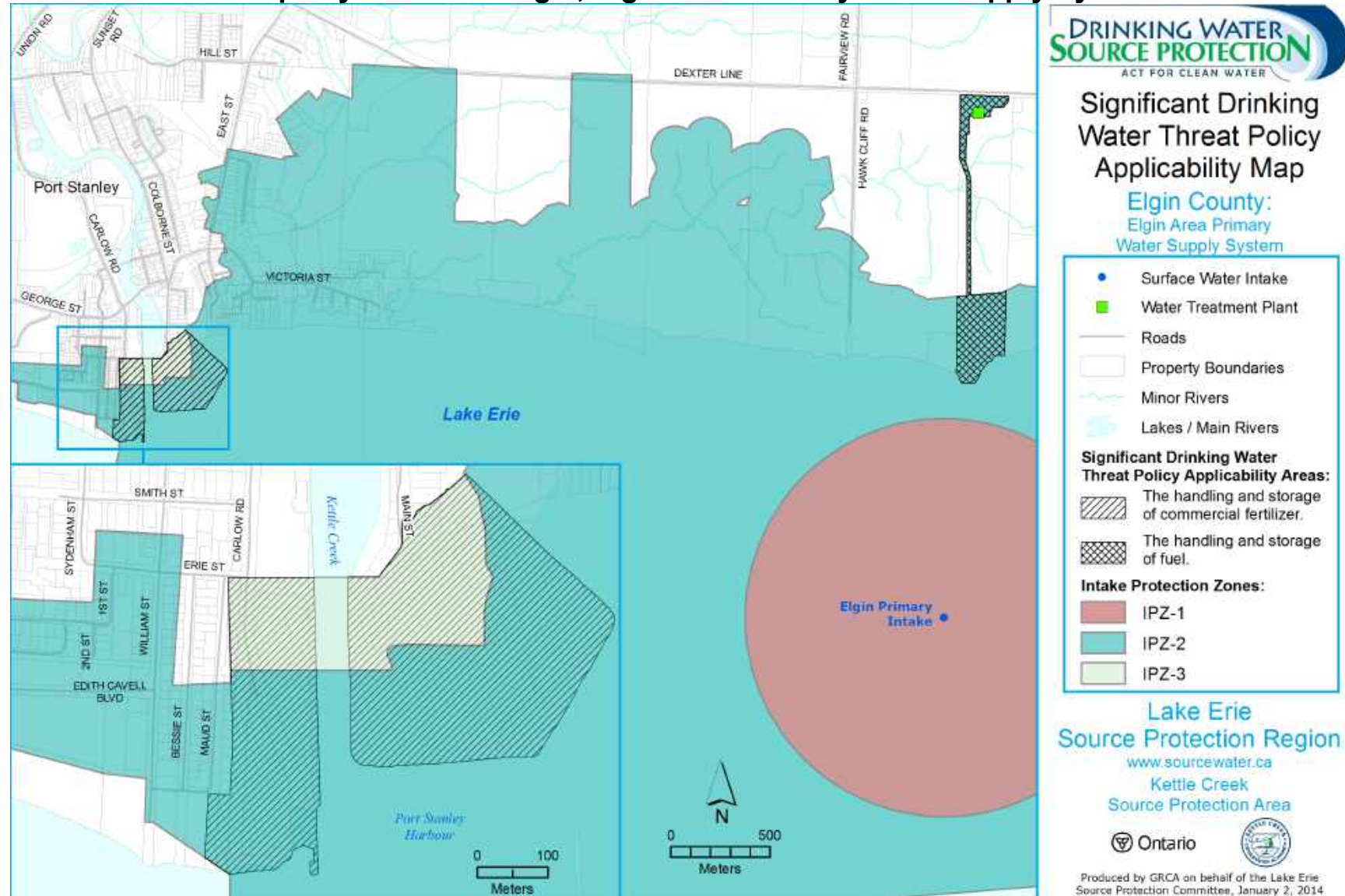
- Highly Vulnerable Aquifer
- Section 59 Notice
- Significant Drinking Water Threat
- Significant Groundwater Recharge Area
- Source Protection Plan
- Surface Water Intake Protection Zone
- Vulnerable Area
- Wellhead Protection Area

## Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply



To be used as basis for modifications to Schedule SW1

## Schedule B: Municipality of Central Elgin, Elgin Area Primary Water Supply System



To be used as basis for modifications to Schedule SW2

## **THE PREAMBLE**

### **PURPOSE**

In accordance with Section 40 of the *Clean Water Act, 2006*, the purpose of the proposed amendment is to bring the Municipal Official Plan into conformity with the relevant policies and map schedules of the Long Point Region Source Protection Plan as it applies to the Municipality of Bayham. Specifically, the Municipal Official Plan is required to conform to the applicable significant threat and land use policies set out in the Long Point Region Source Protection Plan. It is noted that the Municipality of Bayham is also located within the boundary of the Catfish Creek Source Protection Plan Area; however the Catfish Creek Source Protection Plan does not contain policies for any municipal drinking water systems within the Municipality of Bayham.

This Amendment includes new Schedules to the Municipal Official Plan, which identify the Source Protection Plan Area boundaries of the Long Point Region and Catfish Creek Source Protection Plans as they apply to the Municipality and the Wellhead Protection Areas (WHPAs) for the Richmond municipal water supply.

### **LOCATION**

The Wellhead Protection Area identified on Schedule A affects the Richmond Wellhead, a municipal drinking water supply source in the Municipality.

### **BACKGROUND**

The *Clean Water Act, 2006* introduced a new level of protection for Ontario's drinking water resources and establishes requirements for protecting vulnerable drinking water resources at-source. The Act establishes roles and responsibilities for the Province, municipalities, and landowners in protecting drinking water resources for current and future generations. The process identified in the *Clean Water Act, 2006* is commonly referred to as 'Source Protection Planning'.

Municipalities are a key partner in Source Protection Planning and are represented on Source Protection Committees. Source Protection Committees lead the process of implementing the *Clean Water Act, 2006* through the preparation of Assessment Reports and Source Protection Plans for the areas they represent.

The preparation of Assessment Reports is required under the *Clean Water Act, 2006*, and form the scientific basis for the preparation of Source Protection Plans. Source Protection Plans contain the policies to address the drinking water threats identified in the Assessment Report. The two main objectives of Source Protection Plans are:

1. To protect existing and future drinking water sources in the source protection area; and
2. To ensure that, for every vulnerable area identified in an Assessment Report as an area where an activity is or would be a significant drinking water threat, the activity never becomes a significant drinking water threat, or if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat.

Vulnerable areas related to municipal drinking water resources that are delineated in Assessment Reports (i.e. Wellhead Protection Areas) meet the definition of *designated vulnerable areas* under the Provincial Policy Statement, 2014 (PPS). Policy 2.2.1 of the PPS gives municipalities the authority to protect, improve and restore the quality and quantity of water by implementing necessary restrictions on development and site alteration.

Numerous public information sessions and open houses were held by the Source Protection Committee when preparing the Assessment Reports and subsequent Source Protection Plans that apply to the Municipality of Bayham. Sessions were also held to present and receive feedback on the proposed Source Protection Plan policies prior to final approval by the Ministry of Environment and Climate Change. Individual property owners within vulnerable areas were also notified directly by the respective Source Protection Authorities throughout the approval process of the Assessment Reports and Source Protection Plans. Additional property owner contact is conducted through the threat activity verification process and/or Risk Management planning process, as required.

## **THE POLICIES**

### **2.3 WATER RESOURCES**

Ground and surface water sources occur throughout the Municipality. Groundwater sources need to be protected to promote public health and as an essential resource for urban and rural water supplies, agricultural production and the maintenance of natural heritage features. In accordance with the policies of Section 2.2 of the Provincial Policy Statement, this Plan shall endeavour to recognize the *surface water features*, *ground water features*, *hydrologic functions*, and *natural heritage features and areas* which are necessary for the ecological and hydrological integrity of the *watershed* and implement necessary restrictions on *development* and *site alteration* to protect all municipal drinking water supplies and designated *vulnerable areas* and to protect, improve or restore *vulnerable* surface and ground water, *sensitive surface water features* and *sensitive ground water features*, and their *hydrologic functions*.

Reference shall be made to the Elgin County Official Plan for the definition of those terms that are italicized in the following policies.

#### **2.3.1 Water Resource Policies**

- 2.3.1.1 The Municipality shall adopt and implement the terms of Section 2.2 of the Provincial Policy Statement.
- 2.3.1.2 The Municipality shall encourage the designation of *surface water features* and *ground water features* in order to protect, improve, and restore the quality and quantity of water throughout the Municipality.
- 2.3.1.3 The Municipality shall encourage efficient and sustainable use of water resources including water conservation, sustaining water quality, and encouraging stormwater management practices which minimize water volume and contaminant loads while using increased vegetation and pervious surface materials.
- 2.3.1.4 The Municipality shall encourage agricultural practices that protect water resources.
- 2.3.1.5 The Municipality shall ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.
- 2.3.1.6 The Municipality shall discourage *development* and *site alteration* on or adjacent to *surface water features* and *ground water features*.
- 2.3.1.7 The Municipality shall protect surface and groundwater quality through the use of regulatory and voluntary means of prohibiting, restricting, or influencing land uses and activities within *vulnerable areas*.
- 2.3.1.8 Pursuant to the Beds of Navigable Waters Act, the waterbed of navigable waterways is claimed as Provincial Crown Lands. Any alterations to navigable waterways which alter the alignment or shape of the channel cross section shall be approved by the Conservation Authority and the Ministry of Natural Resources.



### 2.3.2 Source Water Protection

The Clean Water Act, 2006 is intended to ensure the protection of municipal drinking water supplies by setting out a risk-based process on a watershed basis to identify *vulnerable areas* and associated *drinking water threats* and issues through the preparation of *Assessment Reports*; and develop policies and programs to eliminate or reduce the risks posed by identified drinking water threats through the preparation of *Source Protection Plans*. This process is otherwise known as Source Protection Planning.

The science-based *Assessment Report* is the technical basis upon which a *Source Protection Plan* is prepared. The *Source Protection Plan* contains policies to address the *drinking water threats* identified in the *Assessment Report*. There are two Source Protection Plans that apply within the Municipality of Bayham. The boundaries of these Source Protection Plans as they apply to the Municipality are identified on Schedule ‘E’ of this Plan.

Identified *vulnerable areas* within the Municipality include the *Wellhead Protection Areas* (WHPAs) surrounding the municipal drinking water supply system servicing the Hamlet of Richmond. These municipal water supply systems must be protected from contamination associated with certain land uses and activities in order to secure a long-term potable water supply for residents and businesses and for future growth in the Municipality. Schedule E-1 identifies the *vulnerable area* for the Richmond municipal water supply wells.

A *Wellhead Protection Area* is an area that is related to a wellhead and within which is it desirable to regulate or monitor land use activities, because they have the potential to affect the quality or quantity of water that flows into the well. WHPAs associated with water quality are identified in Schedule E-1 to this Plan as Wellhead Protection Areas A, B, and C. WHPA-Ds are not identified on Schedule E-1 as there are no significant drinking water threat policies identified in the Long Point Region Source Protection Plan for these WHPAs. The time related capture zones associated with each WHPA include the following:

- a) WHPA-A: 100 metre radius surrounding the well
- b) WHPA-B: 2 year travel time for water to enter the well
- c) WHPA-C: 5 year travel time for water to enter the well
- d) WHPA-D: 25 year travel time for water to enter the well

The ‘vulnerability score’ for each WHPA illustrated on Schedule E-1 identifies the degree to which a WHPA in the Municipality is vulnerable to contamination. The vulnerability score of a WHPA can range from 2 to 10, with 10 being the most vulnerable. The vulnerability score is used, together with a table of drinking water threats published by the Ministry of Environment and Climate Change, to determine whether a drinking water threat is either significant, moderate, or low.

Land use activities which may pose a *drinking water threat* to municipal water supplies are defined by the Clean Water Act, 2006 as an *activity* or condition that adversely affects, or has the potential to adversely affect, the quality and quantity of any water that is or may be used as a source of drinking water. *Drinking water threats* include the following as prescribed by Ontario Regulation 287/07 of the Clean Water Act, 2006 and further defined by the circumstances outlined in the table of drinking water threats, as may be amended:



1. Waste disposal sites within the meaning of Part V of the Environmental Protection Act.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of *road* salt.
13. The handling and storage of *road* salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid (DNAPL).
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or surface water body without returning the water to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.

*Significant drinking water threats* within the WHPA are either prohibited or regulated by the Long Point Region Source Protection Plan. The significance of a prescribed *drinking water threat* depends on the characteristics of the activity and where the activity is occurring within the WHPA.

Notwithstanding the land uses permitted by the underlying land use designation in this Plan:

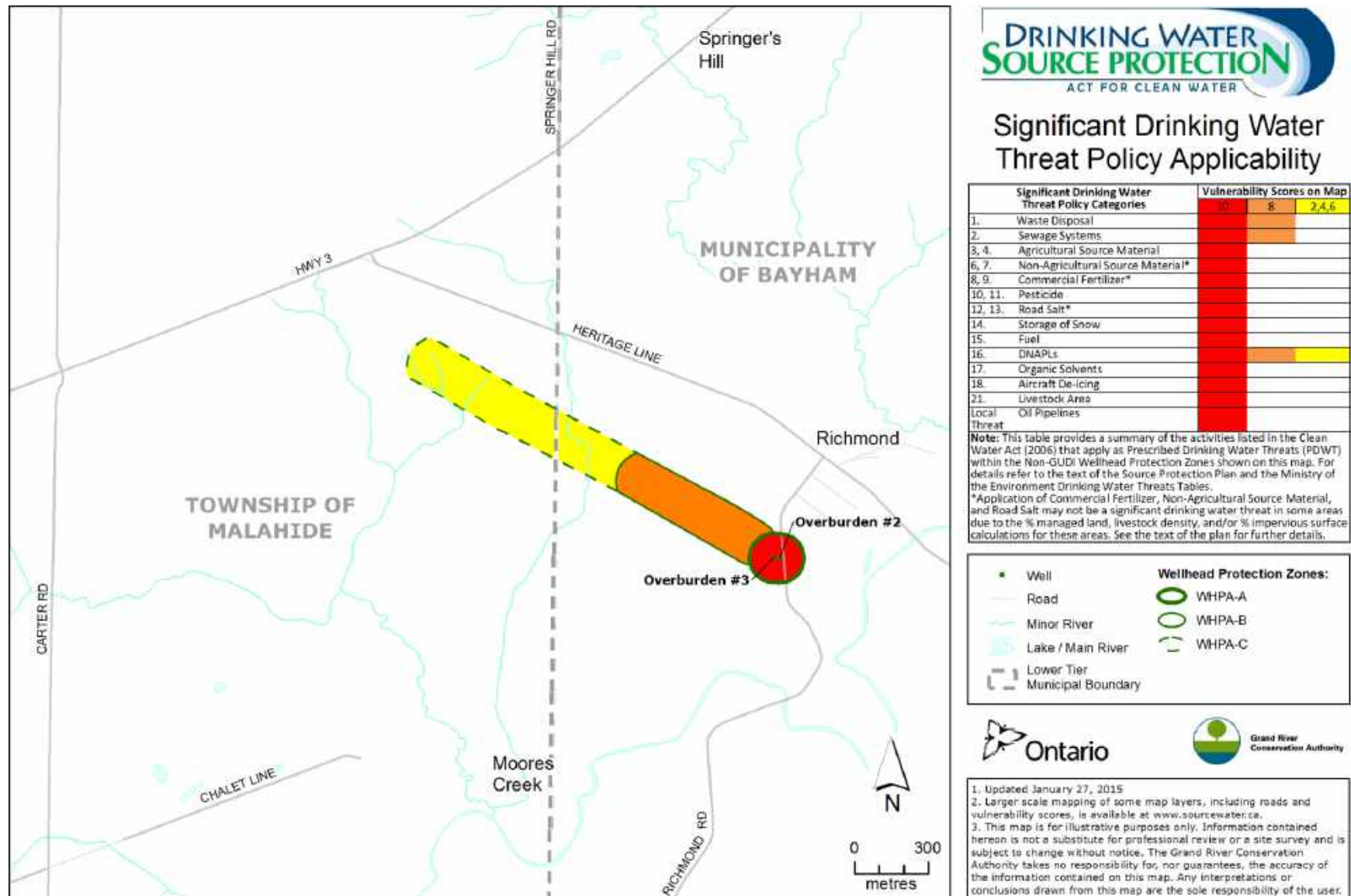
- 2.3.2.1 Permitted land uses that involve a *significant drinking water threat* within the WHPA identified in Schedule E1 to this Plan may be either prohibited or regulated by the Long Point Region Source Protection Plan.

- 2.3.2.2 An application for *development, redevelopment, or site alteration* for any land use, except solely residential uses, within a WHPA that may involve a *significant drinking water threat* shall only be deemed complete under the Planning Act if submitted with a *Section 59 Notice* issued by the Municipality's Risk Management Official, in accordance with the Clean Water Act, 2006 and the Long Point Region Source Protection Plan.
- 2.3.2.3 The Municipality's Risk Management Official shall determine whether a new land use or *activity* is, or involves, a *significant drinking water threat* in accordance with the Clean Water Act, 2006 and whether the land use or *activity* is prohibited or regulated through a Risk Management Plan in accordance with Long Point Region Source Protection Plan. Policy 2.3.2.2 shall not apply if the applicant can demonstrate, to the satisfaction of the Risk Management Official, that a *significant drinking water threat* will not be engaged in.
- 2.3.2.4 The Risk Management Official may provide guidance to assist the Municipality in screening applications for *development, redevelopment or site alteration*.
- 2.3.2.5 New and replacement small on-site septic systems and/or holding tanks shall be located on the same property as the land use relying on the system but where possible sited outside the limits of a WHPA with a vulnerability score of 10 as identified on Schedule E1 to this Plan while remaining in compliance with the Building Code.
- 2.3.2.6 New development that relies on a large on-site septic system and/or holding tank shall be prohibited within a WHPA with a vulnerability score of 10 as identified on Schedule E1 to this Plan.
- 2.3.2.7 Road salt storage facilities, where permitted by this Plan and/or the Zoning By-law, will only be permitted in a WHPA with a vulnerability score of 10 if the road salt is contained in covered roof storage facilities and a salt impact assessment and/or salt management plan has been completed to the satisfaction of the Municipality.
- 2.3.2.8 For the purposes of Policy 2.3.2.5 and Policy 2.3.2.6, the following definitions shall apply:
- i. Septic system and/or holding tank: systems that store and/or treat human waste on-site and shall include, but not be limited to, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks, and shall not include sewage treatment plants.
  - ii. Small on-site septic system or holding tank: a system with a design flow of less than or equal to 10,000 litres per day and subject to approval under the Building Code Act or the Ontario Water Resources Act. These systems are primarily located on rural residential properties or un-serviced settlement areas.
  - iii. Large on-site septic system or holding tank: a system with a design flow of greater than 10,000 litres per day and regulated under the Ontario Water Resources Act. These systems may be located at a school, campground or larger business property.

**The following terms are italicized in the proposed policy text and reference the Elgin County Official Plan for definitions:**

- Activity
- Assessment Report
- Drinking Water Threat
- Highly Vulnerable Aquifer
- Section 59 Notice
- Significant Drinking Water Threat
- Significant Groundwater Recharge Area
- Source Protection Plan
- Surface Water Intake Protection Zone
- Vulnerable Area
- Wellhead Protection Area

## 6.6 Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)



To be used as basis for preparation of Schedule E1

## **THE PREAMBLE**

### **PURPOSE**

In accordance with Section 40 of the *Clean Water Act*, the purpose of the proposed amendment is to bring the Township Official Plan into conformity with the relevant policies and map schedules of the Kettle Creek; Long Point Region; Thames, Sydenham and Region; and Catfish Creek Source Protection Plans as they apply to the Township of Malahide. Specifically, the Township Official Plan is required to \ the applicable significant threat and land use policies set out in the Kettle Creek and Long Point Region Source Protection Plans. It is noted that the Township of Malahide is also located within the Thames, Sydenham and Region and Catfish Creek and Source Protection Plan Areas, however these Source Protection Plans do not contain policies for any municipal drinking water systems within the Township of Malahide.

This Amendment includes new Schedules to the Township Official Plan, which identifies Wellhead Protection Areas (WHPAs) that extend into the Township from adjacent municipalities and include the WHPA for the Belmont municipal water supply source located in the Municipality of Central Elgin and the WHPA for the Richmond municipal water supply source located in the Municipality of Bayham, as mapped in the Kettle Creek Source Protection Plan and Long Point Region Source Protection Plan, respectively. A Schedule to the Township Official Plan, which identifies the Source Protection Plan Area boundaries of all applicable Source Protection Plans within the Township, is also included.

There are no municipal drinking water systems within the Township of Malahide that are regulated by a Source Protection Plan.

### **LOCATION**

Wellhead Protection Areas are identified on Schedule A and include the portion of the Belmont and Richmond WHPAs that extend into the Township from adjacent municipalities.

### **BACKGROUND**

The *Clean Water Act, 2006* introduced a new level of protection for Ontario's drinking water resources and establishes requirements for protecting vulnerable drinking water resources at-source. The Act establishes roles and responsibilities for the Province, municipalities, and landowners in protecting drinking water resources for current and future generations. The process identified in the *Clean Water Act, 2006* is commonly referred to as 'Source Protection Planning'.

Municipalities are a key partner in Source Protection Planning and are represented on Source Protection Committees. Source Protection Committees lead the process of implementing the *Clean Water Act, 2006* through the preparation of Assessment Reports and Source Protection Plans for the areas they represent.

The preparation of Assessment Reports is required under the *Clean Water Act, 2006*, and form the scientific basis for the preparation of Source Protection Plans. Source Protection Plans contain the policies to address the drinking water threats identified in the Assessment Report. The two main objectives of Source Protection Plans are:

1. To protect existing and future drinking water sources in the source protection area; and
2. To ensure that, for every vulnerable area identified in an Assessment Report as an area where an activity is or would be a significant drinking water threat, the activity never becomes a significant drinking water threat, or if the activity is occurring when the source protection plan takes effect, the activity ceases to be a significant drinking water threat.

Vulnerable areas related to municipal drinking water resources that are delineated in Assessment Reports (i.e. Wellhead Protection Areas and Intake Protection Zones) meet the definition of *designated vulnerable areas* under the Provincial Policy Statement, 2014 (PPS). Policy 2.2.1 of the PPS gives municipalities the authority to protect, improve and restore the quality and quantity of water by implementing necessary restrictions on development and site alteration.

Numerous public information sessions and open houses were held by individual Source Protection Committees when preparing the Assessment Reports and subsequent Source Protection Plans that apply to vulnerable areas in the Township of Malahide. Sessions were also held to present and receive feedback on the proposed Source Protection Plan policies prior to final approval by the Ministry of Environment and Climate Change. Individual property owners within vulnerable areas were also notified directly by the respective Source Protection Authorities throughout the approval process of the Assessment Reports and Source Protection Plans. Additional property owner contact is conducted through the threat activity verification process and/or Risk Management planning process, as required.

## **THE POLICIES**

### **2.6      Water Resources**

Ground and surface water sources occur throughout the Township. Groundwater sources need to be protected to promote public health and as an essential resource for urban and rural water supplies, agricultural production and the maintenance of natural heritage features. In accordance with the policies of Section 2.2 of the Provincial Policy Statement, this Plan shall recognize the *surface water features*, *ground water features*, *hydrologic functions*, and *natural heritage features and areas* which are necessary for the ecological and hydrological integrity of the *watershed*, and implement necessary restrictions on *development* and *site alteration* to protect all municipal drinking water supplies and designated *vulnerable areas* and to protect, improve or restore *vulnerable* surface and ground water, *sensitive surface water features* and *sensitive ground water features*, and their *hydrologic functions*. Reference shall be made to the Elgin County Official Plan for the definition of those terms that are italicized in this policy section.

#### **2.6.1      Water Resource Policies**

- 2.6.1.1      The Township shall adopt and implement the terms of Section 2.2 of the Provincial Policy Statement.
- 2.6.1.2      The Township shall designate *surface water features* and *ground water features* in order to protect, improve, and restore the quality and quantity of water throughout the Township.
- 2.6.1.3      The Township shall encourage efficient and sustainable use of water resources including water conservation, sustaining water quality, and encouraging stormwater management practices which minimize stormwater volume and contaminant loads while using increased vegetation and pervious surface materials.
- 2.6.1.4      The Township shall encourage agricultural practices that protect water resources.
- 2.6.1.5      The Township shall ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.
- 2.6.1.6      The Township shall discourage *development* and *site alteration* on or adjacent to *surface water features* and *ground water features*.
- 2.6.1.7      The Township shall protect surface and ground water quality through the use of regulatory and voluntary means of prohibiting, restricting, or influencing land uses and activities within *vulnerable areas*.

#### **2.6.2      Source Water Protection**

The Clean Water Act, 2006 is intended to ensure the protection of municipal drinking water supplies by setting out a risk-based process on a watershed basis to identify *vulnerable areas* and associated *drinking water threats* and issues through the preparation

of *Assessment Reports*; and develop policies and programs to eliminate or reduce the risks posed by identified *drinking water threats* through the preparation of *Source Protection Plans*. This process is otherwise known as Source Protection Planning.

The science-based *Assessment Report* is the technical basis upon which a *Source Protection Plan* is prepared. The *Source Protection Plan* contains policies to address the drinking water threats identified in the *Assessment Report*. There are two *Source Protection Plans* that apply to vulnerable areas within the Township of Malahide – the Long Point Region Source Protection Plan and the Kettle Creek Source Protection Plan. The boundaries of these *Source Protection Plans* as they apply to the Township are identified on Schedule ‘D’ to this Plan.

Identified *vulnerable areas* in the Township include the *Wellhead Protection Areas* (WHPAs) surrounding the municipal drinking water supply systems of Belmont in the Municipality of Central Elgin and Richmond in the Municipality of Bayham. These municipal drinking water systems must be protected from contamination associated with certain land uses and activities in order to secure a long-term potable water supply for residents and businesses, and for future growth in these municipalities. The Township of Malahide does not contain any municipal drinking water systems that are regulated by a *Source Protection Plan*. Schedules D1 and D2 to this Plan identify the vulnerable areas for the Belmont and Richmond municipal water supply wells.

A Wellhead Protection Area is an area that is related to a wellhead and within which it is desirable to regulate or monitor land use activities, because they have the potential to affect the quality or quantity of water that flows into the well. WHPAs associated with water quality are identified on Schedules D1 and D2 to the Plan as Wellhead Protection Area C. WHPA-Ds are not identified on Schedule E-1 as there are no *significant drinking water threat* policies identified in the Kettle Creek or Long Point Region *Source Protection Plans* for these WHPAs. The time related capture zones associated with each WHPA include the following:

- WHPA-C: 5 year travel time for water to enter the well
- WHPA-D: 25 year travel time for water to enter the well

The ‘vulnerability score’ for each WHPA illustrated in Schedules D1 and D2 identify the degree to which a WHPA in the Municipality is vulnerable to contamination. The vulnerability score of a WHPA can range from 2 to 10, with 10 being the most vulnerable. The vulnerability score is used, together with a table of drinking water threats published by the Ministry of Environment and Climate Change, to determine whether a *drinking water threat* is either significant, moderate, or low.

Land use activities which may pose a drinking water threat to municipal water supplies are defined by the Clean Water Act, 2006 as an *activity* or condition that adversely affects, or has the potential to adversely affect, the quality and quantity of any water that is or may be used as a source of drinking water. *Drinking water threats* include the following as prescribed by Ontario Regulation 287/07 of the Clean Water Act, 2006, and further defined by the circumstances outlined in the table of drinking water threats, as may be amended:

1. Waste disposal sites within the meaning of Part V of the Environmental Protection Act.



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

*Significant drinking water threats* within the WHPA are either prohibited or regulated by the applicable *Source Protection Plan*. The significance of a prescribed drinking water threat depends on the characteristics of the activity and where the activity is occurring within the WHPA.

Notwithstanding the land use permitted by the underlying land use designation in this Plan:

- 2.6.2.1 Permitted land uses that involve the handling and storage of a dense non-aqueous phase liquid (DNAPL) *significant drinking water threat* within a WHPA identified in Schedules E-1 and E-2 to this Plan may be either prohibited or regulated by the applicable *Source Protection Plan*.
- 2.6.2.2 Within the Kettle Creek Source Protection Area, an application for *development, redevelopment, or site alteration* for any land use within a Wellhead Protection Area that may involve the handling and storage of a dense non-aqueous phase liquid (DNAPL) *significant drinking water threat* shall only be deemed complete under the Planning Act if submitted with a Section 59 Notice issued by the Risk Management Official, in accordance with the Clean Water Act, 2006 and the Kettle Creek Source Protection Plan.

- 2.2.6.3 Within the Long Point Region Source Protection Area, an application for *development, redevelopment, or site alteration* for any land use, except solely residential uses, within a WHPA that may involve the handling and storage of a dense non-aqueous phase liquid (DNAPL) *significant drinking water threat* shall only be deemed complete under the Planning Act if submitted with a Section 59 Notice issued by the Risk Management Official, in accordance with the Clean Water Act, 2006 and the Long Point Region Source Protection Plan.
- 2.2.6.4 The Risk Management Official of the Municipality of Central Elgin or the Municipality of Bayham, as applicable, shall determine whether a new land use or *activity* is, or involves, the handling and storage of a dense non-aqueous phase liquid (DNAPL) *significant drinking water threat* in accordance with the Clean Water Act, 2006 and whether the land use or *activity* is prohibited or regulated through a Risk Management Plan in accordance with the applicable *Source Protection Plan*. Policy 2.2.6.2 and Policy 2.2.6.3 shall not apply if the applicant can demonstrate, to the satisfaction of the Risk Management Official, that a significant drinking water threat will not be engaged in.
- 2.2.6.5 The Risk Management Official may provide guidance to assist the Township in screening applications for *development, redevelopment or site alteration*.

**The following terms are italicized in the proposed policy text and reference the Elgin County Official Plan for definitions:**

- Activity
- Assessment Report
- Drinking Water Threat
- Highly Vulnerable Aquifer
- Intake Protection Zone
- Section 59 Notice
- Significant Drinking Water Threat
- Significant Groundwater Recharge Area
- Source Protection Plan
- Vulnerable Area
- Wellhead Protection Area

## **THE SCHEDULES**

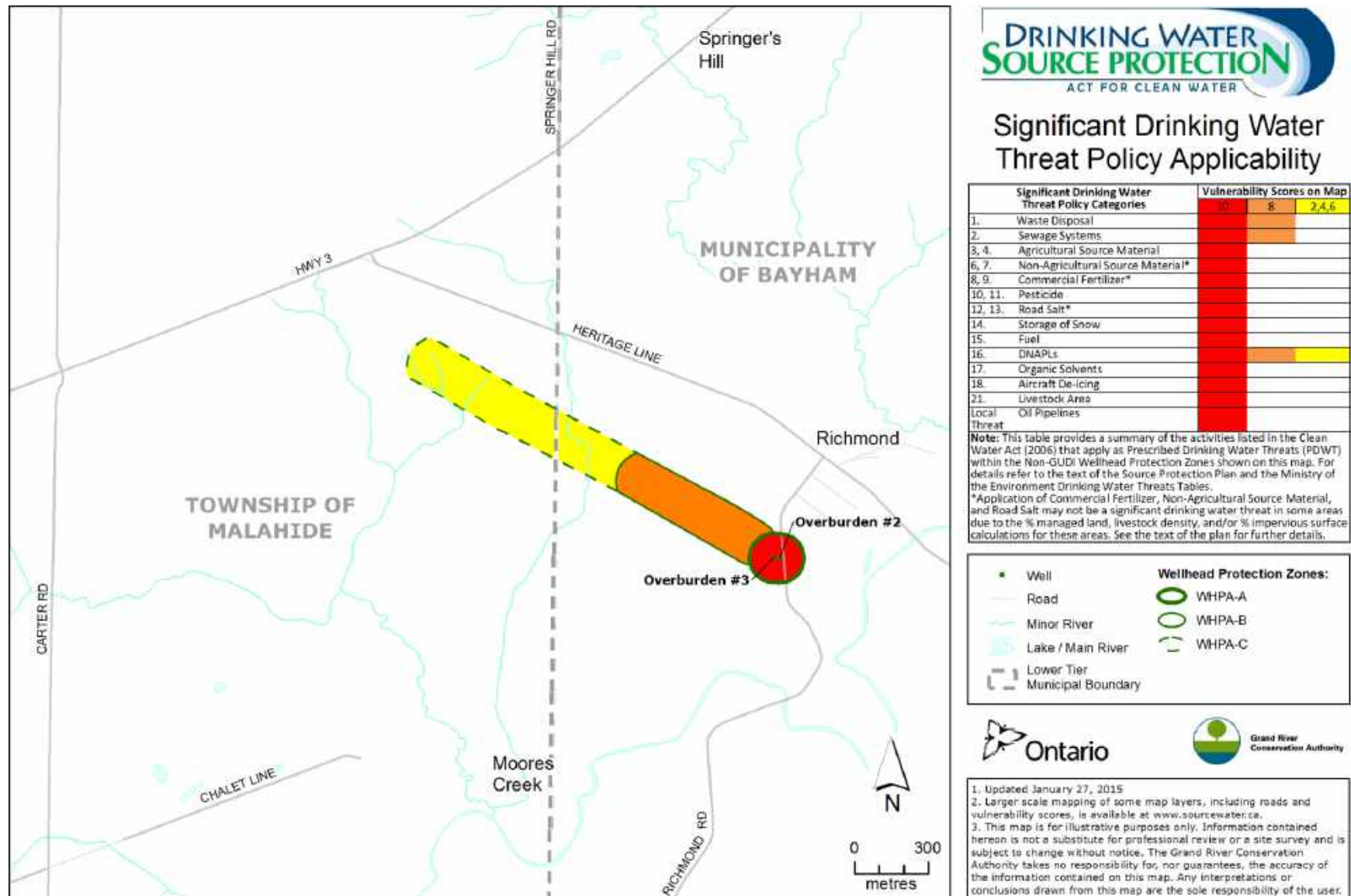
**The following Schedule additions to the Official Plan are required:**

Schedule D – Source Protection Plan Areas

Schedule D1 – Schedule is to identify the WHPA-C limits for the Richmond WHPA and associated vulnerability scores as mapped in the Long Point Region Source Protection Plan.

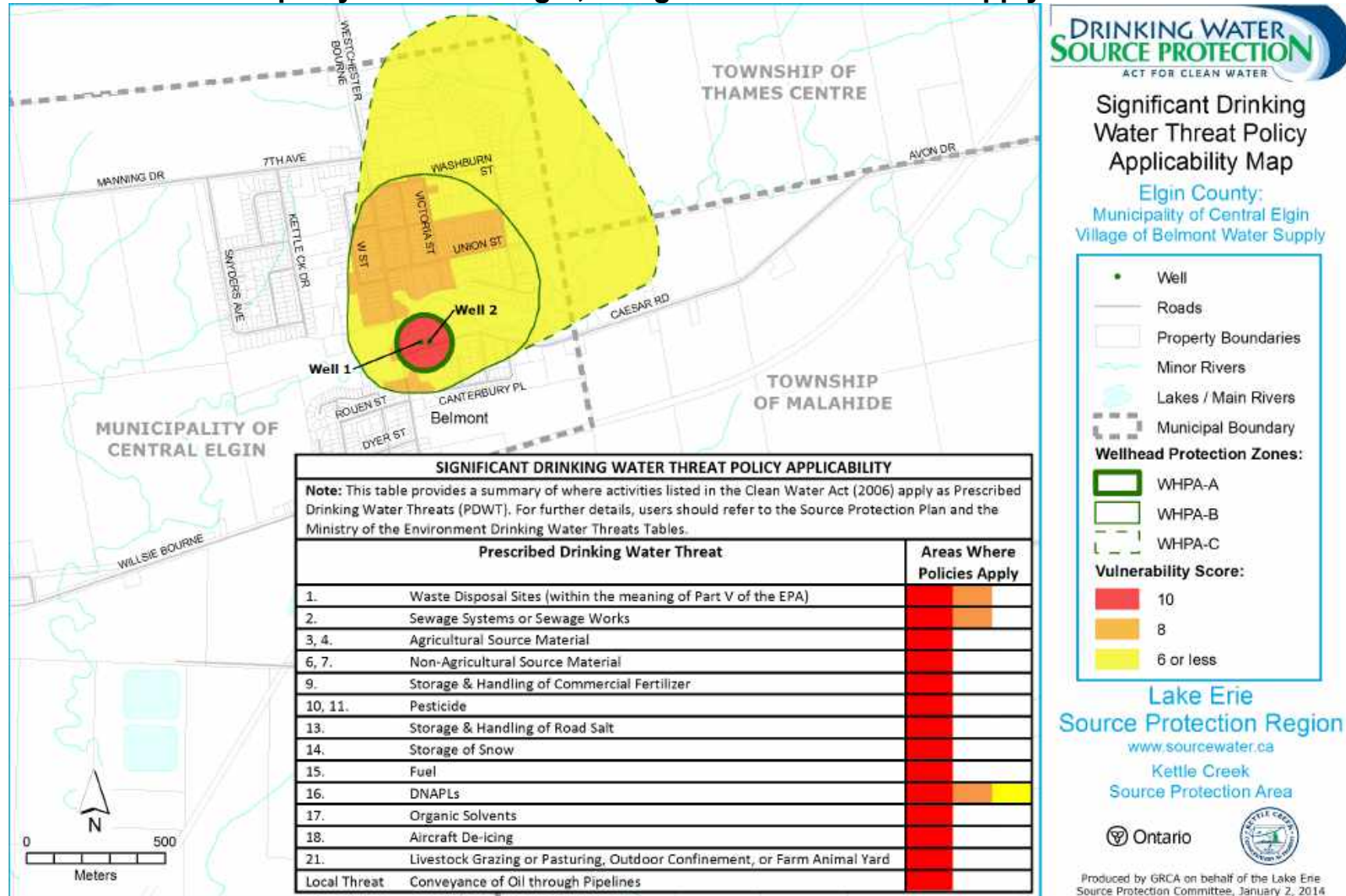
Schedule D2 – Schedule is to identify WHPA-C limits of the Belmont WHPA and associated vulnerability scores as mapped in the Kettle Creek Source Protection Plan.

## 6.6 Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)



To be used as basis for preparation of Schedule D1

## Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply



To be used as basis for preparation of Schedule D2

# APPENDIX E

## **Draft Zoning By-law Text Source Protection Plan Implementation**

1. Municipality of Central Elgin
2. Municipality of Bayham
3. Township of Malahide

## **4.19 SOURCEWATER PROTECTION**

### **4.19.1 Identification of Vulnerable Areas**

Vulnerable Areas shown on Schedule A to this By-law represent the Wellhead Protection Area and the associated level of vulnerability for the municipal water source serving the Village of Belmont. A WHPA illustrates three time-related capture zones including a 100-metre radius surrounding the well (WHPA-A), 2 year travel time for water to enter the well (WHPA-B), and 5 year travel time for water to enter the well (WHPA-C).

The degree of vulnerability of a WHPA is represented in Schedule A by a vulnerability score. The vulnerability score can range from 1 to 10, with 10 being the most vulnerable. WHPAs that are considered to be the most vulnerable to surface activities are assigned a vulnerability score of 8 to 10, with the degree of vulnerability generally decreasing the further away from the well.

### **4.19.2 Use Prohibitions and Regulations within Vulnerable Areas**

Notwithstanding the land uses permitted by the underlying zone category in this By-law, any land use that involves one of the following significant drinking water threat activities within vulnerable areas identified on Schedule A to this By-law shall be prohibited until a Section 59 Notice has been issued by the Municipality's Risk Management Official in accordance with the Clean Water Act, 2006, or the Risk Management Official is satisfied that a significant drinking water threat will not be engaged in:

- i. Waste disposal sites within the meaning of Part V of the Environmental Protection Act.
- ii. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
- iii. The application of agricultural source material to land.
- iv. The storage of agricultural source material.
- v. The management of agricultural source material.
- vi. The application of non-agricultural source material to land.
- vii. The handling and storage of non-agricultural source material.
- viii. The application of commercial fertilizer to land.
- ix. The handling and storage of commercial fertilizer.
- x. The application of pesticide to land.
- xi. The handling and storage of pesticide.
- xii. The application of road salt.
- xiii. The handling and storage of road salt.

- xiv. The storage of snow.
- xv. The handling and storage of fuel.
- xvi. The handling and storage of a dense non-aqueous phase liquid.
- xvii. The handling and storage of an organic solvent.
- xviii. The management of runoff that contains chemicals used in the de-icing of aircraft.
- xix. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.
- xx. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
- xxi. An activity that reduces the recharge of an aquifer.

**The following terms and definitions are to be added to Section 2 - Definitions of the Zoning By-law:**

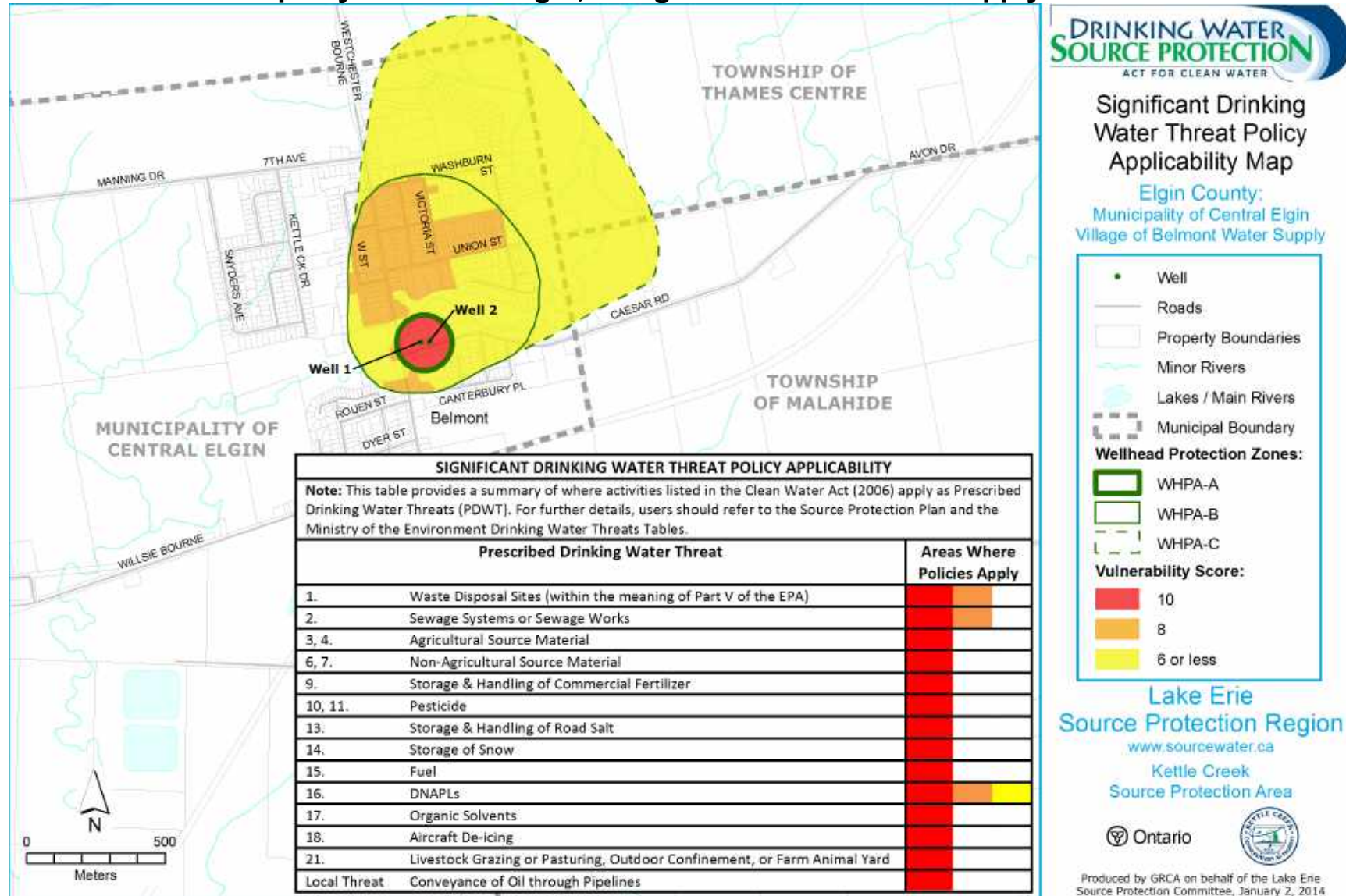
**SECTION 59 NOTICE**, refers to the requirements under Section 59 of the Clean Water Act, which requires issuance of a notice from the Municipality's Risk Management Official before permitting an activity that is considered a restricted land use as identified in the Thames Sydenham & Region or Kettle Creek Source Protection Plan, whichever is applicable.

**DRINKING WATER THREAT**, means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the Regulations under the Clean Water Act, 2006 as a drinking water threat. (Source: Clean Water Act, 2006)

**SIGNIFICANT DRINKING WATER THREAT**, means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. (Source: Clean Water Act, 2006).



## Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply



To be used as basis for revisions to Schedule A

## **NEW ZONING TEXT**

### **4.29 SOURCEWATER PROTECTION**

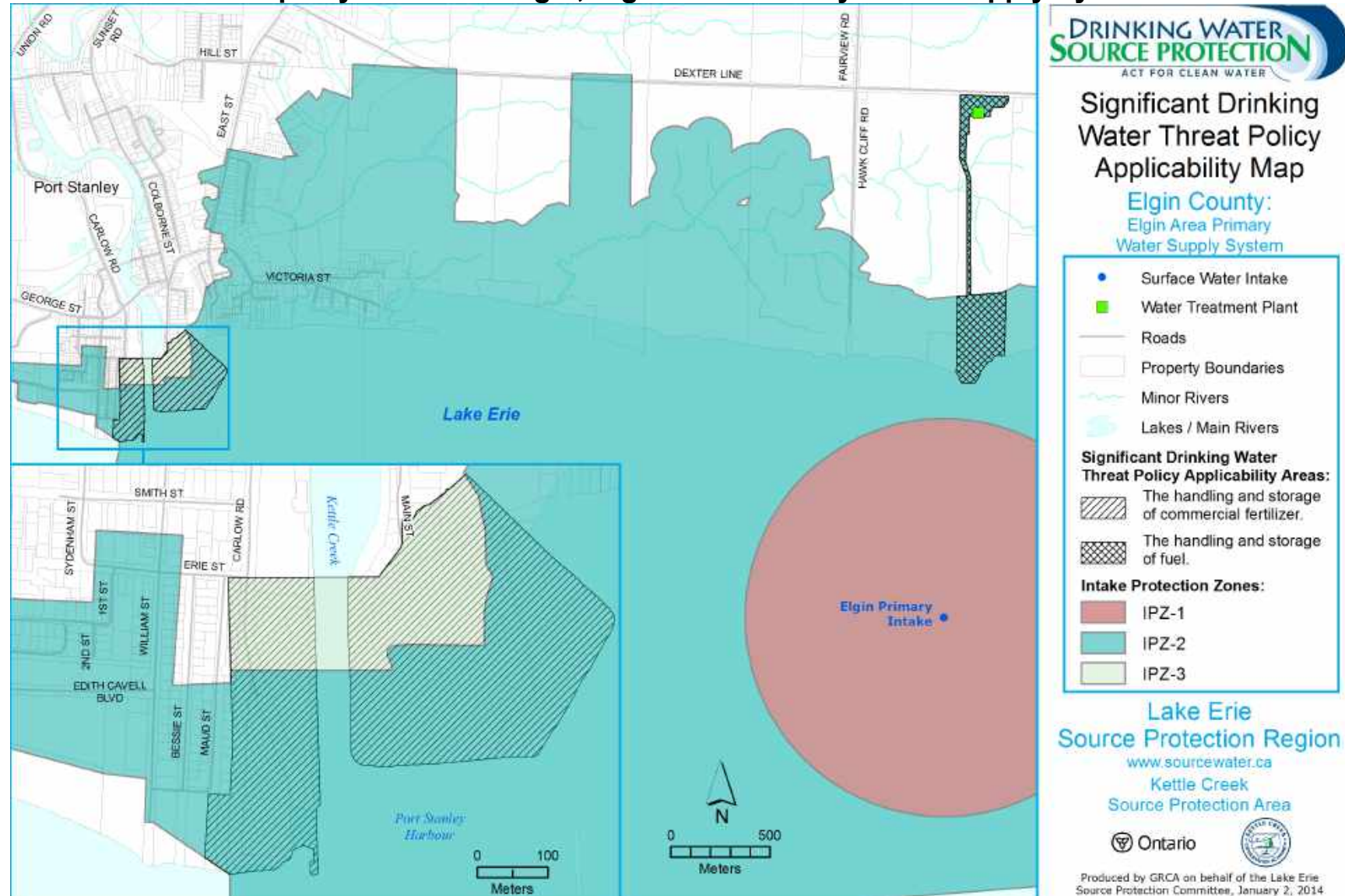
- 4.29.1 Vulnerable Areas shown on Schedule A to this By-law represent the Intake Protection Zone (IPZ) and the associated level of vulnerability for the Elgin Area Primary Water Supply System serving numerous communities within the Municipality of Central Elgin.
- 4.29.2 Notwithstanding the land uses permitted by the underlying zone category in this By-law, any land use that involves one of the following significant drinking water threat activities within the Intake Protection Zone identified on Schedule A shall be prohibited:
- a) The handling and storage of commercial fertilizer in an amount greater than 5,000 cubic metres; and
  - b) The handling and storage of fuel greater than 6,000 litres.

#### **The following terms and definitions to be added to Section 2 - Definitions of the Zoning By-law:**

**DRINKING WATER THREAT**, means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the Regulations under the Clean Water Act, 2006 as a drinking water threat. (Source: Clean Water Act, 2006)

**SIGNIFICANT DRINKING WATER THREAT**, means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. (Source: Clean Water Act, 2006).

## Schedule B: Municipality of Central Elgin, Elgin Area Primary Water Supply System



To be used as basis for revisions to Schedule A

## **NEW ZONING TEXT**

### **7.1.27 SOURCEWATER PROTECTION**

- 7.1.27.1** Vulnerable Areas shown on Schedule X to this By-law represent the Intake Protection Zone (IPZ) and the associated level of vulnerability for the Elgin Area Primary Water Supply System serving numerous communities within the Municipality of Central Elgin.
- 7.1.27.2** Notwithstanding the land uses permitted by the underlying zone category in this By-law, any land use that involves one of the following significant drinking water threat activities within the Intake Protection Zone identified on Schedule A shall be prohibited:
- a) The handling and storage of commercial fertilizer in an amount greater than 5,000 cubic metres; and
  - b) The handling and storage of fuel greater than 6,000 litres.

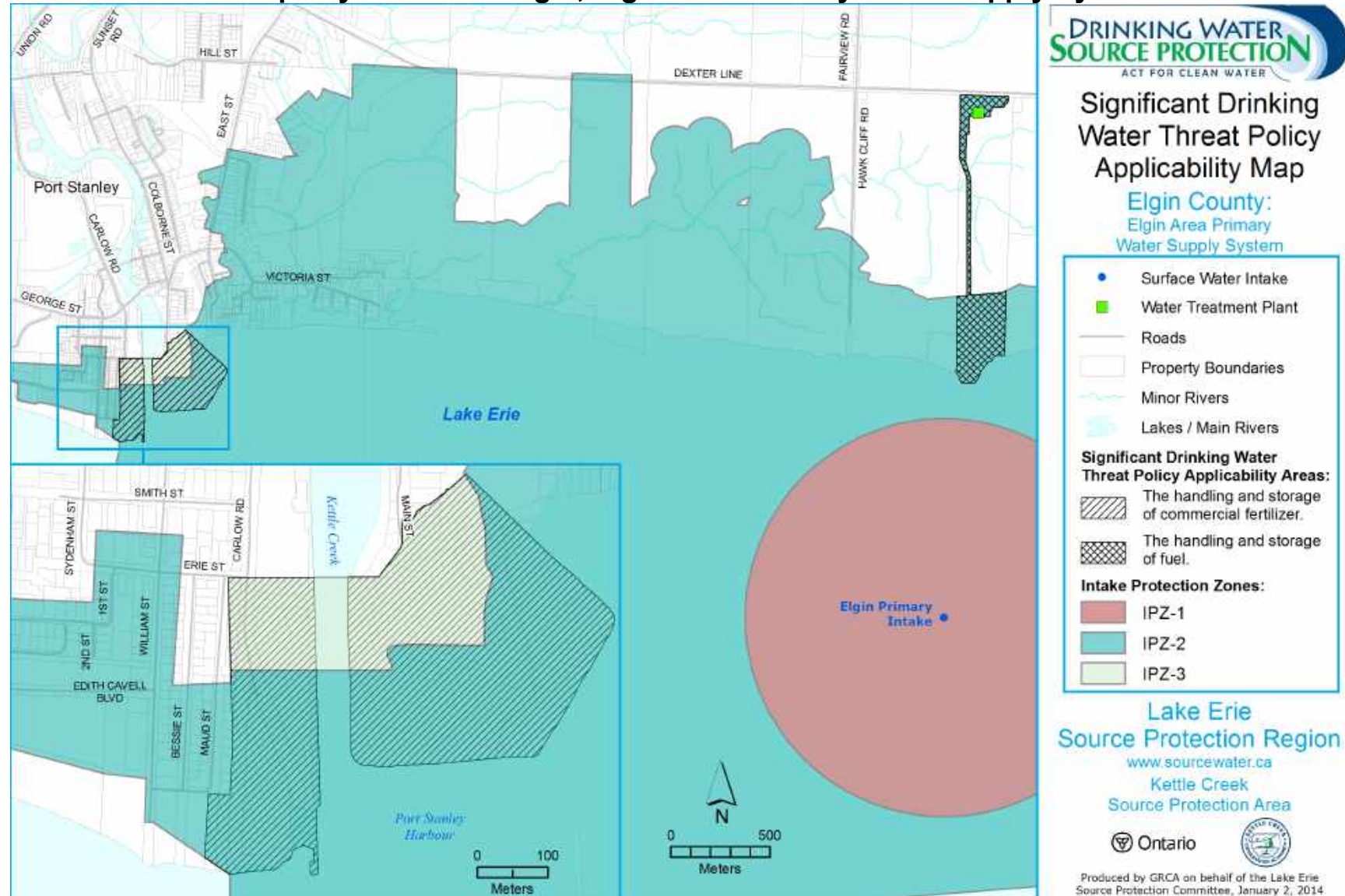
**The following terms and definitions to be added to Section 2 - Definitions of the Zoning By-law:**

***DRINKING WATER THREAT*** means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the Regulations under the Clean Water Act, 2006 as a drinking water threat. (Source: Clean Water Act, 2006)

***SIGNIFICANT DRINKING WATER THREAT*** means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. (Source: Clean Water Act, 2006).



## Schedule B: Municipality of Central Elgin, Elgin Area Primary Water Supply System



To be used as basis for revisions to Schedule A

## **4.58 Sourcewater Protection**

### **4.58.1 Identification of Vulnerable Areas**

- a) Vulnerable Areas shown on Schedules A and E to this By-law represent Wellhead Protection Areas (WHPAs) and the associated level of vulnerability for municipal water sources serving the Municipality.
- b) A WHPA illustrates three time-related capture zones including a 100-metre radius surrounding the well (WHPA-A), 2 year travel time for water to enter the well (WHPA-B), and 5 year travel time for water to enter the well (WHPA-C).
- c) The degree of vulnerability of a WHPA is represented in Schedules A and E by a vulnerability score. The vulnerability score can range from 1 to 10, with 10 being the most vulnerable.

### **4.58.2 Use Prohibitions and Regulations within Vulnerable Areas**

- a) Notwithstanding the land uses permitted by the underlying zone category in this By-law, any land use, except a solely residential land use, that involves one of the following significant drinking water threat activities within a vulnerable area identified on Schedules A and E shall be prohibited until a Section 59 Notice has been issued by the Municipality's Risk Management Official in accordance with the Clean Water Act, 2006, or the Risk Management Official is satisfied that a significant drinking water threat will not be engaged in:
  - i. Waste disposal sites within the meaning of Part IV of the Environmental Protection Act.
  - ii. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
  - iii. The application of agricultural source material to land.
  - iv. The storage of agricultural source material.
  - v. The management of agricultural source material.
  - vi. The application of non-agricultural source material to land.
  - vii. The handling and storage of non-agricultural source material.
  - viii. The application of commercial fertilizer to land.
  - ix. The handling and storage of commercial fertilizer.
  - x. The application of pesticide to land.
  - xi. The handling and storage of pesticide.

- xii. The application of road salt.
- xiii. The handling and storage of road salt.
- xiv. The storage of snow.
- xv. The handling and storage of fuel.
- xvi. The handling and storage of a dense non-aqueous phase liquid (excluding incidental volumes for personal/domestic use).
- xvii. The handling and storage of an organic solvent.
- xviii. The management of runoff that contains chemicals used in the de-icing of aircraft.
- xix. The use of land as livestock grazing or pasturing land, an outdoor confinement area or farm-animal yard.
- xx. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
- xxi. An activity that reduces the recharge of an aquifer.

#### 4.58.3 Sewage Systems and Holding Tanks within Vulnerable Areas

- a) Notwithstanding any other provision of this By-law to the contrary, the following shall apply to WHPAs with a vulnerability score of 10 as identified on Schedules A and E:
  - i. A new or replacement *small on-site septic system and/or holding tank* shall be located on the same property but where possible sited outside the limits of the WHPA with a vulnerability score of 10 as identified on Schedules A and E.
  - ii. New development relying on a *large on-site septic system and/or holding tank* shall be prohibited.

#### 4.58.4 Road Salt Storage Facilities in Vulnerable Areas

- a) Notwithstanding any other provision of this By-law to the contrary, the following shall apply to WHPAs with a vulnerability score of 10 as identified on Schedules A and E:
  - i. Where permitted in the underlying zone category, road salt storage facilities are only permitted where a salt impact assessment and/or a salt management plan has been completed to the satisfaction of the Municipality and the road salt storage facilities are covered by a roof.

**The following terms and definitions are to be added to Section 2.0 Definitions:**

***“SMALL ON-SITE SEPTIC SYSTEM AND/OR HOLDING TANK”*** shall mean a system that stores and/or treats human waste on-site with a design flow of less than or equal to 10,000 litres per day and subject to approval under the Building Code Act or the Ontario Water Resources Act. These systems shall include, but not be limited to, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks, and shall not include sewage treatment plants.

***“LARGE ON-SITE SEPTIC SYSTEM AND/OR HOLDING TANK”*** shall mean a system that stores and/or treats human waste on-site with a design flow of greater than 10,000 litres per day and regulated under the Ontario Water Resources Act. These systems shall include, but not be limited to, greywater systems, cesspools, leaching bed systems and associated treatment units, and holding tanks, and shall not include sewage treatment plants.

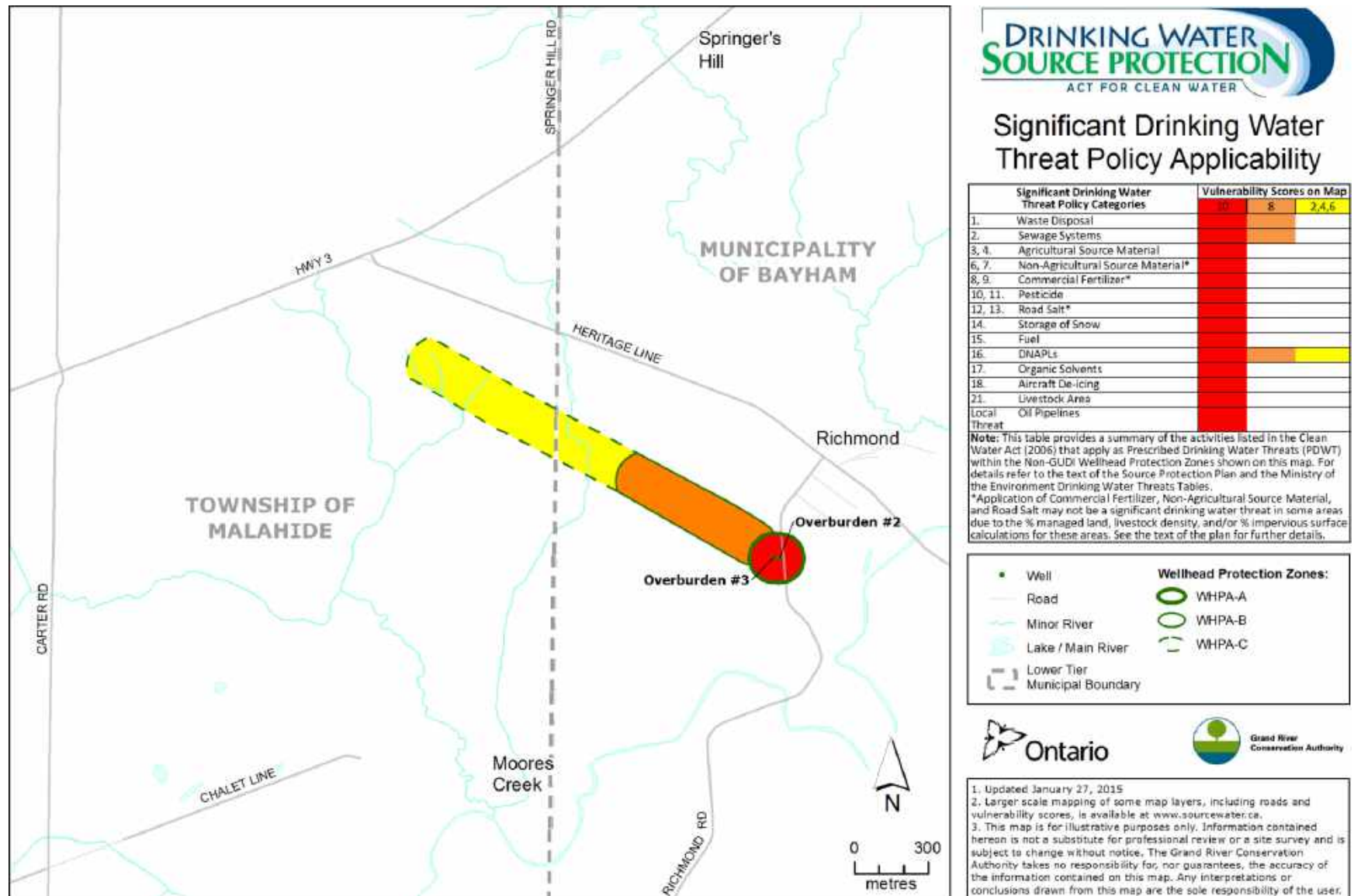
***“SECTION 59 NOTICE”*** refers to the requirements under Section 59 of the Clean Water Act, which requires issuance of a notice from the County’s Risk Management Official before permitting an activity that is considered a restricted land use as identified in the Long Point Region Source Protection Plan.

***“DRINKING WATER THREAT”*** means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat (Source: Clean Water Act)

***“SIGNIFICANT DRINKING WATER THREAT”*** means a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk (Source: Clean Water Act)



## 6.6 Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)



To be used as basis for revisions to Schedule A

#### **4.47 Sourcewater Protection**

##### **4.47.1 Identification of Vulnerable Areas**

- a) Vulnerable Areas shown on Schedule A represent Wellhead Protection Areas (WHPAs) and the associated level of vulnerability for municipal water sources serving the neighbouring Municipalities of Central Elgin and Bayham.
- b) A WHPA illustrates three time-related capture zones including a 100-metre radius surrounding the well (WHPA-A), 2 year travel time for water to enter the well (WHPA-B), and 5 year travel time for water to enter the well (WHPA-C). WHPA-C areas associated with wellheads in the Municipalities of Central Elgin and Bayham are located within the Township.
- c) The degree of vulnerability of a WHPA is represented in Schedule A by a vulnerability score. The vulnerability score can range from 1 to 10, with 10 being the most vulnerable.

##### **4.47.2 Use Prohibitions and Regulations within Vulnerable Areas**

- a) Notwithstanding the land uses permitted by the underlying zone category in this By-law, any land use that involves one of the following significant drinking water threat activities shall be prohibited within the vulnerable areas identified on Schedule A to this By-law until a Section 59 Notice has been issued by the Municipality's Risk Management Official in accordance with the Clean Water Act, 2006, or if the Risk Management Official is satisfied that a significant drinking water threat activity will not be engaged in:
  - i. The handling and storage of a dense non-aqueous phase liquid
- b) 4.47.2 a) shall not apply to a solely residential land use in the Long Point Region Source Protection Plan Area.

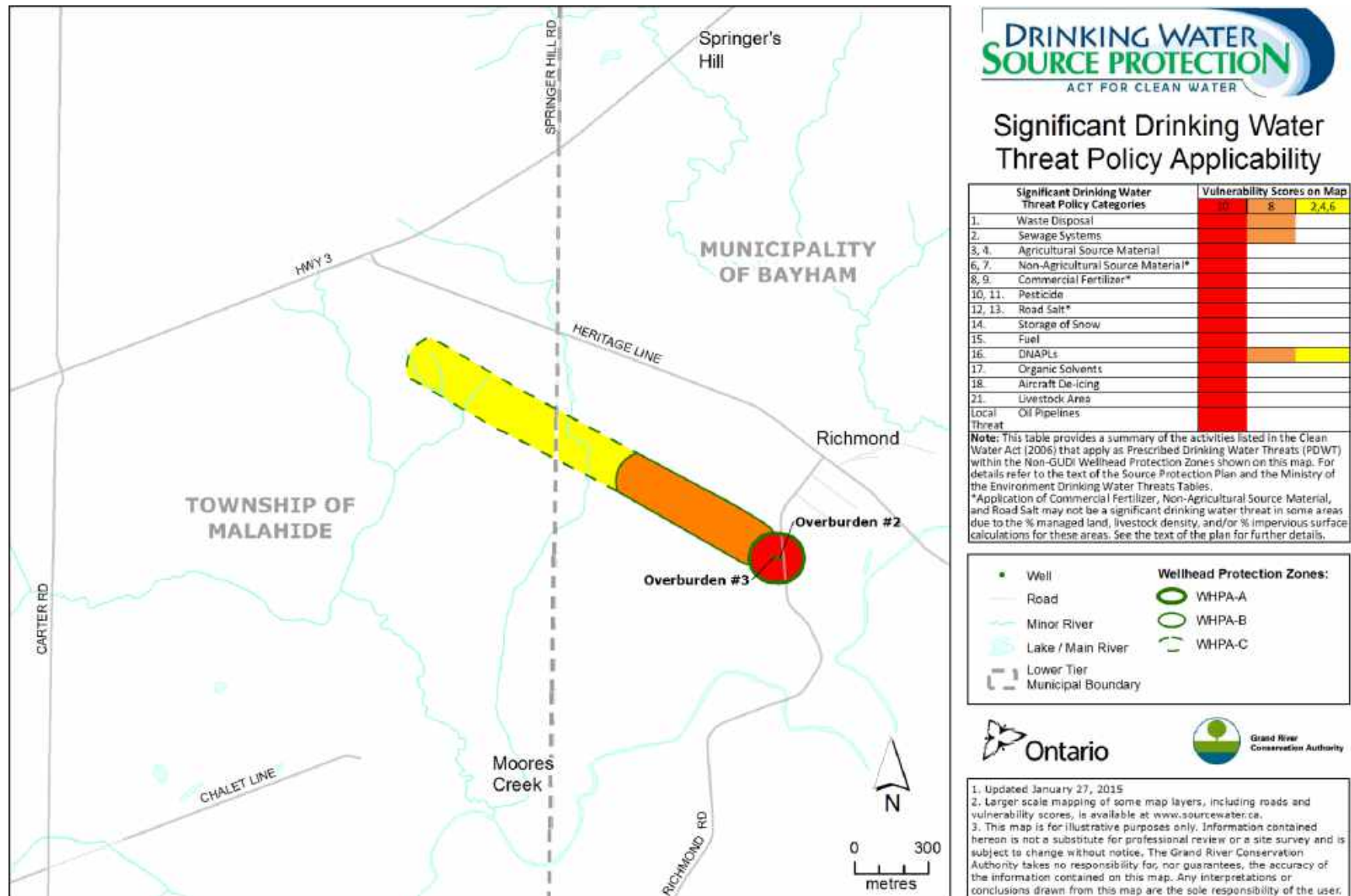
**The following terms and definitions are to be added to Section 2 – Definitions:**

**DRINKING WATER THREAT**, shall mean an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source or drinking water, and includes an activity or condition that is prescribed by the Regulations under the Clean Water Act as a drinking water threat. (Source: Clean Water Act)

**SECTION 59 NOTICE**, shall refer to the requirements under Section 59 of the Clean Water Act, which requires issuance of a notice from the Municipal Risk Management Official before permitting an activity that is considered a restricted land use in the Long Point Region or Kettle Creek Source Protection Plan.

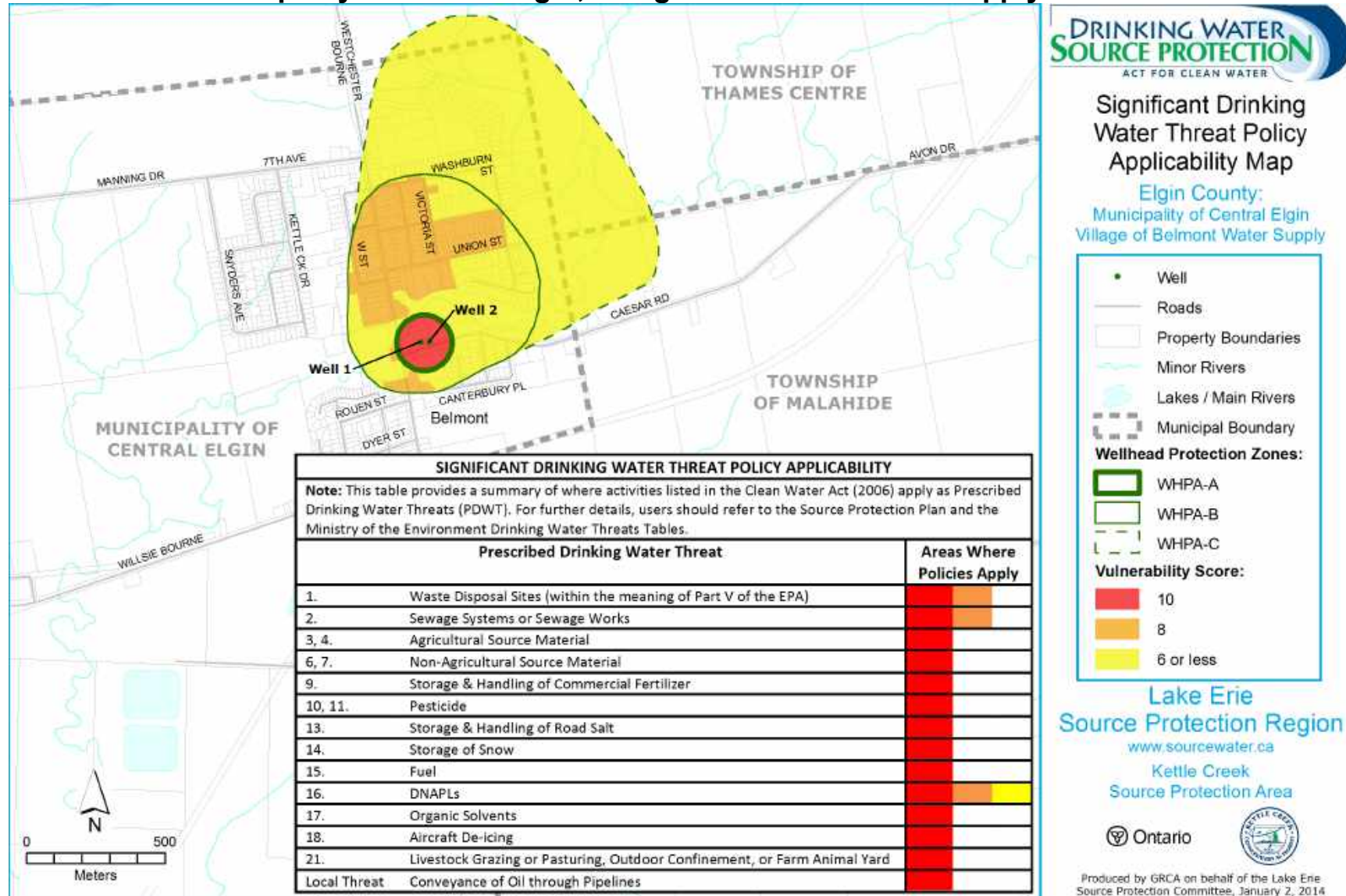
**SIGNIFICANT DRINKING WATER THREAT**, shall mean a drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. (Source: Clean Water Act)

## 6.6 Schedule A: Municipality of Bayham: Village of Richmond Water Supply (Groundwater Wells)



To be used as basis for revisions to Schedule A

## Schedule A: Municipality of Central Elgin, Village of Belmont Water Supply



To be used as basis for revisions to Schedule A

# APPENDIX F

## **Draft General Water Resources Policy Framework**

1. Municipality of Dutton-Dunwich
2. Municipality of West Elgin
3. Town of Aylmer
4. Township of Southwold



## **8.0 WATER RESOURCES**

- 8.1 Surface water sources, including streams, lakes, ponds and wetlands are normally protected through their inclusion within the Natural Heritage System. Groundwater sources occur throughout the Municipality and are an essential resource for urban and rural water supplies, agricultural production and the maintenance of the natural heritage system. It is the intent of this Plan that all development shall be subject to the following policies to ensure that water quality and quantity are not adversely affected. Specifically, it is the Municipality's intent that the development of public and private uses will not significantly alter groundwater recharge or discharge; impair groundwater or surface water quality; or negatively impact municipal groundwater supply.
- 8.2 Maintaining a sustainable groundwater supply is a priority to meet the needs of current and future residents. The Municipality recognizes a relationship between groundwater and surface water in terms of recharge and discharge functions. The policies of this Plan are intended to address both ground water and surface water protection.
- 8.3 With respect to water resources, the Municipality shall endeavour to:
- a) Ensure land use decisions advance water conservation efforts and support the efficient use of water resources.
  - b) Promote efficient and sustainable use of water resources that maintain and enhance water quantity and quality through the retention of vegetation or through re-naturalization.
  - c) Encourage agricultural practices that protect water resources.
  - d) Promote sustainable stormwater management practices that protect for, or where feasible, enhance water quality and water quantity control.
  - e) Identify water resource systems consisting of groundwater features, hydrologic functions, natural heritage features and areas, and surface water features, which are necessary for the ecological and hydrological integrity of the watershed.
  - f) Maintain linkages and related functions among groundwater features, hydrologic functions, natural heritage features and areas, and surface water features.
  - g) Protect or enhance the function of sensitive groundwater recharge areas, discharge areas, aquifers and headwaters.
  - h) Work cooperatively with Conservation Authorities and Provincial Ministries regarding land management issues within the watersheds of the Municipality.
  - i) Ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.

- j) Ensure that development meets provincial water quality objectives.
- k) Ensure levels of wastewater treatment that are appropriate for the size, location and scale of development anticipated.
- l) Protect wetlands and areas that make significant contributions to groundwater recharge.
- m) Ensure the base flow needed to protect streams, fisheries and wetlands are maintained.
- n) Support sustainable stormwater management practices that protect, or where feasible, enhance water quantity and quality control.
- o) Implement necessary restrictions on development and site alteration to protect municipal drinking water supplies, vulnerable areas and sensitive surface and groundwater features.
- p) Improve or restore sensitive surface and groundwater features through low impact development approaches and restrictions on development and site alteration, where necessary.

### 3.4 WATER RESOURCES

*The water resources of West Elgin include the Thames River which bounds the Municipality on the north and Lake Erie which bounds the Municipality on the south as well as numerous streams and creeks which flow into these respective water bodies. Also included are groundwater resources on which a large part of the 'Rural Area' depends as a source of water for residential, business and agricultural purposes. Measures and practices are necessary to reduce or eliminate the potential for impairment of the quality and quantity of the Municipality's surface and groundwater resources. It is the intent of this Plan that all development shall be subject to the following policies to ensure that water quality and quantity are not adversely affected. Specifically, development of public and private uses shall not significantly alter groundwater recharge or discharge, impair groundwater or surface water quality, or negatively impact municipal groundwater supply.*

*Maintaining a sustainable groundwater supply and protecting surface water sources is a priority to meet the needs of current and future residents. The Municipality recognizes a relationship between groundwater and surface water in terms of recharge and discharge functions. The policies of this Plan are intended to address both ground water and surface water protection.*

#### 3.4.1 Adverse Impacts

Where development is being proposed that may have an adverse impact on the Municipality's water resources, the proponent shall be required to submit a report prepared by a person or persons qualified in this field to identify and evaluate such impacts and the measures which are feasible to mitigate these impacts.

#### 3.4.2 Sustainable Use

The Municipality shall promote efficient and sustainable use of its water resources by promoting the retention of vegetation and renaturalization to enhance water quantity and quality, encouraging agricultural practices that protect water resources, and ensuring land use decisions advance water conservation efforts and support the efficient use of water resources. The Municipality will also endeavor to adopt water conservation measures and sustain water quality through such measures as maintaining appropriate sewage rates in areas served by municipal treatment plants, the preparation and implementation of nutrient management plans for livestock operations, and promoting appropriate use and maintenance of individual and communal waste disposal systems and the use of low nitrate generating systems, ultimately ensuring that levels of wastewater treatment are



appropriate for the size, location and scale of development anticipated.

### **3.4.3 Partnerships**

The Municipality shall co-operate with the Lower Thames Valley Conservation Authority and other interested groups regarding land management issues within the watersheds of the Municipality and to identify and implement cost effective measures for protecting, improving and restoring the quality and quantity of the water resources of West Elgin.

### **3.4.4 Stormwater Management**

The Municipality shall require stormwater management plans for new development and promote sustainable stormwater management practices that protect for, or where feasible, enhance water quality and quantity control.

Studies may be required for undeveloped areas prior to development to minimize stormwater runoff and contaminant loads as well as to maintain or enhance vegetative and pervious surfaces. Such studies shall be prepared, where appropriate to do so, on a sub-watershed basis as opposed to a land ownership basis. Stormwater Management facilities shall not be permitted in provincially significant wetlands. In the preparation and evaluation of such studies, the Lower Thames Valley Conservation Authority shall be consulted. All design parameters for stormwater management shall be approved by the Municipality, the Ministry of Environment and the Lower Thames Valley Conservation Authority. A certificate of approval shall be required from the Ministry prior to construction.

### **3.4.5 Systems and Functions**

With respect to water resource systems and related functions, the Municipality shall endeavor to:

- a) Identify water resource systems consisting of groundwater features, hydrologic functions, natural heritage features and areas, and surface water features.
- b) Maintain linkages and related functions among groundwater features, hydrologic functions, natural heritage features and areas, and surface water features.
- c) Protect or enhance the function of sensitive groundwater recharge areas, discharge areas, aquifers and headwaters.
- d) Protect wetlands and areas that make significant contributions to groundwater recharge.
- e) Ensure the base flow needed to protect streams, fisheries and wetlands are maintained.
- f) Ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.

- g) Implement necessary restrictions on development and site alteration to protect municipal drinking water supplies, vulnerable areas and sensitive surface and groundwater features.
- h) Improve or restore sensitive surface and groundwater features through low impact development approaches and restrictions on development and site alteration, where necessary.

#### **3.4.6 Watershed Boundaries**

Rodney and West Lorne are situated partially within the watershed of the Thames River and partially within the watershed of Lake Erie. Within these settlements, there are a number of sub-watersheds stemming from a series of drains. In the case of Rodney, these include the Milton Drain and the Wismer Drain while in the case of West Lorne, they include the Trigger Drain and the Wilton Outlet Drain. Modifications to the boundaries of sub-watersheds may be required as a result of minor re-grading to facilitate development. Such modifications shall be subject to the approval of the Municipality and the Lower Thames Valley Conservation Authority.

### 2.2.11 WATER RESOURCES

Surface water resources, including streams, lakes, ponds and wetlands are normally protected through their inclusion within the Natural Heritage System. Groundwater sources occur throughout the Town and are an essential resource for residents and businesses. It is the intent of this Plan that all development shall be subject to the following policies to ensure that water quality and quantity are not adversely affected. Specifically, it is the Town's intent that the development of public and private uses will not significantly alter groundwater recharge or discharge; impair groundwater or surface water quality, or negatively impact municipal groundwater supply. The Town recognizes a relationship between groundwater and surface water in terms of recharge and discharge functions. The policies of this Plan are intended to address both ground water and surface water protection.

With respect to water resources, the Town shall endeavour to:

- (1) Ensure land use decisions advance water conservation efforts and support the efficient use of water resources.
- (2) Promote efficient and sustainable use of water resources that maintain and enhance water quantity and quality through the retention of vegetation or through re-naturalization.
- (3) Encourage agricultural practices that protect water resources.
- (4) Promote sustainable stormwater management practices that protect for, or where feasible, enhance water quality and water quantity control.
- (5) Identify water resource systems consisting of groundwater features, hydrologic functions, natural heritage features and areas, and surface water features, which are necessary for the ecological and hydrological integrity of the watershed.
- (6) Maintain linkages and related functions among groundwater features, hydrologic functions, natural heritage features and areas, and surface water features.
- (7) Protect or enhance the function of sensitive groundwater recharge areas, discharge areas, aquifers and headwaters.
- (8) Work cooperatively with Conservation Authorities and Provincial Ministries regarding land management issues within the watersheds of the Municipality.
- (9) Ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis.
- (10) Ensure that development meets provincial water quality objectives;
- (11) Ensure levels of wastewater treatment that are appropriate for the size, location and scale of development anticipated.

- (12) Protect wetlands and areas that make significant contributions to groundwater recharge.
- (13) Ensure the base flow needed to protect streams, fisheries and wetlands are maintained.
- (14) Support sustainable stormwater management practices that protect, or where feasible, enhance water quantity and quality control.
- (15) Implement necessary restrictions on development and site alteration to protect municipal drinking water supplies, vulnerable areas, and sensitive surface and groundwater features.
- (16) Improve or restore sensitive surface and groundwater features through low impact development approaches and restrictions on development and site alteration, where necessary.

### **3.1.6 STORMWATER MANAGEMENT POLICY**

#### **(1) Stormwater Management Studies**

Prior to development being allowed to proceed, and if required by the policies of this Plan, the Catfish Creek Conservation Authority and/or the Ministry of the Environment, the developer shall undertake a stormwater management study to determine the effect of increased run-off due to development of the site, and to identify stormwater management measures as necessary to control any increases in flows in downstream watercourses, up to and including the 1:100 year design storm. This Plan requires the preparation of a stormwater management study for any new development consisting of more than five residential lots or for commercial or industrial developments with large amounts of impervious area. The study shall identify practices that will minimize stormwater volumes and contaminant loads and determine the appropriate stormwater facilities for the development to achieve these objectives. The developer shall install the stormwater management measures identified in the study as part of the development of the site, to the satisfaction of the Town and the Conservation Authority. In addition to the Catfish Creek Conservation Authority, the Ministry of Environment and the Ministry of Transportation shall be consulted on stormwater management studies in situations where statutory approvals are necessary under the Ontario Water Resources Act and/or in situations where development is proposed adjacent to a Provincial Highway. Stormwater management studies will be considered in light of the Ministry of the Environment's current Stormwater Management Practices Planning and Design Manual.

## 2.4 WATER RESOURCES

The Township contains watercourses draining to Lake Erie and the Thames River. Among other resources, wetlands, the lake, river and streams support the natural environment and the existing community.

Groundwater resources also occur throughout the Township and are an essential resource for urban and rural water supplies, agricultural production and the maintenance of the natural heritage systems. The protection, conservation and careful management of groundwater resources is necessary to meet both the present and future needs of residents, businesses and the natural environment. It is the intent of this Plan that all development shall be subject to the following policies to ensure that water quality and quantity are not adversely affected. Specifically, it is the Township's intent that the development of public and private uses will not significantly alter groundwater recharge or discharge, impair groundwater or surface water quality, or negatively impact municipal groundwater supply. The policies of this Plan are intended to address both groundwater and surface water protection.

The following will be the policy of the Township:

- a) The Township will work cooperatively with the Kettle Creek and Lower Thames Valley Conservation Authorities in dealing with land management issues within the subwatersheds draining to Lake Erie, including those that extend beyond the municipal boundaries.
- b) The Township will encourage the preparation of watershed and subwatershed management plans and regional stormwater quality/quantity management facilities to assist in water resource and land use planning on an ecosystem basis. To the extent feasible, the Township will support the Conservation Authorities in the preparation and implementation of watershed and subwatershed plans.
- c) The Township will encourage the protection and restoration of Natural Heritage Features, such as wetlands, to improve water quality and quantity and maintain groundwater recharge.
- d) The Township shall endeavor to identify water resource systems consisting of groundwater features, hydrologic functions, natural heritage features and areas, and surface water features, which are necessary for the ecological and hydrologic integrity of the watershed.
- e) The Township will maintain linkages and related functions among groundwater features, hydrologic functions, natural heritage features and areas, and surface water features. The function of sensitive groundwater recharge areas, aquifers and headwaters will be protected or enhanced.
- f) The Township will ensure that land use planning contributes to the protection, maintenance, and enhancement of water and related resources and aquatic systems on an integrated watershed management basis, and that development meets provincial water quality objectives.
- g) Planning applications that propose to make use of a private water source will be required to submit a detailed hydrogeological study to determine the suitability of the lands for groundwater extraction. The hydrogeological study will be prepared to the satisfaction of the Township and the affected Conservation Authority.

- h) Levels of wastewater treatment shall be appropriate for the size, location and scale of development anticipated.
- i) The Township will require groundwater impact assessments for development proposals as appropriate according to the level of susceptibility and potential groundwater contaminants. Assurance that groundwater quality and quantity will not be negatively impacted will be required for approval of applications for development.
- j) The Township will require the use of stormwater management facilities downstream of new developments, where appropriate, to mitigate development impacts on stormwater quantity and quality. The Township will promote sustainable stormwater management practices that protect for, or where feasible, enhance water quality and water quantity control and are characterized by naturalized and unfenced stormwater management facilities, constructed with gentle slopes. Applications for development will be required to be supported by a stormwater quality/quantity management study. The planning and design of stormwater facilities should be undertaken in accordance with the Ministry of the Environment's Stormwater Management Planning and Design Manual.
- k) A Permit To Take Water (PTTW), in accordance with the *Ontario Water Resources Act* is required from the Ministry of Environment where more than 50,000 litres a day of groundwater/surface water will be drawn.
- l) Environmental Assessment and Certificate of Approval may be required from the Ministry of Environment in connection with stormwater management facilities and permits to take water.
- m) In cooperation with the private sector and the community, the Township will encourage the reduction of water consumption levels through the promotion of the efficient use of water and ensure land use decisions advance water conservation efforts and support the efficient use of water resources.
- n) The Township will promote efficient and sustainable use of water resources that maintain and enhance water quantity and quality through the retention of vegetation or through re-naturalization.
- o) The Township will encourage agricultural practices that protect water resources.
- p) The Township shall implement necessary restrictions on development and site alteration to protect municipal drinking water supplies, vulnerable areas and sensitive surface and groundwater features.
- q) The Township shall improve or restore sensitive surface and groundwater features through low impact development approaches and restrictions on development and site alteration where necessary.
- q) In the interest of protecting the quality of ground and surface waters, new or expanding livestock operations will satisfy the policies of Section 4.1 Agriculture.