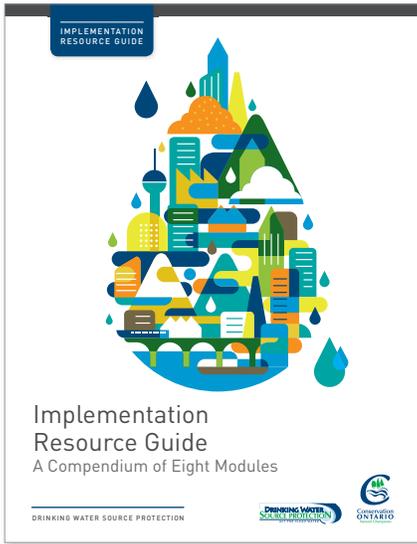




MODULE 3

Land Use Planning

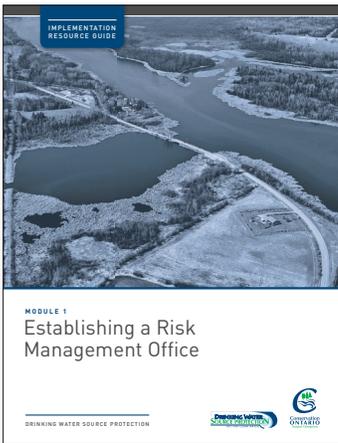


Implementation Resource Guides

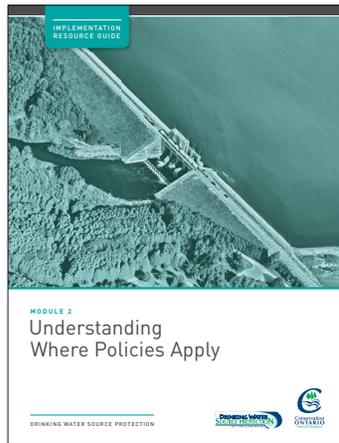
A Compendium of Eight Modules

Look for all eight modules in our Drinking Water Source Protection series. You can find them at www.conservation-ontario.on.ca

MODULE 1



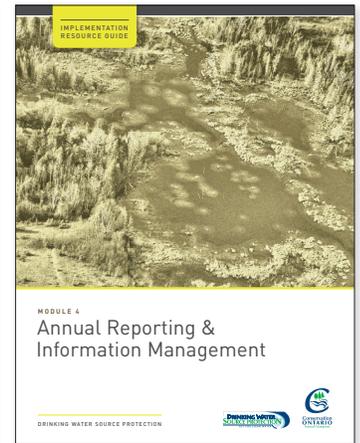
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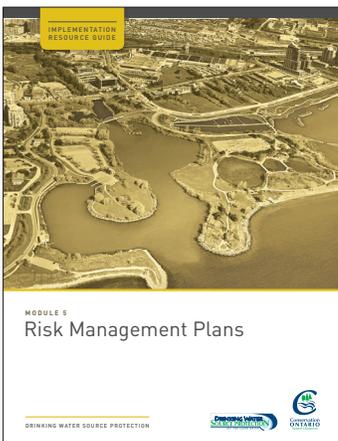
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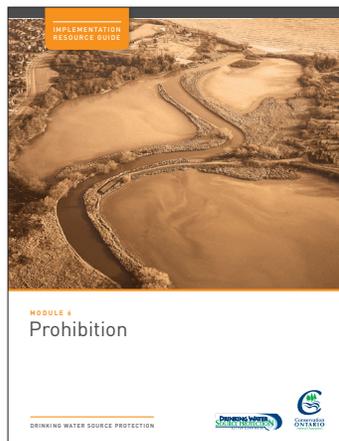
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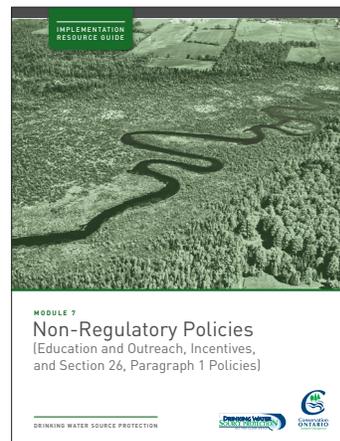
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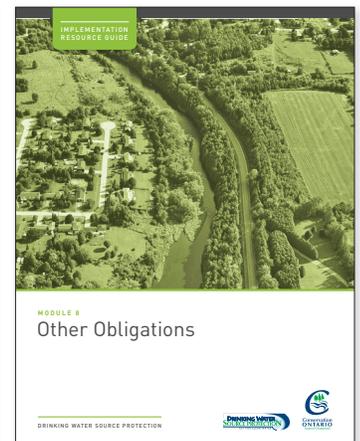
MODULE 6



MODULE 7



MODULE 8



Module 3: Land Use Planning

Implementation Resource Guide

06/05/2014

Note to Reader: This document is one of a series developed by staff at conservation authorities and Conservation Ontario in support of source protection plan implementation. These documents cover a variety of tools related to plan implementation, but not all will apply in your municipality. Consult your local source protection plan to determine which policies are applicable in your municipality. This document has not been reviewed by legal counsel and is not presented as legal advice.

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A. Introduction

This module outlines how the *Clean Water Act, 2006* Assessment Reports and source protection plans can influence municipal planning. The first section describes the source protection planning process, the alignment of the local Assessment Reports with the Provincial Policy Statement, and how the information in Assessment Reports should be used to inform planning decisions.

The second section describes the content and legal effect of source protection plans and implications for planning decisions.

The third section explains how to integrate source protection plan policies into Official Plans, zoning by-laws, and other tools available through the *Planning Act*. This section also describes transition provisions that could be included in some source protection plans, and how implementing bodies should consider these provisions when making planning decisions.

The last sections of this module clarify the use of Section 59 of the *Clean Water Act* in reviewing municipal development applications, source-protection-related appeals to the Ontario Municipal Board, and annual reporting requirements for municipalities.

B. Land Use Planning and the *Clean Water Act, 2006*

i. Source Protection for Land Use Planners

The purpose of the *Clean Water Act* is to protect existing and future sources of municipal residential drinking water. This legislation is a major part of the Ontario government's commitment to ensuring that every Ontarian has access to safe drinking water. Protecting water at its source is the first step in the multi-barrier approach to protecting drinking water. By stopping contaminants from getting into sources of drinking water — lakes, rivers and aquifers — we can provide the first line of defence in the protection of our environment and the health of Ontarians. The *Clean Water Act* relies on locally developed and watershed-based source protection plans founded on sound science to effectively meet this objective.

As part of the Province's multi-barrier approach to drinking water, the *Clean Water Act* mandates that drinking water shall be protected at its source using a variety of tools, including existing resources such as municipal land use planning authorities. To assist municipalities in using these authorities, the *Clean Water Act* established locally driven, watershed-based, source protection committees to review and assess municipal drinking water sources. The *Clean Water Act* mandated each source protection committee prepare three documents:

1. Terms of Reference (a work plan that identified the drinking water systems that are included in the program),
2. local Assessment Reports (technical studies), and

3. drinking water source protection plans to address threats to municipal drinking water at its source.

Land use planners make planning decisions using the best available information. Historically, many municipalities indicated that they could not protect their drinking water supplies because they didn't know where they were. For many municipalities in Ontario, this information is now readily available in the local Assessment Reports. The Assessment Report information and how it can help inform planning decisions is summarized in the next paragraph and discussed in Section C (i).

Assessment Reports

Assessment Reports are technical documents that describe the local watershed and available water supplies, identify vulnerable areas where drinking water sources might face a risk of contamination or depletion, assess threats to drinking water within those vulnerable areas, and provide the basis for the development of a source protection plan. The Director of the Source Protection Programs Branch has approved all of Ontario's 38 Assessment Reports. Assessment Reports are not policy documents; they contain technical and scientific information, including the delineations of vulnerable areas. The information and delineations in the Assessment Reports cannot be appealed to the Ontario Municipal Board.

Several municipalities currently have provisions in their land use planning documents to protect sources of drinking water. Some municipalities are beginning to use the information in the Assessment Reports as they update their planning documents and make decisions on land use planning applications.

Director's Technical Rules

In determining the location and extent of vulnerable areas, source protection committees used scientific rules that were applied across the province and are found in the Director's Technical Rules. In areas of the province where Assessment Reports were not completed, municipalities can rely on the Director's Technical Rules to delineate vulnerable areas or portions of vulnerable areas. The Technical Rules describe, among other matters, how to delineate vulnerable areas and assess the vulnerability of these areas to contamination or depletion. Find the Director's Technical Rules here: <http://www.ontario.ca/environment-and-energy/technical-rules-assessment-report>

When vulnerable areas are delineated using the Director's Technical Rules, these vulnerable areas would then be delineated in accordance with provincial standards and would align with the definition of *designated vulnerable areas* per 2.2.1.d of the Provincial Policy Statement, 2005. Municipalities could then rely on the science as they make decisions to impose restrictions on development and site alteration to satisfy their obligations under the Provincial Policy Statement.

Tables of Drinking Water Threats

The Technical Rules contain tables that set out the activities that pose risks to drinking water, the circumstances that identify the activity as a threat, and in what instances those activities are considered significant, moderate or low drinking water threats. Examples of circumstances include the volume of a product at a site, the size of the contributing area for a stormwater pond, or the size of area where materials are applied. Activities and circumstances pose a risk to an area depending on the vulnerability score of that area. In some cases, the volume of the contaminant or the vulnerability score can be so low that the activity is not considered a risk to drinking water.

The Tables of Drinking Water Threats combine the activity, circumstances, and vulnerability score into one document that is very complex. There are other tools available to help you understand if an activity poses a risk to drinking water.

Tables of Circumstances

The Province has also developed Tables of Circumstances to allow you to see only the activities that are a significant risk in a certain vulnerable area. Municipal planning staff can use the Tables of Circumstances as a guide to determine whether a proposed land use would be appropriate. For example, a planner could review the vulnerability of an area to help determine whether a gas station would be acceptable. While planners may use the Tables of Circumstances as a guide when considering planning applications, the Risk Management Official will use these Tables of Circumstances to determine whether regulating these activities is necessary (see Part IV for planners at the end of this module).

Find a searchable version of the Tables of Drinking Water Threats here:

<http://www.trcgauging.ca/RmmCatalogue/>

Source Protection Plans

Source protection plans must include policies to address areas where threats to sources of drinking water could be significant. Generally, these areas are close to municipal wellheads or intakes. Source protection plans may contain policies to address threats to sources of drinking water in areas where the threat could only rate as moderate or low, such as highly vulnerable aquifers and significant groundwater recharge areas). A municipality's planning decisions to protect designated vulnerable areas may be the only way to protect private drinking water sources since they are not covered by the *Clean Water Act*. Outside of the implementation of source protection plan policies, municipalities are not limited to addressing activities that are considered drinking water threats under the *Clean Water Act* (listed in Ontario Regulation 287/07), and can make their own decisions about which land uses are incompatible with the protection of vulnerable areas for drinking water sources.

The source protection plan is the crucial link between the science in the Assessment Reports and the policy(ies) to address threats. Planning decisions will be required to “conform with” significant threat policies, as well as to “have regard for” any moderate and low threat policies in approved source protection plans. Once a source protection plan is approved, it will prevail. In the case of a conflict over Official Plans and zoning by-laws (i.e. where a conformity exercise has not been undertaken to update an Official Plan or zoning by-law to bring them into conformity with an approved source protection plan) the approved source protection plan still prevails. Where there is a conflict between a source protection plan and the Provincial Policy Statement or other provincial plans, the provision that offers the greatest protection to the source of drinking water will prevail. The *Clean Water Act* also ensures that where there is a conflict between a provision of the *Clean Water Act* and any other Act, the provision providing the highest level of protection to the water quality and quantity will prevail.

Proposed source protection plans can be found at this link:

<http://www.conservationontario.ca/uncategorised/143-otherswpreionsindex>

Threats to Drinking Water

The General Regulation under the *Clean Water Act* prescribed certain threats to drinking water. This list was developed through a multi-stakeholder working group and includes threats or activities that were either known to cause contamination, or were identified as having a higher potential to impact sources of drinking water. The list of prescribed threats to drinking water is found in Section 1.1 of Ontario Regulation 287/07. The list includes 19 specific activities that could contribute chemicals or pathogens and affect the quality of the source of the water supply, and two activities that could result in depleted water supplies (threats 19 and 20). The specific threat activities:

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.

14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

In addition to this list of threats, a source protection committee can apply to the Director of the Source Protection Programs Branch for a local drinking water threat to be added. For example, one approved local threat is the transportation of specific hazardous substances, such as fuel and septage, along transportation corridors.

Municipal planning staff involved will need to make decisions relative to vulnerable areas sensitive to contamination or depletion. They should evaluate land uses that involve drinking water threat activities to make decisions on development applications in these vulnerable areas.

C. Source Protection Considerations and Obligations Before Source Protection Plans Take Effect

i. Assessment Reports and the Provincial Policy Statement, 2005

Assessment Reports describe the watershed, provide the scientific basis for the source protection plan, and are approved by the Director, Source Protection Programs Branch, and Ministry of the Environment. Assessment Reports were developed using standardized scientific methods provided by the Ministry of the Environment's Director's Technical Rules. Vulnerable areas that are delineated using the Technical Rules are the "designated vulnerable areas" as defined in the Provincial Policy Statement. Four types of vulnerable areas are delineated and mapped in the Assessment Reports:

1. surface water intake protection zones (IPZs),
2. wellhead protection areas (WHPAs),
3. highly vulnerable aquifers (HVAs), and
4. significant groundwater recharge areas (SGRAs).

If an issue with water quality is identified that is, or could, impact the use of the drinking water system, the issue could be documented in the Assessment Reports. If an issue is identified in the Assessment Reports, it will also include an issue contributing area (ICA) within the vulnerable area. Typically, this means that threat activities in the ICA that could contribute to that drinking water issue could be identified as significant threats in a broader area. For example, if a nitrate issue is identified at or near a well, all threat activities that could contribute nitrates, such as application of fertilizer, agricultural source material, non-agricultural source materials, and sewage disposal systems, could be significant drinking water threats in the broader issue contributing area.

The *Planning Act* requires that municipal planning decisions be consistent with the Provincial Policy Statement, 2005. The Provincial Policy Statement gives municipalities the authority to protect, improve and restore the quality and quantity of water resources. Specifically, Section 2.2.1 includes the following provision:

"Planning authorities shall protect, improve or restore the quality and quantity of water by...

...d. implementing the necessary restrictions on development and site alteration to:

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

The designated vulnerable areas delineated in the Assessment Reports align with the definition of the term in the Provincial Policy Statement. These designated areas are defined as vulnerable, in accordance with provincial standards, by virtue of their importance as a drinking water source. To be consistent with the Provincial Policy Statement, planning decisions should

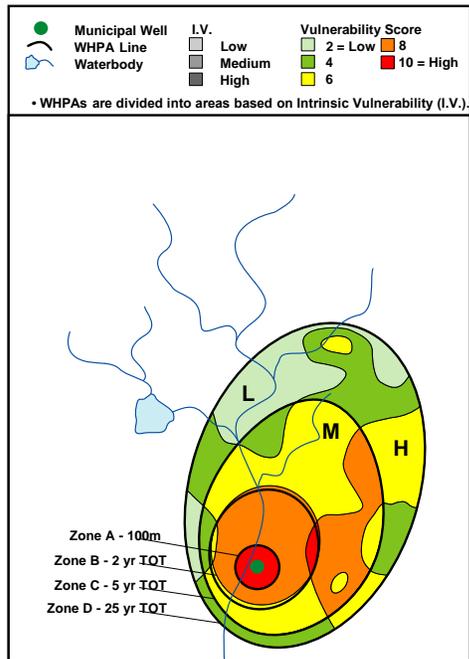
take into consideration information from the relevant local Assessment Reports. Municipalities are beginning to review the mapping in the Assessment Reports as part of their considerations when locating new land uses. Sample illustrations of vulnerable areas are included in Figures 1 and 2.

A municipality may also identify and protect sensitive groundwater features that are important locally, and/or important if the hydrologic function contributes to a sensitive groundwater recharge area or highly vulnerable aquifer. These sensitive groundwater features come under Section 2.2.1.d.2 of the Provincial Policy Statement.

To better understand the delineation of vulnerable areas, vulnerability scores and how to determine the presence of significant drinking water threats, refer to Module 2: Understanding Where Policies Apply and consult with your local source protection authority, or appointed Risk Management Officials.

All existing appeal rights under land use planning legislation continue to apply. A planning decision to protect drinking water sources could still be appealed to the Ontario Municipal Board. Assessment Reports provide decision makers with information used to make an informed decision in a sensitive area. Assessment Reports could be used to support decisions to restrict new uses in vulnerable areas.

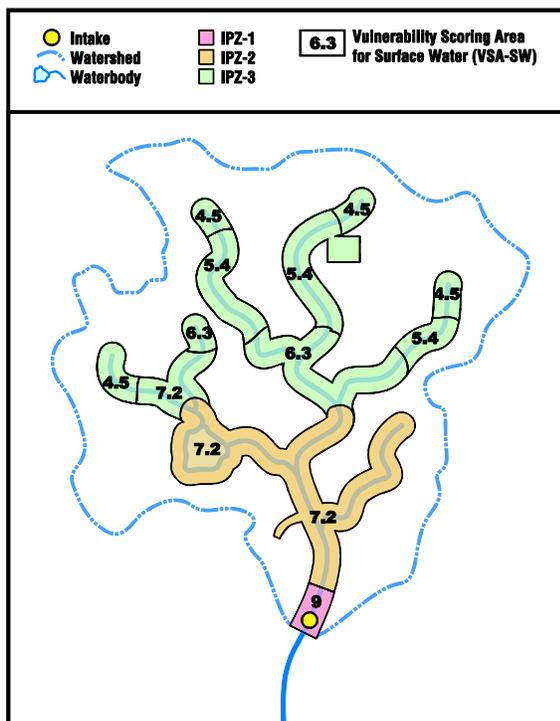
Figure 1: Illustration of a Wellhead Protection Area and Vulnerability Scoring



WHPA Vulnerability Scoring

- Overlay WHPA zones with groundwater vulnerabilities of low, medium and high
- Scoring decreases away from the well and with decreasing aquifer vulnerability
- Always score 10 in Zone A
- WHPA-B scores 10, 8 and 6 with high, medium and low vulnerability, respectively
- WHPA-C scores 8, 6 and 4
- WHPA-D scores 6, 4 and 2

Figure 2: Illustration of an Intake Protection Zone and Vulnerability Scoring



Example Vulnerability Scores for Intake Protection Zones Type C Intake

- Vulnerability scores decrease from IPZ-1 to IPZ-2 to IPZ-3
- Individual vulnerability scores are applied to the IPZ-1 and IPZ-2
- Variable vulnerability scores are possible within IPZ-3

ii. Official Plan Updates to be Consistent with the Provincial Policy Statement

Prior to source protection plan approval, the planning approval authority should take into consideration the information and mapping in the Assessment Reports to ensure that decisions are consistent with the Provincial Policy Statement and to protect drinking water supplies and designated vulnerable areas. Some municipalities have vulnerable area mapping that does not match the mapping in the Assessment Reports. When relying on 2.2.1.d of the Provincial Policy Statement, municipalities should use the vulnerable area mapping in the Assessment Reports. However, municipalities may also have an interest in areas that were mapped using locally determined criteria.

Periodically, municipalities are required to undertake a review and, where appropriate, update their planning documents. Prior to completion of the Assessment Reports, many municipalities were uncertain where their vulnerable areas were located. With the information from the Assessment Reports now available, municipalities can review the maps and update their planning documents to be consistent with the Provincial Policy Statement. Including vulnerable area mapping in Official Plans will generate greater awareness about source protection and vulnerable areas amongst property owners, developers, real estate agents, lawyers, and the general public. Municipalities may also elect to be more restrictive and protect other drinking water sources, including non-municipal drinking water systems that are outside of the scope of the Assessment Reports.

Municipal Official Plan updates may include general or detailed policies, together with mapping of designated vulnerable areas to satisfy their obligations under the Provincial Policy Statement. Municipalities may also consider amending Official Plans to include provisions to make vulnerable areas subject to site plan control. Additionally, the Official Plan could be reviewed to determine whether council requires further information about vulnerable areas to make an informed decision.

In developing Official Plan policies, municipalities may wish to consider the direction in the submitted source protection plan, recognizing that the direction can change prior to final approval of the Plan. When the source protection plan takes effect, municipalities may have a limited amendment, if any, to ensure conformity with the source protection plan.

iii. *Planning Act* and Development Application Review Prior to Source Protection Plan Approval – Supporting Information

Whether or not an Official Plan has been updated to be consistent with the Provincial Policy Statement, planning decisions must be consistent with the Provincial Policy Statement in the interim. For a municipality to make an informed decision on a development application,

applicants may request supporting documents to help determine if an application relates to vulnerable areas. The municipality may be required to amend the Official Plan to require any documentation currently not specified in the Official Plan or the *Planning Act*. Supporting documents, such as a disclosure report, hydrological/hydrogeological study, or a spill prevention and contingency plan, could be required to address significant drinking water threats, as part of a *Planning Act* or development application in vulnerable areas, such as WHPAs, IPZs, and ICAs. A planning justification report could also include this information in support of an application. Applicants can incorporate this practice into the development review process, especially if the municipality has a development application checklist.

The Official Plan must incorporate requirements to submit documents to support an application so that proponents are aware of the complete application requirements.

1) Disclosure Report

This report should detail the nature, activities and operations of the proposed development/use. It should describe:

- the nature of the proposed use,
- its associated required services and facilities (e.g. stormwater management facility),
- the threat activities and related operations to be conducted onsite, and
- the substances and their quantities to be used or stored onsite.

2) Detailed Hydrological/Hydrogeological Study

A qualified professional (e.g. hydrogeologist or hydrologist) with a designation of a P. Geo. or P. Eng. should prepare this study in the form of a technical report that uses professional standards and protocols acceptable to the Ministry of the Environment.

The study should:

- predict the net groundwater and surface water quality and quantity impacts likely to occur on the subject property, on down-gradient properties and on the municipal surface water intake or well,
- address cumulative impacts of development in the intake protection zones or wellhead protection areas, and
- include mitigating measures for the design, construction and post-construction monitoring of the proposed use.

Note: Where the impacts of the use cannot be adequately mitigated within an acceptable risk to surface or groundwater quality or quantity to the satisfaction of the municipality, the use should not be permitted.

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.

During development application review, municipal staff should provide information related to source protection to the proponent, to indicate whether the application is within a vulnerable area and that source protection plan policies may apply. Examples of wording that could be used during application review before source protection plans are approved are provided in Appendix A. Module 2 contains significant drinking water threat surveys, which can be used with applicants during pre-consultation to determine which activities on the property could pose a significant drinking water threat.

iv. Municipal Planning Processes

To integrate source water protection into the regular planning processes, municipal planning departments must understand source protection mapping and policies. It is also important for municipalities to establish procedures to integrate consultation with the Risk Management Official into planning application reviews and business processes, so that when Source protection plans take effect there is an established review process. In source protection plans where Part IV is used to regulate threats to drinking water, the Risk Management Official will need to review development applications.

In addition to integrating Part IV considerations with application review processes, planning decisions must conform to the source protection plan policies as soon as the source protection plan takes effect. Planners should become familiar with any policies on List A and List B in the source protection plan prior to source protection plans taking effect.

Planning Act/Development Applications Review Process

Source protection is relevant to many stages of the development application process. For example, municipal councils may pass by-laws requiring pre-submission consultation with proponents and municipal staff before submitting most planning and development applications. This requirement would allow municipal staff to consult Assessment Report mapping and source protection plans and flag applications that fall in vulnerable areas before the formal application submission, allowing proponents to make changes or cease the application process altogether.

Figure 3 provides an example of how to integrate source water protection into the planning process.

Many municipalities have development application checklists to ensure that the appropriate municipal staff members and, where needed, external agencies, such as the local conservation authority, have participated in the review process. Find a sample checklist in Appendix D.

Additionally, municipalities can require proponents to include a source water protection checklist as a requirement for a complete application. A municipality may also elect to update its existing checklist or incorporate questions into existing application forms. The *Planning Act* provides that persons applying for amendments to Official Plans or zoning by-laws submit any information or material that the municipal council may need, beyond the prescribed information. However, complete application submission requirements must be specified in the Official Plan. Therefore, Official Plans might require amendments.

Once the Official Plan is amended, the municipality may wish to create a checklist or form that helps applicants ensure they're addressing source protection. Appendix E provides a sample checklist that would ensure source protection plan policy considerations are part of *Planning Act* or development applications.

Upon submission of the application, municipal staff can review this checklist to determine whether significant drinking water threat policies apply. Specific threat-related checklists are provided in Module 2: Understanding Where Policies Apply.

Site Plan Control

Site plan control can address the layout of a site and ensure proponents consider source protection planning matters, such as waste disposal, grading and drainage, building and septic envelopes, and vegetated buffer strips, and to ensure other features are provided and maintained. To use site plan control, the Official Plan must include provisions that allow site plan control by-laws in the appropriate areas. A local Official Plan provides general or specific provisions as to where site plan control applies and what classes of development are included. A municipality may want to include provisions to require site plan control for all or certain classes of development in all vulnerable areas delineated in the Assessment Reports, or only in vulnerable areas where threats could be significant. Many municipalities use site plan control only for certain classes of uses, and often single detached residential uses or agricultural uses are exempt from site plan control. Depending on the local circumstances, site plan control could be an effective tool to address the layout of sites in vulnerable areas. Table 1 provides examples of significant drinking water threat activities and how they could be managed by site plan control.

Site plan control can also help implement source protection plan policies, including cases in which a property is partially within a vulnerable area, or where more than one vulnerability score applies. When a property is in a vulnerable area and site plan control is required, the municipality can ensure that significant threat activities associated with specific structures are not located within the vulnerable area, or within areas with the highest vulnerability scores. If

the activity can be sited so that it is no longer a significant threat, the activity ceases to be subject to source protection plan policies – a benefit that should be emphasized to the proponent. For example, if a commercial property requiring a large parking lot is partially located in a wellhead protection area where the application of road salt would be a significant drinking water threat, site plan control could ensure the parking lot is located outside of the vulnerable area.

Holding By-law

Holding by-laws allow for future land use or building, but delay development until local services, such as roads, are in place. Holding by-laws must be part of the municipal Official Plan. Holding provisions apply for a limited time only; once the provisions have been met, the holding by-law is removed. This tool would not preclude someone from modifying the activity at a later date, and thus, the use of holding by-laws for implementation of source protection policies may be limited. However, municipalities may choose to investigate the feasibility of holding provisions for source protection purposes.

Holding provisions cannot be used to ensure that Risk Management Plans are negotiated before applications are approved. Risk Management Plans are tied to the person engaged in the activity, and not tied to the land. Therefore, Risk Management Plans must be negotiated with the person or agency engaging in the activity, which may not be the same person or agency that submits a development application.

Figure 3: Application Process Considering Source Water Protection (Adapted from York Region)

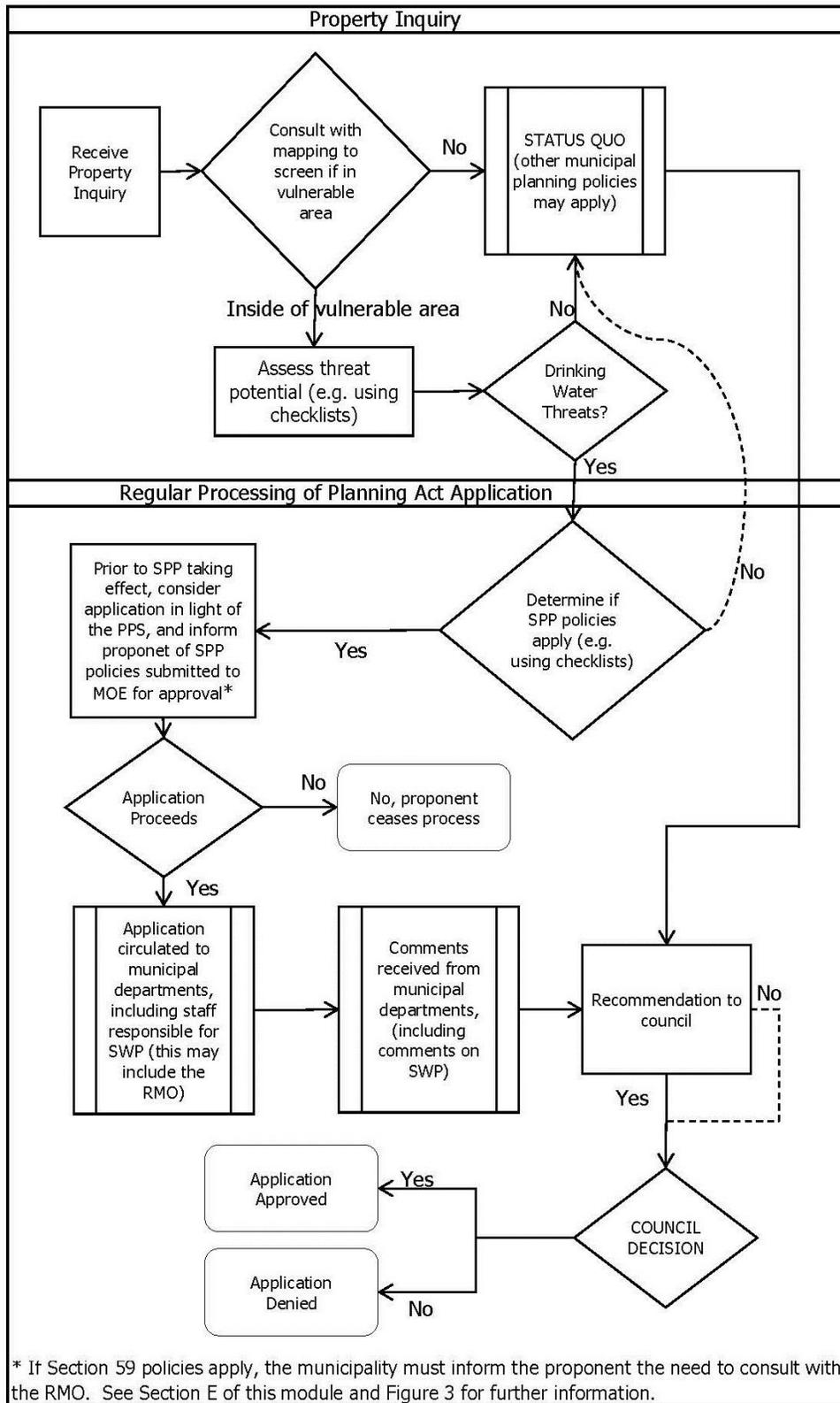


Table 1: Site Plan Control

Prescribed Threat	Example of Threat	Examples of Site Plan Control Requirements
Establishment of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act</i>	Storage of hazardous waste	Location of storage facility on parcel Size and capacity of storage facility
	Landfilling solid non-hazardous waste	Location of landfill facilities on parcel Setback of development
Establishment of a system that collects, stores, transmits, treats or disposes of sewage	Septic system	Location of septic tank on parcel Size and capacity of tank
	Discharge of untreated stormwater from a stormwater retention pond	Lot grading Capacity of retention pond
Storage of snow	Snow disposal site	Lot grading Location of dedicated snow storage Stormwater management plan
Storage of agricultural storage material	Manure produced and stored on a farm	Building envelope for storage facility Capacity of storage facility
Storage of non-agricultural source material	Storage of unprocessed plant waste from food processing facility	
Storage of commercial fertilizer	Storage of commercial fertilizer	
Storage of fuel	Industry storing fuel	
Storage of pesticide	Storage of pesticide at manufacturing plant	
Storage of DNAPLs and organic solvents	Storage of chemicals at an industrial facility	
Storage of road salt	Storage of road salt at a contractor's yard	
Application of road salt	Parking lot	Lot grading Stormwater management plan
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.	Farm animal yard	Location of yard Lot grading

D. Source Protection Considerations and Obligations After Source Protection Plans Take Effect

Source protection plans contain policies that manage or prohibit specific activities that are, or may become, significant threats to drinking water. Source protection plans are not land use plans, but rather plans that rely on other legislation for implementation, like the *Planning Act*. Policies in the source protection plan that rely on land use planning authorities may need to be translated into appropriate land use planning restrictions. For example, a source protection plan may specify “no handling and storage of road salt.” A land use planning restriction may state “no municipal works yards or large scale private works facilities.”

Activities vs. Uses

The *Planning Act* provides the legislative framework for municipalities to regulate land uses, not specific activities occurring within these uses. The land use planning framework does not easily address some of the threat activities prescribed for the *Clean Water Act*. For example, municipal planning decisions cannot restrict specific activities, such as the handling and application of agricultural source material, non-agricultural source material, commercial fertilizer, pesticides, or chemicals. In addition, the use of land for livestock grazing, pasturing, outdoor confinement areas, farm-animal yards and aquaculture generally do not qualify as development or site alteration as defined in the Provincial Policy Statement.

To address these activities through land use planning, a decision would have to restrict all of the uses where these activities might occur. For example, to prohibit an activity like the spreading of agricultural source materials through land use planning, it would be necessary to prohibit agriculture in the designated area, effectively prohibiting many other activities that may pose no risk to sources of drinking water, thus causing a significant impact to the local economy. Committees considered these limitations in the legislation when developing policies, so the source protection plan may or may not rely on *Planning Act* authorities depending on the local circumstances.

Additional Restrictions

Outside of the implementation of Source protection plan policies, municipalities are not limited to addressing prescribed drinking water threats and can make their own decisions about which land uses are incompatible with the protection of vulnerable areas for drinking water sources. For example, a municipality may review the maps in the Assessment Reports and determine that it wants additional restrictions on land uses or increased setbacks in vulnerable areas. If challenged, the municipality would be responsible for defending these decisions and showing how the decision is consistent with the Provincial Policy Statement and balances provincial interests.

***Municipal Act* Authorities**

Municipalities may also use existing authorities under the *Municipal Act* to establish by-laws to control activities that fall within their sphere of jurisdiction, for example, the disconnection of downspouts or household hazardous waste collection. Once a source protection plan is approved, a municipality may be required to establish by-laws using its authority under the *Municipal Act* to satisfy the obligations of the applicable significant threat policies. These policies can be found on List E and/or List J in the Appendix of your local source protection plan.

i. Policies Affecting Land Use Planning – Legal Effect and Effective Date

Legal Effect of Source Protection Plans

Part III of the *Clean Water Act* specifies the legal effect of each type of policy. Under the Act, some policies can be legally binding on implementing bodies, while others cannot. Each source protection plan has an Appendix that contains the lists of policies identified for each legal effect provision of Part III. The purpose of each list is to ensure the appropriate provisions of Part III of the *Clean Water Act* are applied to a policy. To determine which source protection plan policies rely on land use planning tools, municipal planners should refer to Lists A and B in the Appendix of the source protection plan. List A sets out the significant threat policies in the plan that affect decisions under the *Planning Act* and *Condominium Act*. List B sets out the moderate and low threat policies that affect decisions under the *Planning Act* and *Condominium Act*.

Where the source protection plan policies rely on authorities in the *Planning Act* and *Condominium Act*, municipalities and local boards are required to make decisions that conform with significant drinking water threat policies (policies on List A), and have regard for moderate and low threat policies (policies on List B). Note that the legal effect lists in the Appendix to the source protection plan that identify the legal effect of policies in the source protection plan. Many policies are included on List A, but not included on List B. If a policy appears only on List A, the policy has the legal effect “conform with.” For a policy to have the legal effect “have regard for,” the policy would have to be included on List B, otherwise the policy does not apply to areas with moderate or low threats.

Effective Date of Source Protection Plans

Source protection plans will take effect on the date specified by the Minister of the Environment. Certain policies may take effect on a later effective date specified in the local source protection plan. This effective date triggers conformity requirements under the *Planning Act* and *Condominium Act*. Decisions on planning matters made by a municipality or planning authority, including the Ontario Municipal Board, on or after the effective date must conform to applicable significant drinking water threat policies, and have regard for moderate and low drinking water threat policies. For example, if an applicant applied to change a land use designation to one that was prohibited through a source protection plan policy, the planning authority would not be able to approve the change.

In addition to planning decisions being affected by the source protection plan, municipalities will also need to review their planning documents (Official Plan, zoning by-law) to ensure conformity with significant drinking water threat policies. Timeframes are established in each source protection plan for Official Plan and zoning by-law conformity, and were determined locally during discussions between the Source protection committee and municipalities in your Source Protection Area during plan development. The timeframe in most Source protection plans follows the same dates as Official Plan and zoning by-law reviews and amendments mandated by Section 26 of the *Planning Act*. Municipalities are encouraged to work with their local source protection authority to determine how to bring Official Plans and zoning by-laws in compliance with significant threat policies.

Municipalities should be aware of source protection plan policies prior to the effective date of the source protection plan. Additionally, municipalities or planning authorities should prepare to have the necessary internal processes in place to be able to meet their legislative obligations when plans take effect.

ii. Transition Provisions

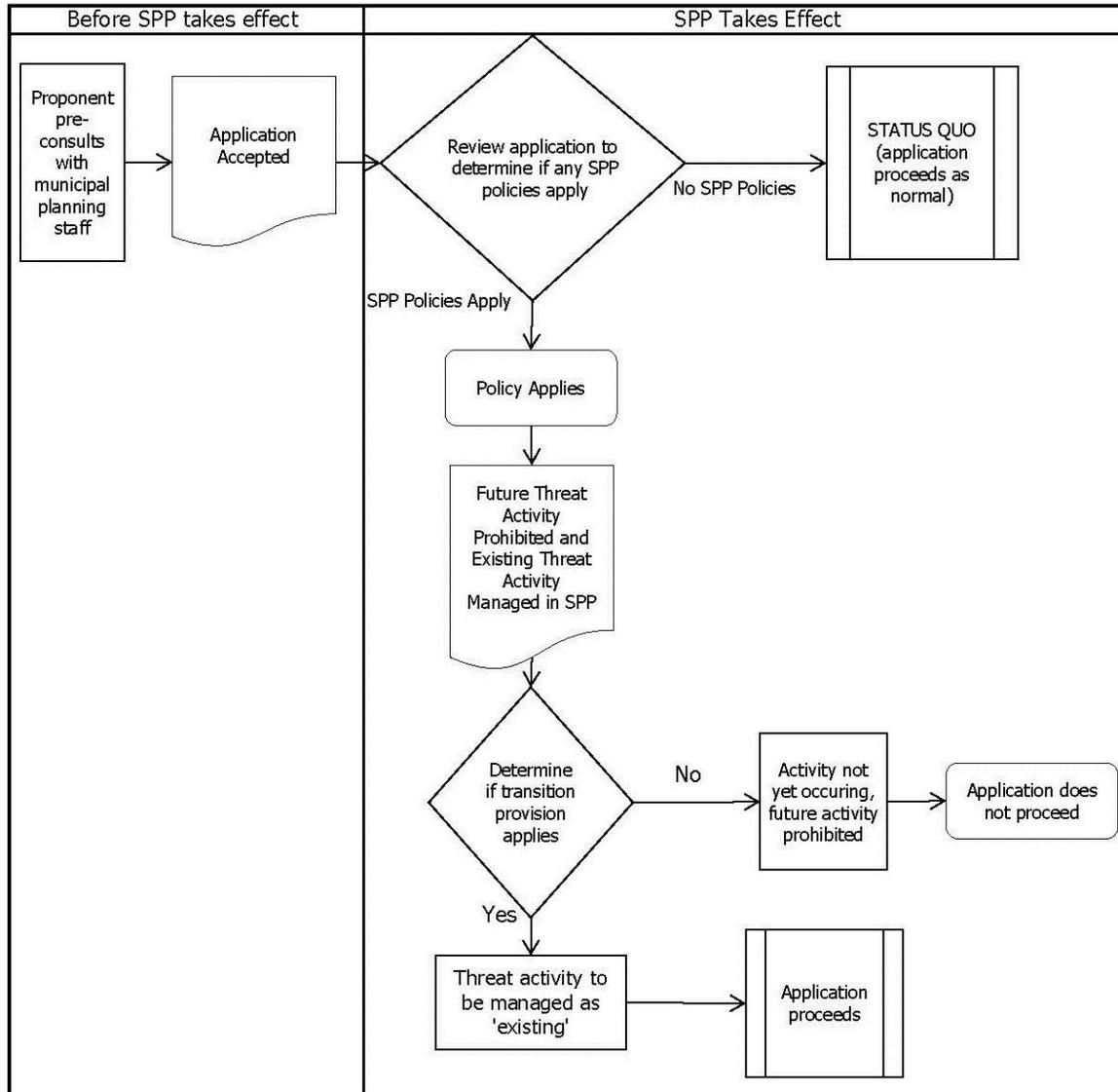
Local source protection plans may contain transition provisions. Transition provisions are common in land use planning, and are often used when changes are made to a regulatory structure to allow existing *bona fide* applications in process or approvals granted to continue. Transition provisions can also allow new applications to be submitted after the effective date, where the new application is helping to implement an existing application in process. For example, a site specific zoning by-law can be transitioned provided it implements a related Official Plan amendment application in process.

Under the *Clean Water Act*, there is a unique consideration for transition provisions. The Act requires source protection plans to contain policies that address all existing or future significant drinking water threats. Therefore, areas that could have significant threats cannot be transitioned to the extent that no source protection plan policy would apply. Many source protection plans opted to prohibit future threats from becoming established and manage existing threats that are presently occurring on the landscape. Prohibiting future threats may unfairly affect complete applications in process when the source protection plans take effect. A transition provision could allow applications that are in process, and land use planning approvals granted, to be considered as “existing” even though the threat has not commenced. This provision would allow the application to proceed and the threat to be managed. Figure 4 provides an example of the transition provision process.

Not all source protection plans have transition provisions as they are not always needed. Where a source protection plan includes policies to manage both existing and future threats, a transition provision is not required. Municipal planners should consult the *Clean Water Act* and applicable policies of the local source protection plans to determine the appropriate

requirements for transition when matters have commenced prior to a source protection plan coming into effect. Refer to Appendix B for an example of a source protection plan transition provision.

Figure 4: Transition Provision



iii. Official Plan and Zoning By-law Conformity

Official Plan and Zoning By-law Conformity in Various Governance Structures

Upper Tier, Lower Tier, and Single Tier municipalities will need to review and, where appropriate, update or amend Official Plans to ensure conformity with significant threat policies in source protection plans, found in List A. Single and Lower Tier municipalities will also need to review and, where appropriate, amend zoning by-laws to conform to significant threat policies. When a source protection plan contains policies using authorities under the *Planning Act* and *Condominium Act* to address areas where threats could be low or moderate (policies on List B), decisions made on development applications must ensure that they “have regard for” these policies. Mapping vulnerable areas should also be included.

In many cases, source protection plan policies are written in a way that allows municipalities to amend Official Plans and zoning by-laws during the next scheduled update.

The requirements for Upper Tier, Lower Tier, and Single Tier plans can vary substantially based on local context. In some cases, the detail will need to be in the Upper Tier municipality’s plan. In other areas the Lower Tier municipality’s plan will be more detailed. As well, there are Upper Tiers where there are no Lower Tier plans – these will need to include all the details. To determine which approach is most appropriate, Upper and Lower Tier municipalities will need to consider the nature of the policy, the regional and local situation, and the current approach to planning.

Implementing Land Use Planning Policies from More than One Source Protection Plan

Source protection areas were established using a watershed approach. Many municipalities could be located within two or more source protection areas and, therefore, could be required to implement multiple source protection plan policies, including land use planning policies. Many source protection committees tried to ensure consistency when developing policies that would affect shared municipalities. However, this was not always possible due to local situations or carefully considered decisions by the local source protection committee; therefore policies in source protection plans may use different policy tools or approaches to manage or prohibit significant drinking water threat activities.

Source protection plan policies are written to address significant drinking water threats in specific areas; likewise, municipal land use planning policies are written to manage land use in specific areas. Municipalities will be required to ensure the correct source protection plan policy is applied to the correct location in the municipality. This is similar to municipalities within the jurisdiction of more than one conservation authority, where the regulations of each conservation authority must be considered.

Municipalities may elect to delineate the boundaries of each source protection area on a schedule and provide Official Plan policies that reflect the source protection plan in each area.

Alternatively, a municipality could provide a uniform policy in the Official Plan that encompasses multiple source protection plans and meets the legal effect requirements of multiple source protection plans. If a municipality chooses to provide a uniform policy that is more stringent than a policy in one of the source protection plans, the municipality may be required to justify this decision.

See Appendix C for an example of how land use planning policies can be implemented in a municipality from more than one source protection plan.

Existing Official Plan Mapping Differs from Assessment Report Mapping of Vulnerable Areas before Official Plan Amendments

Once the source protection plan takes effect, municipal decisions must conform to significant drinking water threat policies in the plan. For the purposes of the Provincial Policy Statement, the Assessment Report mapping of vulnerable areas is considered to be the provincial standard. Other areas may be of importance locally. If an application relates to threat activities within vulnerable areas delineated in the Assessment Reports, it will be important to identify if any significant drinking water threat policies will apply. Assessment Report mapping is available from local source protection authorities, or through Conservation Ontario's website.

Policy Approaches to Conform with Source Protection Plans

If a source protection plan policy prohibits, for example, storage of commercial fertilizer, then depending on the local circumstances, the municipality could include a variety of policy approaches in the Official Plan to conform with the source protection plan direction (either alone or in combination):

- Recommend zoning using setbacks from a vulnerable area.
- Include Official Plan provisions to ensure that the vulnerable area is subject to site plan control
- Designate the vulnerable area as a natural vegetated buffer strip or other use that would prevent the erection of buildings and structures.
- Use an overlay designation or provide provisions to use an overlay designation in the zoning by-law to ensure source protection matters are considered in vulnerable areas.
- Include mapping of vulnerable areas delineated in the Assessment Reports.

A zoning by-law could implement the Official Plan direction in a variety of ways.

- Prohibit use of land, buildings and structures in vulnerable areas,
- Impose setbacks from vulnerable areas.
- Continue to allow agriculture as a main use, but prohibit certain accessory uses or structures, such as structures intended to store agricultural materials in specific areas.
- Use a vegetated buffer strip zone.

- Limit the size of additions or prohibit additions in vulnerable areas.
- Provide an overlay zone to define a building envelope, to restrict the size, location or nature of the development, or to impose other restrictions as may be deemed necessary by the municipality.

“Placeholder” Policy

Some municipalities have elected to use a “placeholder” policy in their Official Plans to indicate work that will be undertaken as part of a future conformity exercise. This policy may indicate the scope and scale of the work and may include interim high-level direction to Lower Tier municipal Official Plans. Placeholder policies may be used to provide general council direction to protect supplies of drinking water in vulnerable areas, pending the completion of a more fulsome and detailed conformity exercise. A placeholder policy may be acceptable if a municipal comprehensive review is substantially complete at the time that a source protection plan takes effect. In a Two Tier governance structure a placeholder policy may provide the Lower Tier with sufficient policy direction until the Upper Tier plan is updated.

A placeholder policy can include:

- acknowledgement that a source protection plan(s) is in progress or has taken effect and that protection of drinking water supplies from contamination and depletion is a key objective,
- direction to review the source protection plan(s) and ensure appropriate policies and a timeframe are incorporated to enable its implementation,
- direction to Lower Tier municipalities to include detailed mapping and policies as well as provisions in a zoning-by-law, and
- an outline of vulnerable areas delineated in the Assessment Reports and areas where threats could be significant, either by textual reference or on a schedule.

Policy Examples and Official Plans and Zoning By-Laws

Land use planning policies used to implement source protection plans will vary across the province. Many municipal Official Plans already contain policies that consider the protection of water quantity and quality. Other municipalities may wish to refer to the following Official Plans and zoning by-laws to see examples of how water protection has been considered:

- Norfolk County Official Plan – Section 6.3 is devoted to source water protection; draft zoning by-law section 3.35 is devoted to wellhead protection.
- Region of Waterloo Official Plan – Chapter 8 is devoted to source water protection (note: as of January 24, 2011, the plan in its entirety was under appeal before the OMB).
- City of North Bay Official Plan – Section 2.1.14.4 provides for complete application requirements for development in IPZ-1.

- Town of Innisfil Official Plan – Section 4.3 has policies for the protection of IPZs; draft zoning by-law section 3.51 has policies related to WHPAs and IPZs.
- City of Barrie Official Plan – Section 3.5.2.3.3 addresses groundwater protection and refers to wellhead protection areas; Section 3.5.2.3.4 refers to the protection of significant groundwater recharge areas.
- City of Kawartha Lakes Oak Ridges Moraine Official Plan – Section 5.4 sets out prohibited uses in WHPAs; Section 5.5 sets out provisions for areas of high aquifer vulnerability.

Other examples can be found through municipalities affected by the Oak Ridges Moraine Conservation Plan which required that each of the 32 municipalities on the Oak Ridges Moraine review and, where necessary, amend or update Official Plans and zoning by-laws to implement policies of the Oak Ridges Moraine Conservation Plan, including policies to protect the quality and quantity of water.

Part IV of the *Clean Water Act* for Planners

When a source protection plan contains policies that use Part IV of the *Clean Water Act*, municipalities with the responsibility for the production, treatment and storage of water are also responsible for enforcing Part IV of the *Clean Water Act*. Part IV authorities are used to regulate specific activities that could be significant drinking water threats. Part IV allows the specific threat activity to be regulated according to the circumstances, such as volume, in the specific area where the threat could be significant. Some activities, such as storage of organic solvents or dense non-aqueous phase liquids (DNAPLS), are not otherwise regulated, and authorities under the *Planning Act* may not always be locally acceptable as it may be difficult to restrict specific types of materials.

Part IV of the *Clean Water Act* provides municipalities with the authority to regulate significant threat activities through Prohibition (Section 57), Risk Management Plans (Section 58) and Restricted Land Use (Section 59). Municipalities responsible for enforcement of Part IV will need to appoint a Risk Management Official, and such Risk Management Inspectors as are necessary. The Risk Management Official is responsible for making decisions about Risk Management Plans, prohibitions, and risk assessments in vulnerable areas, similar to the way in which building officials make decisions on building permits. The Risk Management Inspector is responsible for enforcing Part IV, similar to the way in which building inspectors enforce the provisions of the *Building Code Act*.

Planners need to be aware of Part IV policies and where they apply because planning applications and building permits in these areas need to be reviewed by the Risk Management Official to avoid a threat activity from becoming inadvertently established. Section E discusses the role of the Risk Management Official in the application and review process if Part IV policies apply.

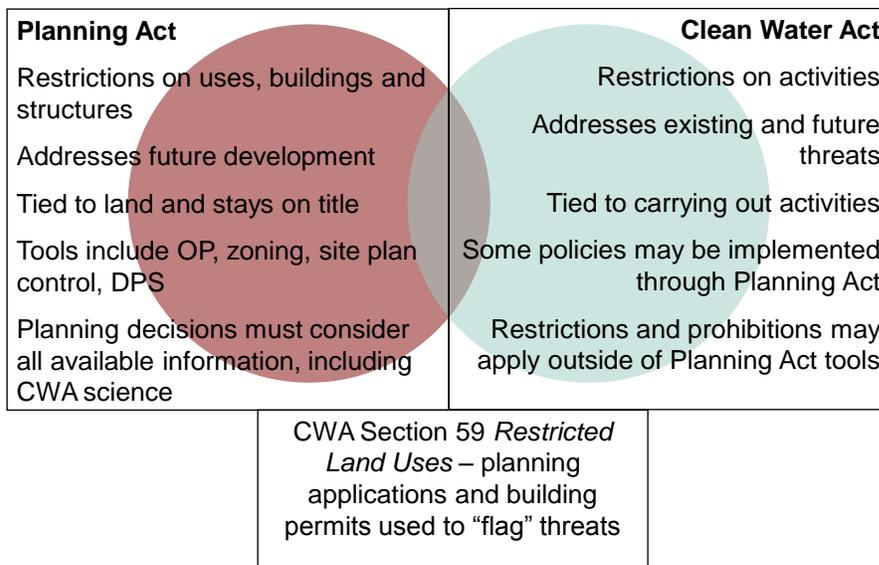
Part IV authorities are different from the restrictions under the *Planning Act* to which planners are accustomed. Key features include:

- Part IV can apply to existing activities currently in operation when the source protection plan takes effect, as well as to future activities.
- Risk Management Plans established under Section 58 are tied to the person engaged in the threat activity, rather than tied to the property, and this may be a landowner or a tenant, and are not transferrable without the consent of the Risk Management Official.

Figure 5 illustrates key differences between land use planning restrictions and the *Clean Water Act* provisions, including Part IV provisions.

Figure 5: Key Differences between Land Use Planning Restrictions and the Clean Water Act Provisions

Land Use Planning / Source Protection



When a source protection plan policy designates an activity using Section 57 Prohibition, that specific activity will be prohibited in an area specified in the source protection plan. For example, fuel storage over 2,500 litres may be prohibited in a wellhead protection area with a score of 10. Similarly, when a source protection plan policy designates an activity for the purpose of Section 58, the activity is prohibited until a proponent can establish a Risk Management Plan to ensure the activity will not pose a significant threat to drinking water. For example, a Risk Management Official may determine that fuel storage over 2,500 litres may be acceptable in an area provided that the physical containment, safety measures, operational and administrative procedures ensure that the threat to drinking water would be managed safely.

Further information about Part IV roles and responsibilities can be found in Module 1: Establishing a Risk Management Office, Module 5: Risk Management Plans, and Module 6: Prohibition.

Some municipalities are beginning to establish risk management offices, as there are authorities under Part IV that are available when the Assessment Reports are completed. Some municipalities are preparing to implement Part IV when the plans take effect.

E. Section 59 – Restricted Land Uses

Understanding Section 59

Section 59 is intended to serve as a “red flag” under Part IV of the *Clean Water Act* so that building permit and *Planning Act* applications can be reviewed in areas where Section 57 (Prohibition) or Section 58 (Risk Management Plans) are in effect. Such a review will help to prevent inadvertently approving an application that includes a significant drinking water threat activity. Section 59 requires that the applicant must obtain a notice, called the “Section 59 notice to proceed,” from a Risk Management Official before an application for an approval under the *Planning Act* or a building permit can proceed. Part IV applies to limited areas where threats to drinking water could be significant, therefore not all applications need to be sent to the Risk Management Official. The Risk Management Official will need to review development applications in vulnerable areas where Part IV applies, and issue a notice to proceed, which will form part of the complete application under the *Planning Act* and part of the applicable law provisions under the Building Code. In a two tier governance structure this may mean that the application is reviewed by the Risk Management Official and the Upper Tier, Lower Tier, and Single Tiers will need to work together to transfer this information.

The Section 59 notice was modelled after existing application review processes, in which proponents are required to ensure that a number of requirements are met. For example, a planning application that fronts onto a regional road would require review by the transportation department that authorizes entrance permits. In the area where Part IV applies, planners will need to ensure that the Risk Management Official reviews an application and provides a notice to proceed (the Section 59 notice) with the application.

The Section 59 notice is part of the applicable law provisions under the *Building Code Act*, effective January 1, 2014, and is part of the complete application requirements under the *Planning Act*. The notice will indicate one of the following:

- i. neither Section 57 or 58 apply to the application, or
- ii. Section 58 applies, and if so, a Risk Management Plan has been agreed to or established for the significant drinking water threat activity.

Note that if Section 57 Prohibition applies, the Risk Management Official informs the proponent and the application does not proceed. There is no Section 59 notice issued in this circumstance.

For Section 59 to be used, the source protection plan must contain policies using Section 57 or Section 58, as well as specifying that Section 59 applies. Section 59 policies must also designate land uses in the Official Plan or zoning by-law (e.g. commercial or industrial) to which the policy applies and the area. For example, if storing organic solvents was designated for the purpose of Section 57 Prohibition in areas where the threat would be significant in the source protection plan, then industrial and commercial land uses may be designated under Section 59 in those areas.

In some source protection plans, Section 59 policies are written in such a way that all land uses are designated for Section 59, or all uses except for residential are designated for Section 59. If a land use is exempt from Section 59, applications related to that land use do not need to be reviewed by the Risk Management Official. However, even if a land use is exempt from Section 59, other policies, including Section 57 and 58 policies, will continue to apply on the property.

Section 59 Policies on List A

Some source protection plans have included Section 59 policies on List A. Policies included on List A require that decisions under the *Planning Act* and *Condominium Act* must conform to these policies. If a Section 59 policy is included on List A, then an Official Plan and zoning by-law could include a textual reference, mapping of the area where the policy applies, and the land uses that have been designated for the purpose of screening applications.

Development Application Submission and Section 59

The Section 59 flag was developed to integrate with existing review functions of a planning or building department. Obtaining the Section 59 notice will form part of the submission requirements for planning applications and building permits in areas where Part IV and Section 59 apply. Section 62 of Ontario Regulation 287/07 prescribes applications under the *Planning Act* for the purpose of Section 59 of the *Clean Water Act*. In addition, municipal departments that process applications under the *Building Code Act* also need to ensure the Risk Management Official reviews applications in areas where Part IV applies. The definition of applicable law in the Ontario Building Code was amended to include the Section 59 notice as part of the applicable law provisions (effective January 1, 2014, Section 1.4.1.3. of the Building Code). When the source protection plans take effect, the Risk Management Official must have a review process in place for planning applications and building permits in areas where Part IV applies.

All Part IV policies, including Section 59, are enabled through the *Clean Water Act* and therefore do not need to be integrated into Official Plans or zoning by-laws to be implemented by municipalities. They will take effect when the source protection plan takes effect (however, see section entitled “Section 59 Policies on List A”). It is recommended, however, that municipalities indicate on a schedule in their planning documents where Part IV applies, as many residents and businesses are familiar with these documents and rely on them for information related to development. Although no amendment is necessary to implement Part IV, municipal planning processes will have to be changed to ensure the Risk Management Official reviews applications in the area where Section 59 applies.

Section 59 will need to be integrated into the regular planning and building review processes. Figure 6 shows how proponents and municipalities can consider Section 59 during the development application review process.

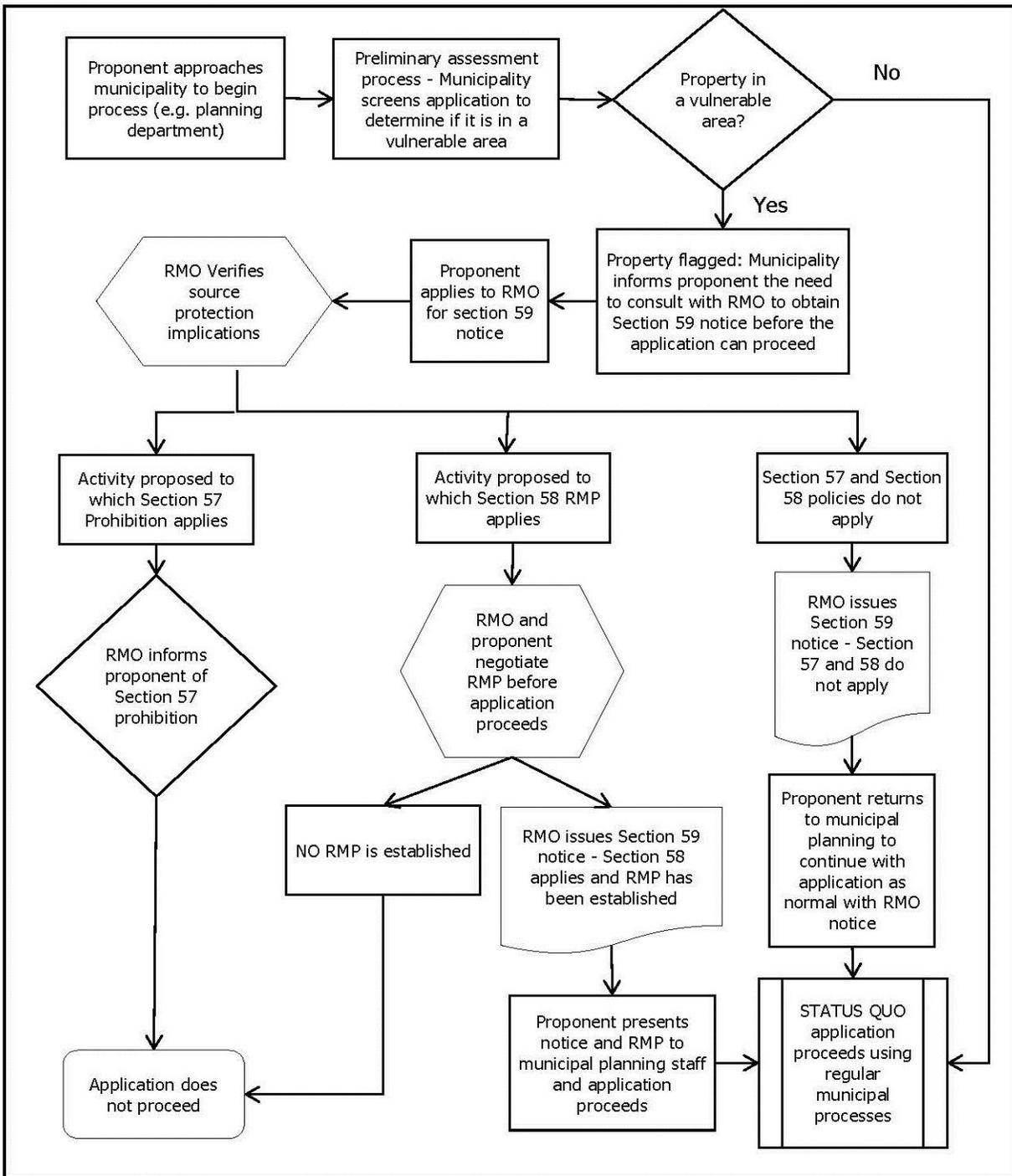
F. Appeals to the Ontario Municipal Board

Once approved, the source protection plan cannot be appealed; however, decisions under the *Planning Act* or the *Condominium Act* can be appealed to the Ontario Municipal Board. Appeals could be made to the Ontario Municipal Board regarding the following:

- i. amendments proposed to the municipal Official Plan and zoning by-law to conform with the source protection plan, and
- ii. decisions on applications, including when the decision is based on source protection plan provisions.

Ontario Municipal Board decisions must also conform with significant drinking water threat policies in the source protection plan (policies on List A), and have regard for policies in the source protection plan that rely on authorities under the *Planning Act and Condominium Act* and that apply in areas where threats could be moderate or low (policies on List B).

Figure 6: Example of Section 59 Process (Adapted from York Region)



G. Annual Reporting

Municipalities will have responsibilities related to annual reporting, which may include reporting to the source protection authority on land use planning activities related to source protection. See Module 4: Annual Reporting and Information Management for more information on annual reporting.

H. Glossary of Terms Defined in the *Clean Water Act* and Regulations

Drinking water threat: 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. Activities prescribed as drinking water threats are listed in Section 1.1 (1) of Regulation 287/07.

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. Highly vulnerable aquifers could include areas where the bedrock is fractured.

Intake protection zone (IPZ): An area that is related to a surface water intake and within which it is desirable to regulate or monitor drinking water threats. The areas around the surface water intake are determined through the Director's Technical Rules based on the time it would take for a spilled substance to reach the intake. The times of travel have been standardized as follows:

- IPZ 1: A fixed radius from the municipal intake, radius varies from intake based on the type of source (e.g. Great Lake vs. Inland river source), generally there is no response time.
- IPZ 2: An area adjacent to IPZ-1 where there is limited response time in the event of a spill (maximum response time is 2 hours, some drinking water system operators delineated a longer response time).
- IPZ 3: Zone that captures all water courses in the watershed that contributes water to the source of the municipal intake. For specific municipal systems such as systems in great lakes or connecting channels, the IPZ-3 may be delineated to capture specific activities that have or will have an impact on the source in case of spills.

Moderate or low drinking water threats: Designations based on the vulnerability of an area and the hazard rating of an activity, as identified in the Assessment Reports. Moderate and low threats may exist in any of the vulnerable areas.

- "Moderate drinking water threat" refers to a drinking water threat that, according to a risk assessment, poses or has the potential to pose a moderate risk.

- “Low drinking water threat” refers to a drinking water threat that, according to a risk assessment, poses or has the potential to pose a low risk.

Risk Management Plans (Section 56 and Section 58): A Risk Management Plan is a policy implementation tool available under Section 58 of the *Clean Water Act* to manage activities that are significant drinking water threats¹ when enabled in an approved source protection plan. A Risk Management Plan may contain operational procedures and requirements for physical barriers, incorporate best management practices, require staff training, etc. to ensure that a threat ceases to be significant. A Risk Management Official is responsible for negotiating and approving Risk Management Plans and ensuring the measures in the Risk Management Plan satisfy Section 22 of the *Clean Water Act*. A Risk Management Plan is tied to the individual undertaking the activity, is not registered on title, and cannot be transferred unless the Risk Management Official consents to the transfer.

A Risk Management Plan created under Section 56 of the *Clean Water Act* would contain the same information as one created under Section 58, but is available to municipalities only in the period between the approval of the Assessment Reports and the approval of a source protection plan. For interim Risk Management Plans, the Risk Management Official must be satisfied that the measures will reduce the potential for the activity to adversely affect raw water supplies.

Significant drinking water threat: A drinking water threat that, according to a risk assessment, poses or has the potential to pose a significant risk. Areas where threats could be significant include all of WHPA-A and IPZ-1, as well as all of IPZ-2, and some parts of IPZ-3 and all or portions of WHPA-B, WHPA-C or WHPA-C1, depending on the assigned vulnerability score (8 or greater). DNAPLs are significant drinking water threats anywhere in WHPA-C or WHPA-C1 with a vulnerability score of 2-10. Significant drinking water threats can also occur in any part of a WHPA or IPZ if there are water quality issues in a drinking water system.

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. For example, SGRAs could include sand and gravel deposits.

Source protection committee (SPC): A committee established under Section 7 of the *Clean Water Act* and according to Regulation 288/07, mandated to prepare three documents to address the municipal residential drinking water systems in its watershed: 1 - Terms of Reference (workplan), and 2 - Assessment Report (scientific report), and 3 - source protection plan (policies to address threats to drinking water).

Vulnerability score: A score that represents the inherent vulnerability of each part of the vulnerable areas that must be delineated in the Assessment Reports. The vulnerability score is assigned based on scientific methodology outlined in the Director’s Technical Rules and represents the hydrogeological and hydrological characteristics of the vulnerable area. Vulnerability scores for wellhead protection areas and intake protection zones can range from 0.8 (low vulnerability) to 10 (highly vulnerable HVAs are designated a vulnerability score of 6

¹ Except waste and sewage threats where a prescribed instrument is available or the Building Code Act applies

and SGRAs are designated a vulnerability score of 2, 4 or 6, depending on the groundwater vulnerability.

Wellhead protection area (WHPA): An area that is related to a wellhead and within which it is desirable to regulate or monitor drinking water threats. The area around a municipal wellhead is delineated through the Director's Technical Rules that determine the time of travel a substance entering the groundwater will reach the wellhead. The times of travel have been standardized as follows:

- WHPA-A: 100 m radius around a municipal wellhead,
- WHPA-B: 2-year time of travel,
- WHPA-C: 5-year time of travel or WHPA-C1: 10-year time of travel, and
- WHPA-D: 25-year time of travel

I. APPENDIX A – Sample Planning Application Review Wording (Prior to Source Protection Plan Approval)

The purpose of this appendix is to provide some basic wording that municipal staff members could use, before the local source protection plan is approved, when reviewing planning applications that are located within a vulnerable area. To use the sample wording, staff members will need to refer to vulnerable area mapping in local Assessment Reports and source protection plans to determine the type of vulnerable area and vulnerability scores. Note that examples are not provided for all vulnerable areas.

Sample Wording A – Properties in Wellhead Protection Areas

This sample wording applies to all properties inside the WHPA. Start by using the general wording (1) for all properties, then use the first part of sample (2) followed by the appropriate wording from the third column depending on the time of travel zone in which the property is located. Next, use the beginning of sample (3) and finish with the appropriate wording based on the vulnerability score for the area. Note that the wording is different where the vulnerability score is 6, 4 or 2, depending on whether or not the property is in the 5-year (or 10-year) time of travel zone.

<i>(1) The subject property is located in the <name of wellhead protection area>. This means groundwater is flowing towards the municipal well and could eventually be drawn up by these wells. Activities taking place on the subject property could impact the source of municipal drinking water if chemicals or pathogens migrate to the groundwater. The Provincial Policy Statement, 2005, provides municipalities the authority to protect, improve and restore the quality and quantity of water resources within wellhead protection areas.</i>		
<i>(2) Within the WHPA, the subject property is located....</i>	100 m zone	<i>within 100 m of the municipal well. This means groundwater beneath the subject property could reach the municipal well very quickly, as would contaminants if they got into the aquifer in this zone.</i>
	2-year time of travel	<i>in the 2-year time of travel zone. This means groundwater beneath the subject property could reach the municipal well within two years, as would contaminants if they got into the groundwater in this zone.</i>
	5-year time of travel	<i>in the 5-year time of travel zone. This means groundwater beneath the subject property could reach the municipal well within five years, as would contaminants if they got into the groundwater in this zone.</i>
	25-year time of travel	<i>in the 25-year time of travel zone. This means groundwater beneath the subject property could reach the municipal well within 25 years, as would contaminants if they got into the aquifer in this zone.</i>
<i>(3) The area where the subject property is located has a vulnerability score of <10, 8, 6, 4, or 2>.</i>	Vulnerability Score of 10 or 8	<i>In areas that score <8 or 10> there are a number of threat activities that are considered significant threats to sources of drinking water. There are also many other activities that are considered moderate and low drinking water threats. Local source protection plans (currently under review by the Ontario Ministry of the Environment) contain policies to address significant threats to source water, and may contain policies to address moderate or low threats. Source protection plan policies (when they come into effect) may limit or restrict drinking water threat activities,</i>

		<p>or they may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in wellhead protection areas through their land use planning processes.</p> <p>(Cont.)</p>
	<p>5-year time of travel (or 10-year time of travel if the Assessment Report includes one) where the vulnerability score is 6, 4 or 2.</p>	<p>In areas that score <6, 4 or 2> within the 5 year time-of-travel zone (in addition to areas that score 8 or 10), activities associated with the handling and storage of dense non-aqueous phase liquids (DNAPLs) are considered to be a significant drinking water threat. DNAPLs are chemicals that are heavy and sink in water (e.g. trichloroethylene). There are also a number of other activities that are considered moderate and low drinking water threats.</p> <p>Local source protection plans (currently under review by the Ontario Ministry of the Environment) contain policies to address significant threats to source water, and may contain policies to address moderate or low threats. source protection plan policies (when they come into effect) may limit or restrict drinking water threat activities, or they may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in wellhead protection areas through their land use planning processes.</p>
	<p>Vulnerability Score of 6 (not in the 5-year or 10-year time of travel)</p>	<p>In areas that score <6>, no threat activities are considered to be a significant threat to sources of drinking water. However there are activities that are considered a moderate or low threat.</p> <p>Local source protection plans (currently under review by the Ontario Ministry of the Environment) may contain policies to address activities that pose a moderate or low threat to source water. These policies may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in wellhead protection areas through their land use planning processes (e.g. Official Plans and zoning by-laws).</p>
	<p>Vulnerability Score of 4 or 2 (not in the 5-year or 10-year time of travel)</p>	<p>In areas that score <4 or 2>, no threat activities are considered to be a significant, moderate or low threat to sources of drinking water. However, municipalities may restrict land uses in wellhead protection areas through their land use planning processes (e.g. Official Plans and zoning by-laws).</p>

Sample Wording B – Properties in Intake Protection Zones

This sample wording applies to all properties inside an IPZ. To use the wording, start with the general wording in sample (1) for all properties, then use the first part of sample (2) followed by the appropriate wording from the third column, depending on the IPZ in which the property is located. Next, use the beginning of sample (3a) if the property is located in IPZ-1 or IPZ-2, and finish with the appropriate wording based on the vulnerability score for the area. If the property is located in an IPZ-3, use sample (3b).

<p><i>(1)The subject property is located in the <name of intake protection zone>. This means that surface water in the <water body> is flowing towards, and could eventually be drawn up, by the intake. Activities taking place on the subject property could impact the source of municipal drinking water if chemicals or pathogens left the property and got into the <name of water body>. The Provincial Policy Statement, 2005, provides municipalities the authority to protect, improve and restore the quality and quantity of water resources within intake protection zones.</i></p>		
<p><i>(2)The subject property is located...</i></p>	<p>IPZ-1</p>	<p><i>...within the Intake Protection Zone -1 of the intake. Intake Protection Zone-1 is the most susceptible to contamination.</i></p>
	<p>IPZ-2</p>	<p><i>...within the Intake Protection Zone -2 of the intake. IPZ-2 extends outward from IPZ-1 and is delineated based on the time of travel for the water treatment plant operator to respond to adverse conditions in the watershed with a maximum 2-hour travel time being used as the furthest upstream point.</i></p>
	<p>IPZ-3</p>	<p><i>...within the Intake Protection Zone – 3 of the intake. The IPZ 3 is delineated differently for different intakes. For intakes that are located in inland rivers or inland lakes, the IPZ-3 extends outward from the IPZ-2 to capture all water courses that contribute water to the source of the municipal intake. For intakes located in the Great Lakes or a connecting channel, the IPZ- 3 is only delineated if there is a need to capture an activity, outside of the IPZ- 2, that the source protection committee has shown could impact the quality of water at the intake. In this case, the IPZ-3 extends out from the IPZ-3 to capture that activity. If there are no activities that need to be captured, the IPZ-3 is not delineated.</i></p>
<p><i>(3a)The area where the subject property is located has a vulnerability score of <4.2, 4.5 4.8, 4.9 5.0, 5.4 5.6, 6 6.3, 6.4 7.0, 7.2, 8, 9</i></p>	<p>Vulnerability score of 8, 9 or 10.</p>	<p><i>In areas that score <10, 9, or 8> there are a number of activities that are considered significant threats to sources of drinking water. There are also a number of other activities that are considered moderate and low drinking water threats.</i></p> <p><i>Local source protection plans (currently under review by the Ontario Ministry of the Environment) contain policies to address significant threats to source water, and may contain policies to address moderate or low threats. source protection plan policies (when they come into effect) may limit or restrict drinking water threat activities, or they may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in intake protection zones through their land use planning processes.</i></p>

<i>or 10>.</i>	Vulnerability score of 4.2, 4.5, 4.8, 4.9 5.0, 5.4, 5.6, 6.0, 6.3, 6.4 7.0, 7.2	<i>In areas that score < 4 to 7.9>, no activities are considered to be a significant threat to sources of drinking water. However there are activities that are considered a moderate or low threat. Local source protection plans (currently under review by the Ontario Ministry of the Environment) may contain policies to address activities that pose a moderate or low threat to source water. These policies may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in intake protection zones through their land use planning processes (e.g. Official Plans and zoning by-laws).</i>
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Example: Property occurs in WHPA – B with a score of 8

The subject property is located in the **<name of wellhead protection area>**. This means groundwater beneath the subject property is flowing towards the municipal well and could eventually be drawn up by these wells. Activities taking place on the subject property could impact the source of municipal drinking water if chemicals or pathogens left the property and got down into the groundwater. The Provincial Policy Statement, 2005, provides municipalities the authority to protect, improve and restore the quality and quantity of water resources within wellhead protection areas.

Within the WHPA, the subject property is located in the 2-year time of travel zone. This means groundwater beneath the subject property could reach the municipal well within two years or less, as would contaminants if they got into the groundwater in this zone.

The area where the subject property is located has a vulnerability score of **8**. In areas that score **8** there are a number of threat activities that are considered significant threats to sources of drinking water. There are also a number of other activities that are considered moderate and low drinking water threats.

Local source protection plans (currently under review by the Ontario Ministry of the Environment) contain policies to address significant threats to source water, and may contain policies to address moderate or low threats. Source protection plan policies (when they come into effect) may limit or restrict drinking water threat activities, or they may address threat activities through provincial instruments, education, outreach, or incentives. Municipalities are also able to further restrict land uses in wellhead protection areas through their land use planning processes. Links to local source protection plans can be accessed through Conservation Ontario’s website: <http://www.conservation-ontario.on.ca/uncategorised/143-otherswpreionsindex>

J. APPENDIX B: Example of a Source Protection Plan Transition Provision

This sample transition provision captures the following circumstances. Not all source protection plans have used this provision. See your local source protection plan to determine whether there are transition provisions.

Sample Transition Provision

Where a source protection plan:

- i) proposes to prohibit future threats (using any tool) and,
- ii) manages existing threats (using any tool), then
- iii) ALL applications in process (prescribed instruments, applications under the *Planning Act* and building or development permits) and land use planning approvals granted are treated as existing and managed.

In this source protection plan, some drinking water threats are addressed by prohibiting “future” threats and managing “existing” threats.

Policy tools used to prohibit and manage threats include:

- **Part IV** – a “future” occurrence of a threat is designated for the purpose of section 57 of the *Clean Water Act* and therefore prohibited while its “existing” occurrence is designated for the purpose of section 58 of the *Clean Water Act* and therefore requires a risk management plan.
- **Prescribed instruments** – a “future” occurrence of a drinking water threat is prohibited while “existing” occurrences are managed.
- **Land use planning** – “future” drinking water threats are prohibited, while other policy approaches, such as a specify action or an education and outreach policy, are used to manage the same “existing” drinking water threats.

Where a policy in this plan refers to an “existing” threat, it means a threat that commenced on a day before the source protection plan comes into effect. A “future” threat means a threat that commences on a day on or after the day the source protection plan comes into effect. However, despite these definitions, in order to be fair to *bona fide* applications in process and to recognize approvals obtained, it is important to allow certain “future” prohibited threats to be treated as “existing” threats and therefore subject to the policies that apply to “existing.”

Where a policy in this plan prohibits a “future” threat from becoming established, the policy to manage “existing” drinking water threats applies in the following cases even though the threat will not exist until after the source protection plan comes into effect:

- A drinking water threat that is related to a development proposal where an application was made or an approval was obtained under the *Planning Act* or *Condominium Act* on a day before the source protection plan comes into effect. The policy for “existing” drinking water threats also applies to any further applications required under the *Planning Act*, *Condominium Act*, or prescribed instruments, to implement the development proposal.
- A drinking water threat that is related to an application made under the *Building Code Act* on a day before the source protection plan comes into effect.

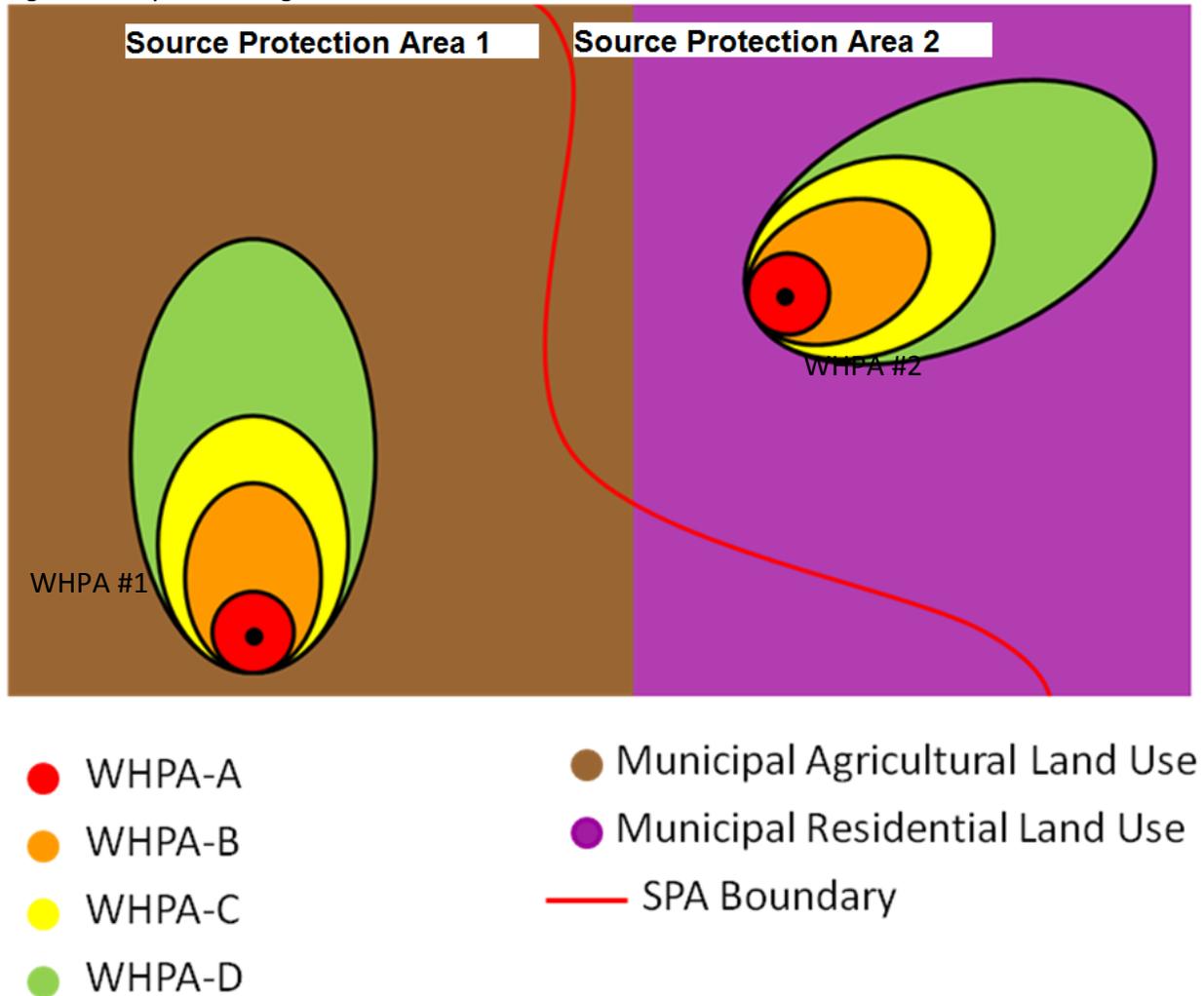
A transition provision that affects:

- Decisions under the *Planning Act* are found on List A in an appendix in the source protection plan,
- Building permit or development permit applications are found on List E in an appendix in the Source protection plan,
- Section 57 Prohibition are found on List G in an appendix in the source protection plan

K. APPENDIX C: Implementing More than One Source Protection Plan

The simple example illustrates a single municipality that will need to implement land use planning policies from two source protection plans.

Figure 7: Implementing More than One Source Protection Plan



In Figure 7, a single municipality is located within two SPAs, and two WHPAs are located in the municipality. WHPA 1 is located completely within SPA 1, and WHPA 2 is located completely within SPA 2. These WHPAs are located in areas of the municipality with different land use designations. WHPA 1 is located in an area of the municipality that has an agricultural land use designation, and WHPA 2 is located in an area of the municipality that has a residential land use designation.

The source protection plan for Source Protection Area 1 would apply to WHPA #1. The Source protection plan for Source Protection Area 1 provides that the following land use would be prohibited in WHPA-A:

- uses where fuel is stored including industrial operations and any other uses involving the bulk handling and storage of fuel.

The source protection plan for Source Protection Area 2 would apply to WHPA #2. The Source protection plan for Source Protection Area 2 provides that the following uses would be prohibited in WHPA-A:

- storage of PCBs, and
- future agricultural uses.

In this example municipality the Official Plan and zoning by-laws would need to be amended to ensure these land uses do not occur in the associated WHPA-As.

The municipality could map the WHPA-As on a schedule either as an overlay designation or as a separate source protection vulnerable area. The existing Official Plan policies would be reviewed in light of source protection to ensure that they conform to the Source Protection Area. The current municipal land use designations would prevent some of the land uses included in the source protection plan from being established. For example, for WHPA #2 the source protection plan prohibits the development of the land for future agricultural land uses. Since this land is currently designated as residential land use in municipal plans, future agricultural land use may already be prohibited as an incompatible land use designation. Additional policies to direct incompatible land uses away from the WHPAs may be included. Policies which are more restrictive than the source protection plan are permitted, however the municipality would have to defend this decision.

**L. APPENDIX D: Municipal Development Application Checklist
(Adapted from York Region)**



**Municipality Name
and Header**

File No.

Type of Application: _____

Applicant: _____

Location: _____

Date of Site Visit (if applicable): _____

Application Considerations	Comments	
	Yes	No
Archaeological Comments:		
Site Contamination Comments:		
Environmental Considerations Comments:		
Water/Wastewater Servicing Comments:		
Land Use Compatibility Comments:		
Transportation Comments:		
Source Water Protection Comments:		
Official Plan Conformity Comments:		
Zoning by-law Conformity Comments:		
Additional Comments:		

Are additional comments attached? YES NO

M.APPENDIX E: Source Water Protection Development Application



SOURCE WATER PROTECTION *PLANNING APPLICATION* CHECKLIST

SOURCE WATER PROTECTION INFORMATION

Is the subject property within a Wellhead Protection Area (WHPA)²? YES NO

IF YES, please complete the rest of the Screening Checklist and email, mail or fax it to the address below. Municipal staff will respond to you in 2-3 business days.

Mail checklist to: ATTN: Mr. Planner, Planning Department, Example Municipality, #1 Municipal Street, City, Ontario, A1B 2CD
Email checklist to: mrplanner@example.ca
Fax checklist to: (555) 555 - 5555

WELLHEAD PROTECTION AREA³:

WHPA-A

WHPA-B

WHPA-C

PROPERTY & CONTACT INFORMATION

Source Protection Area⁴: _____ Date: _____
Name of Applicant: _____
Contact Information: Address: _____
Telephone/Cellular Number: _____
Email Address: _____
Municipal Address of Subject Property: _____
Legal Description of Subject Property: _____
Lot/Part No.: _____ Registered Plan No.: _____
Lot & Concession: _____

² This form could be modified to include "intake protection zone", "issue contributing area" or other vulnerable areas where land use planning policies apply

³ Additional WHPAs may need to be added.

⁴ This field is only required if municipality is located in two or more source protection areas

PROPOSAL

<input type="checkbox"/>	New Structure	<input type="checkbox"/>	Geothermal System ⁵ (Transport Pathway)
<input type="checkbox"/>	New Land Use/Change of Use	<input type="checkbox"/>	New or Replacement Septic System
<input type="checkbox"/>	Expansion OR Conversion of an Existing or Previous Approved Land Use or Structure	<input type="checkbox"/>	New Well ⁵ (Transport Pathway)

Classification

<input type="checkbox"/>	Single Residential	<input type="checkbox"/>	Industrial
<input type="checkbox"/>	Multi – residential (incl. subdivision)	<input type="checkbox"/>	Commercial (incl. mixed use)
<input type="checkbox"/>	Agricultural	<input type="checkbox"/>	Institutional.

Brief Description of Proposal and/or Activity

PLANNING INFORMATION

OFFICIAL PLAN DESIGNATION: _____

OFFICIAL PLAN DOCUMENT NAME: _____

CURRENT ZONING: _____

⁵Section 27, Ontario General Regulation 287/07 requires the municipality to notify the SPA and SPC when a new transport pathway may be created

POTENTIAL THREATS ASSOCIATED WITH PROPOSED ACTIVITY

A drinking water threat as defined under the *Clean Water Act, 2006* as “an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water”.

Please note that activities that are, or may be, significant drinking water threats will vary in each vulnerable area.

PLEASE CHECK ALL ACTIVITIES THAT MAY BE ASSOCIATED WITH THE DEVELOPMENT PROPOSAL WITHIN THE VULNERABLE AREA:

<input type="checkbox"/>	1. FUEL HANDLING & STORAGE
<input type="checkbox"/>	a. Includes both liquid fuel and fuel oil
<input type="checkbox"/>	b. Home heating, retail outlets, bulk plant, marina, farm
<input type="checkbox"/>	2. CHEMICAL HANDLING & STORAGE
<input type="checkbox"/>	a. Automotive and automotive related businesses that use paints, degreasers, chemicals etc.
<input type="checkbox"/>	b. Dry cleaning establishments
<input type="checkbox"/>	c. Industrial manufacturing and processing (e.g. using furniture stripping products, paints, chemical processes)
<input type="checkbox"/>	d. Industrial strength cleaning agents
<input type="checkbox"/>	e. De-icing of aircraft
<input type="checkbox"/>	3. APPLICATION, HANDLING & STORAGE OF ROAD SALT
<input type="checkbox"/>	4. SNOW STORAGE
<input type="checkbox"/>	5. WASTE DISPOSAL
<input type="checkbox"/>	a. Raw, untreated liquids and solids that are pumped out of septic systems and holding tanks
<input type="checkbox"/>	b. Disposal of petroleum refining waste; hazardous, liquid and industrial waste; municipal waste, industrial and commercial waste; PCB waste
<input type="checkbox"/>	c. Mine tailings
<input type="checkbox"/>	6. STORMWATER MANAGEMENT
<input type="checkbox"/>	a. Stormwater management facility (treatment, retention, infiltration or control of stormwater)
<input type="checkbox"/>	b. Car or truck washing facility
<input type="checkbox"/>	c. Sewage treatment plant effluent discharge (e.g. lagoons)
<input type="checkbox"/>	d. Sewer systems and related pipes
<input type="checkbox"/>	7. SEPTIC SYSTEMS
<input type="checkbox"/>	a. Small septic for residential or small-scale commercial/industrial/institutional
<input type="checkbox"/>	b. Large septic system (>10,000 L/day) for commercial/industrial/institutional
<input type="checkbox"/>	8. AGRICULTURAL
<input type="checkbox"/>	a. Application, handling and storage of fertilizers and pesticides
<input type="checkbox"/>	b. Application, handling and storage of agricultural and non-agricultural source material (e.g. biosolids)
<input type="checkbox"/>	c. Grazing and pasturing of livestock