



## **RAISIN-SOUTH NATION SOURCE PROTECTION REGION**

### ***PROPOSED TERMS OF REFERENCE***

**for the**

**Raisin Region Source Protection Area  
and the  
South Nation Source Protection Area**

**Submitted to  
The Minister of the Environment  
May 31, 2009**

**[www.yourdrinkingwater.ca](http://www.yourdrinkingwater.ca)**

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## Executive Summary

### Why you should read this document:

The *Clean Water Act, 2006* impacts municipalities, conservation authorities, and watershed residents. Attached is a terms of reference for all municipalities within the Raisin-South Nation Source Protection Region. This terms of reference is the basis for developing source protection plans which will include:

- The identification of drinking water risks
- Development of Land Use Policies to address drinking water risks

Source Protection Plans will impact all municipalities, especially municipalities that own and/or operate drinking water systems. The tasks in this document lay the foundation for how these plans will be developed. Specifically, the *Clean Water Act, 2006* may affect municipalities through:

- Costs for implementation of Source Protection Plans
- Required amendments to Official Plans and Zoning By-Laws

### What is in this document:

Attached is the **proposed Terms of Reference**.

The **Terms of Reference** is a work plan that outlines:

1. resources;
2. costs; and
3. timelines for developing the **Assessment Reports and Source Protection Plans**.

**Assessment Reports:** are a summary of water quality and quantity risks in the Raisin-South Nation Source Protection Region.

**Source Protection Plans:** are policy documents, which are action plans for eliminating, reducing, and managing water quantity and quality risks in the Raisin-South Nation Source Protection Region.

The Source Protection Committee has circulated previous drafts of the attached terms of reference to municipalities, working groups, First Nations, conservation authorities and the general public. All municipal residential drinking water systems are currently being studied by conservation authorities in cooperation with local municipalities. This document summarizes the work to date, and proposes high level tasks required to complete the source protection plans.

**Note:** *The Ministry of the Environment has not released regulations on either the Assessment Report or the Source Protection Plans. Once these regulations are developed, the Terms of Reference will likely require amendment.*



## 1.0 Mission Statement and Guiding Principles

The Raisin-South Nation Source Protection Committee is committed to the development of fair and responsible source protection plans. Protection of drinking water as a common resource will be premised upon the following principles:

- Policy development based on the best available science
- Provision of opportunities for public input and consideration of public concerns
- Provision of direct and timely contact with affected property owners
- Consideration of economic impacts (i.e. cost-benefit analysis) prior to implementation
- Advocating sustainable funding for affected property owners and municipalities to implement measures for water quality and/or quantity protection
- Fair and reasonable decisions made through an open and transparent process

## 2.0 Background

The Province of Ontario has embarked on a comprehensive study of all watersheds in the province with the end goal of producing source protection plans, which will outline scientific approaches to managing water quality and quantity risks for drinking water supplies. The *Clean Water Act, 2006* was brought into effect with the passing of the first set of regulations on July 3, 2007. The legislation and associated regulations puts in place a framework for establishing a Source Protection Committee and geographic study areas called Source Protection Regions and Source Protection Areas. The Source Protection Committee has the responsibility to guide the development of source protection plans for each of the Source Protection Areas within their respective Source Protection Region.

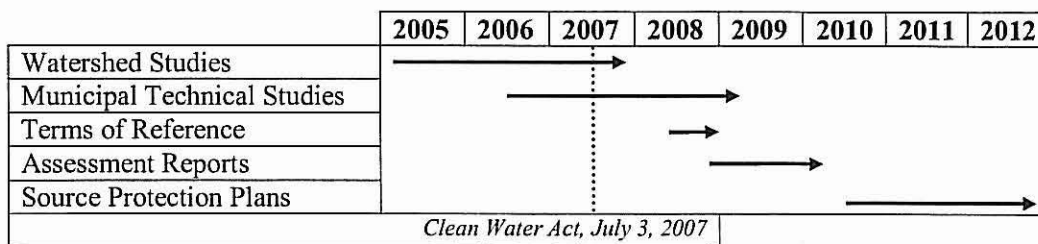
The first step for the Source Protection Committee to prepare the source protection plans is to develop a comprehensive terms of reference that will outline the technical studies required, the cost and who will perform the work. In the first set of regulations passed under the *Clean Water Act*, this work plan is referred to as a terms of reference. Regulation 287/07 outlines the requirements for how to develop the terms of reference, the content and the minimum consultation requirements to get local input included.

Prior to the *Clean Water Act*, local municipalities and conservation authorities have been promoting and implementing source water protection for decades. Through watershed studies, landowner incentive programs and regional partnerships for water resource management, a significant wealth of information and progress has been made at the local level to protect our watersheds. Therefore, as the Source Protection Committee develops a work plan for source protection plans, it is imperative that this new governance structure builds on the success and momentum of existing partnerships and watershed initiatives.

### 3.0 Introduction

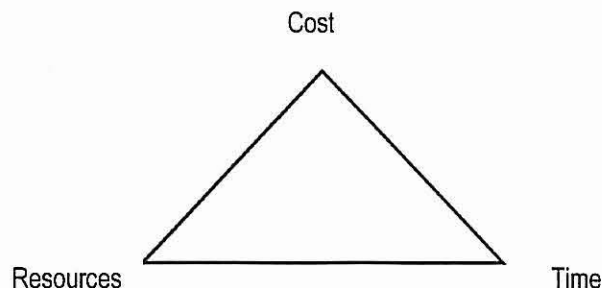
This document represents the terms of reference for developing two source protection plans for the Raisin-South Nation Source Protection Region (Map 1). The Raisin Region Source Protection Area and the South Nation Source Protection Area together comprise a region that is over 7000 km<sup>2</sup>. The terms of reference begins with a focus on the Source Protection Region and the common elements that need to be studied and included in both source protection plans. For example, groundwater movement within the region is not necessarily restricted to the boundaries of surface watersheds so it is important to examine regional information. Likewise, each Source Protection Area contains distinct municipal residential drinking water systems that must be studied to identify potential drinking water risks. Therefore, the terms of reference will draw upon the local information requirements specific to each Source Protection Area.

As outlined in Figure 1, the content of the terms of reference needs to focus on two principal products: 1) the Assessment Report and 2) the Source Protection Plan. The tasks required to complete each of these products started before the *Clean Water Act* was enacted. The Ministry of the Environment (MOE) has provided funding since 2005 to initiate watershed and technical studies that would integrate into the assessment report and ultimately into source protection plans.

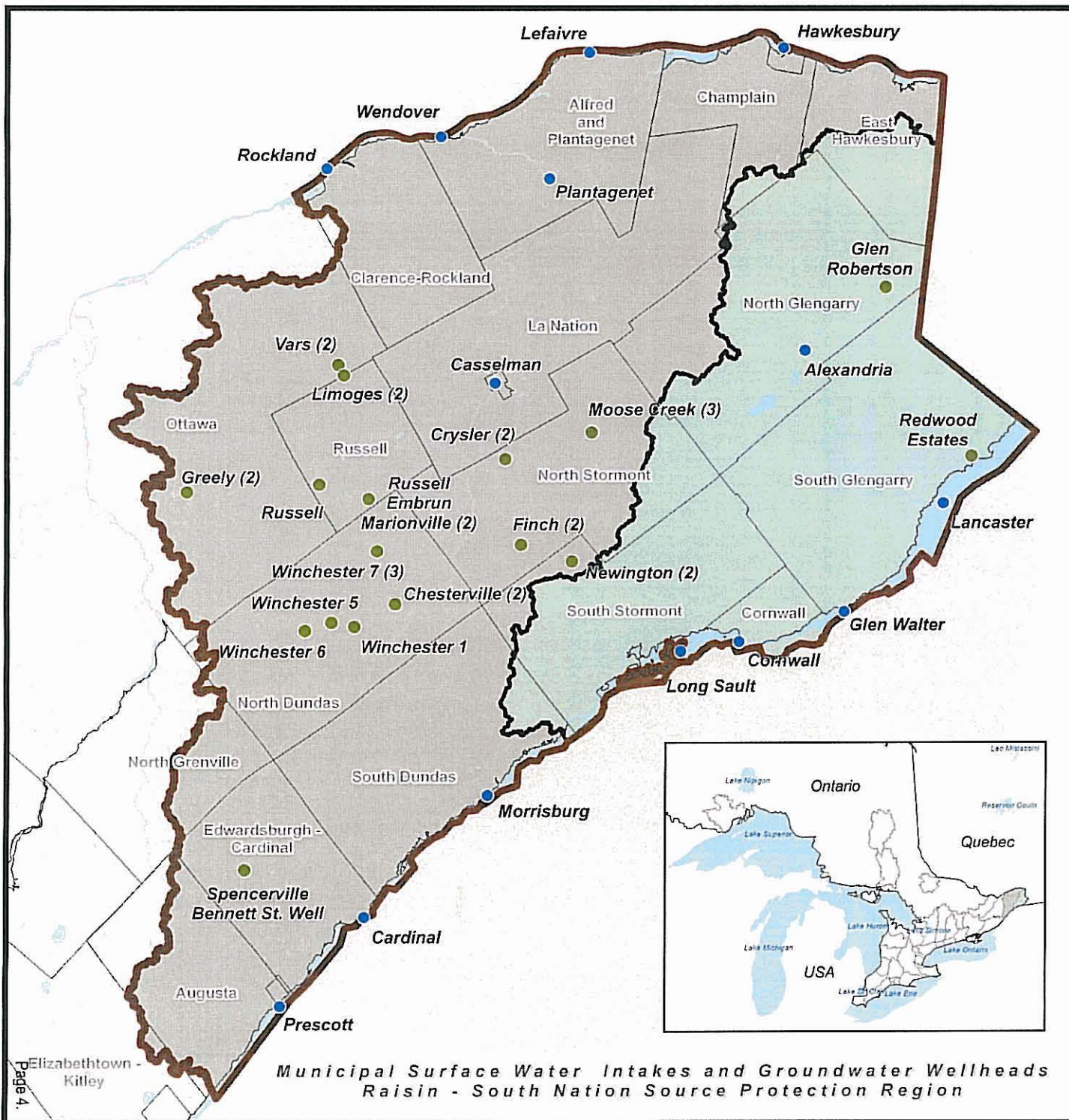


**Figure 1. Timeline for Source Protection Products**

In order to establish the work plan for developing the assessment reports and the source protection plans, the Source Protection Committee needs to consider what work has been completed, initiated or is required. Figure 2 represents the three components that need to be addressed to establish the scope of work. The inherent challenge is to balance the triangle so the work proposed is achievable and realistic goals are set.



**Figure 2. Scope of Work**



1:625,000

Kilometers  
10 5 0 10

Map 1

### Legend

#### Municipal Surface Water Intakes and Wellheads

- Municipal Surface Water Intake
- Municipal Wellhead (2) Indicates # of Wellheads

#### Source Protection Region and Area Boundaries

- Raisin Region Source Protection Area
- South Nation Source Protection Area
- Raisin-South Nation Source Protection Region
- Source Protection Area Boundary
- Municipal Boundary
- Major Lakes and Rivers

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Produced For: Terms of Reference  
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The source base data is known to be the best available information provided through the Ontario Geospatial Data Exchange and by Ontario Ministry of Natural Resources, Ontario Ministry of Environment, Conservation Ontario and local Municipalities.

Additional data was provided by other provincial or municipal agencies and clearing houses.

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The following sections of the terms of reference outline each of the components shown in Figure 2 for both the source protection region and the two source protection areas.

#### **4.0 The Source Protection Region**

Of the 19 Source Protection Regions in the province of Ontario, the Raisin-South Nation Source Protection Region is the most easterly. Bordered by the province of Quebec to the east and north, the United States to the south and as part of the traditional territories of the Mohawks of Akwesasne and the Algonquins of Pikwàkanagàn, the Raisin-South Nation Source Protection Region is influenced by many complex inter-provincial and international issues related to water quality and quantity. These influences add complexity to the development of source protection plans, specifically relating to multi-jurisdictional concerns. The United Counties of Stormont, Dundas and Glengarry, the United Counties of Prescott and Russell, a portion of the United Counties of Leeds and Grenville, a portion of the City of Ottawa, and the City of Cornwall and the Town of Prescott make up the Source Protection Region. Within the Raisin-South Nation Source Protection Region, there are 24 upper, lower and single tier municipalities. These municipalities rely on a combination of surface water and groundwater sources for drinking water, with the majority of the Source Protection Region's population relying on private wells to supply their drinking water. Similar to the reliance on private water supplies, the Source Protection Region consists mainly of private land at approximately 95% of the total land area.

#### **4.1 The Raisin Region Source Protection Area**

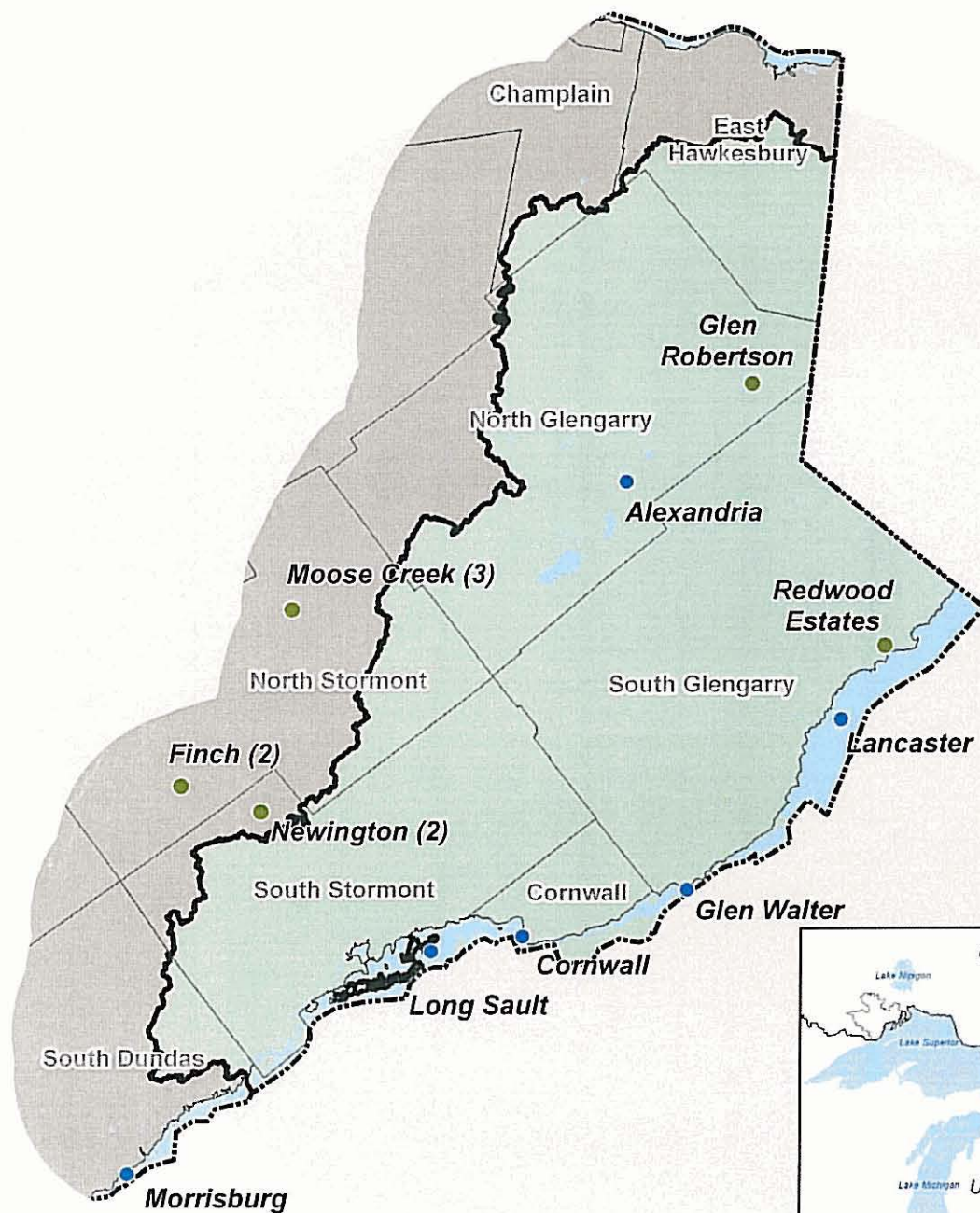
Consisting primarily of the jurisdiction of the Raisin Region Conservation Authority the Raisin Region Source Protection Area is shown on Map 2. With the exception of the Rigaud River watershed, all of the watersheds within the Raisin Region Source Protection Area flow into the St. Lawrence River.

The municipal drinking water supplies in the Raisin Region Source Protection Area are predominantly along the St. Lawrence River. One in-land surface water source is located in the Garry River watershed and the two groundwater sources are Redwood Estates in South Glengarry and Glen Robertson in North Glengarry.

**Table 1. Municipalities and Residential Drinking Water Systems in the Raisin Region Source Protection Area**

Municipality	Tier	Source Water	# of Wells	Location of Intake or Well	Communities Serviced
United Counties of Prescott-Russell	Upper	Does not operate municipal systems.		n/a	n/a
Champlain	Lower	Municipal supply in South Nation Source Protection Area		n/a	n/a
East Hawkesbury	Lower	Private Wells		n/a	n/a
La Nation	Lower	Municipal supply in South Nation Source Protection Area		n/a	n/a
United Counties of Stormont-Dundas and Glengarry	Upper	Does not operate municipal systems.		n/a	n/a
North Stormont	Lower	Municipal supplies in South Nation Source Protection Area		n/a	n/a
South Stormont	Lower	St. Lawrence River		Long Sault	Long Sault Ingleside
South Dundas	Lower	Municipal supplies in South Nation Source Protection Area		n/a	n/a
North Glengarry	Lower	Garry River Groundwater	1	Alexandria Glen Robertson	Alexandria Glen Robertson
South Glengarry	Lower	St. Lawrence River  Groundwater	  1	South Lancaster  Glen Walter Redwood Estates	South Lancaster Lancaster Glen Walter Redwood Estates
City of Cornwall	Single	St. Lawrence River		Cornwall	Cornwall St. Andrews West

As indicated in Table 1, there are 8 lower tier municipalities and the City of Cornwall that are included in the Raisin Region Source Protection Area. In several instances the portion of the municipality that contains one or more municipal residential drinking water systems is located in the adjacent South Nation Source Protection Area. Despite the location of municipal residential systems, there are a significant number of non-municipal systems scattered throughout the Raisin Region Source Protection Area. The Mohawks of Akwesasne reserve is within the Raisin Region Source Protection Area and has several community drinking water systems with both groundwater and surface water sources.

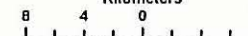


**Municipal Surface Water Intakes and Groundwater Wellheads  
Raisin Region Source Protection Area**



1:500,000

Kilometers



## Map 2

### Legend

#### Municipal Surface Water Intakes and Wellheads

- Municipal Surface Water Intake
- Municipal Wellhead (2) Indicates # of Wellheads

#### Raisin Region Source Protection Area

- Raisin Region Source Protection Area
- South Nation Source Protection Area
- Source Protection Area Boundary
- Municipal Boundary
- Major Lakes and Rivers

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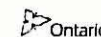
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## 4.2 The South Nation Source Protection Area

The South Nation Source Protection Area contains watershed that flows primarily into the Ottawa River (Map 3). The exception to this is a relatively small band of land along the St. Lawrence River which drains directly south into the St. Lawrence and contains a few municipal residential drinking water systems.

The South Nation Source Protection Area is comprised of the jurisdiction of the South Nation River Conservation Authority as well as the municipalities along the Ottawa River that contain watersheds that flow directly into the Ottawa River. These municipalities or portions thereof have been included in the source protection planning process under the *Clean Water Act, 2006*.

As indicated in Table 2, the South Nation Source Protection Area contains a complex mix of municipal drinking water systems, many of which have joint servicing with several communities and neighbouring municipalities. The South Nation Source Protection Area covers a large area and has drinking water supplies on the major rivers like the St. Lawrence and Ottawa. In addition, there is an in-land drinking source in the South Nation River and 27 groundwater wells that supply water to in-land communities.

**Table 2. Municipalities and Residential Drinking Water Systems in the South Nation Source Protection Area**

Municipality	Tier	Source Water	# of Wells	Location of Intake or Well	Communities Served
United Counties of Prescott-Russell	Upper	Does not operate municipal systems.			
Clarence-Rockland	Lower	Ottawa River		Rockland	Rockland Hammond, St. Pascal de Bayon Cheney Bourget
Alfred-Plantagenet	Lower	Ottawa River		Lefavre  Wendover	Lefavre Alfred St. Isidore Plantagenet
Champlain	Lower	Ottawa River		Hawkesbury	L'Orignal, Vankleek Hill
East Hawkesbury	Lower	Private wells		N/A	N/A
La Nation	Lower	Ottawa River Groundwater	2	Lefavre Russell	St. Isidore Limoges
Russell	Lower	Groundwater	2	Embrun	Embrun Marionville Russell Russell
			1	Russell	



Municipality	Tier	Source Water	# of Wells	Location of Intake or Well	Communities Served
Casselman	Lower	South Nation River		Casselman	Casselman
Town of Hawkesbury	Single	Ottawa River		Hawkesbury	Hawkesbury L'Orignal Vankleek Hill
United Counties of Stormont-Dundas and Glengarry	Upper	Does not operate municipal systems.			
North Dundas	Lower	Groundwater	2 6	Chesterville Winchester	Chesterville Winchester
North Stormont	Lower	Groundwater	2 2 3	Crysler Finch Moose Creek	Crysler Finch Moose Creek
South Stormont	Lower	Groundwater	2	Newington	Newington
South Dundas	Lower	St. Lawrence River		Morrisburg	Morrisburg Iroquois
North Glengarry	Lower	Municipal supply in the Raisin Region Source Protection Area		n/a	n/a
United Counties of Leeds-Grenville	Upper	Groundwater	1	Spencerville	Apartment Complex Bennett St.
Edwardsburg-Cardinal	Lower	St. Lawrence River		Cardinal	Cardinal
Augusta	Lower	Private wells		n/a	n/a
Elizabethtown-Kitley	Lower	Municipal supply outside of Source Protection Region		n/a	n/a
North Grenville	Lower	Municipal supply outside of Source Protection Region		n/a	n/a
Town of Prescott	Single	St. Lawrence River		Prescott	Prescott Edwardsburgh-Cardinal
City of Ottawa	Upper	Groundwater  Note: additional systems outside of Source Protection Region	2 2	Vars Greely	Vars Shadow Ridge





1:625,000

Kilometers  
10 5 0 10

## Map 3

### Legend

#### Municipal Surface Water Intakes and Wellheads

- Municipal Surface Water Intake
- Municipal Wellhead (2) Indicates # of Wellheads

#### South Nation Source Protection Area

- Raisin Region Source Protection Area
- South Nation Source Protection Area
- ▬ Source Protection Area Boundary
- ▬ Municipal Boundary
- Major Lakes and Rivers

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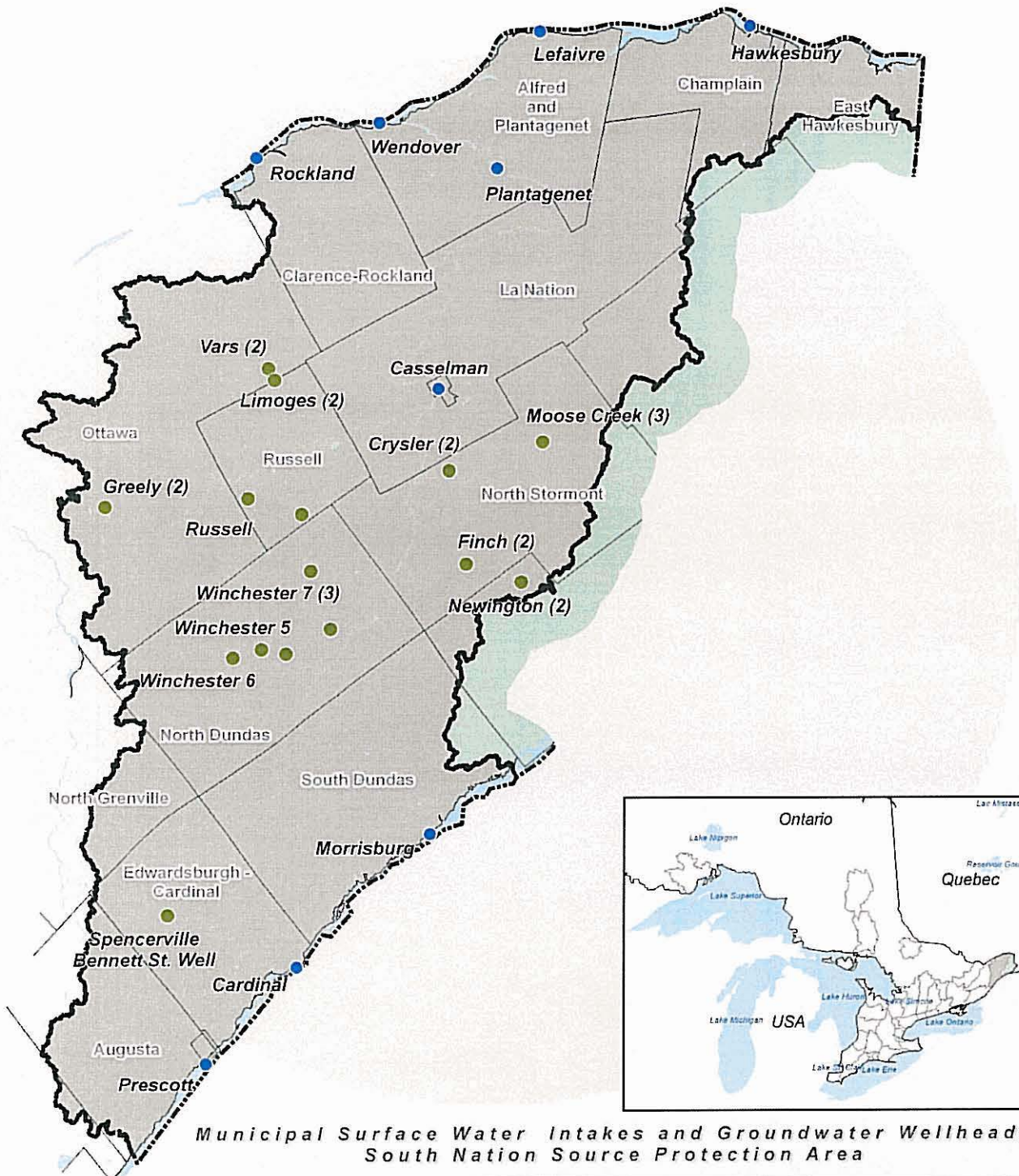
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Municipal Surface Water Intakes and Groundwater Wellheads  
South Nation Source Protection Area

## 5.0 Scope of Work

The work required under the *Clean Water Act* consists of two main products: assessment reports and source protection plans. For the Raisin-South Nation Source Protection Region, two assessment reports and two source protection plans will be created, one for each of the source protection areas shown on Map 2 and Map 3.

The drinking water systems that can be included in the source protection planning process include:

- Municipal residential drinking water systems;
- Other drinking water systems (e.g. non-municipal systems, clusters of private wells); and
- First Nations drinking water systems.

Details on the tasks and status of current technical work are found in appendix A for the assessment reports and appendix B for the source protection plans. It is important to note that the Ministry of the Environment is expected to provide guidance on other ie. non-municipal drinking water systems in spring 2008. Likewise, the regulations and Director's rules on the assessment report are expected to be complete in summer 2008.

The terms of reference will be amended as required once Ministry of the Environment guidance and regulations are finalized.

## 5.1 Communications:

Communications in the Raisin-South Nation Region is guided by two principles; accountability and transparency. These two principles are important to all our stakeholder engagement processes as they contribute to the fairness and legitimacy of the program.

### *Accountability*

Whatever the consultation tools and process used to engage stakeholders in drinking water source protection, the Source Protection Committee is responsible to the participants. Expectations of involvement and how the participants' contribution will be used need to be clearly articulated and met. Stakeholder engagement expectations need to be clearly defined, understood and met. The tools and activities used by staff of the stakeholder engagement processes need to fit the level of participation sought and promised. If participants are being asked to provide input, then staff and the Source Protection Committee are accountable to the participants having promised that their input will receive due attention and consideration.

### *Transparency*

Transparency relates to the procedures for engagement. Clear descriptions and instructions on how stakeholders can become involved and participate in the source protection planning process are needed. The roles and responsibilities of all parties need to be clearly defined and shared with participants at the outset. Stakeholders need to be informed up front of the how, where, when, and what is to be expected of their



contribution and participation. Processes for considering the contributions and concerns brought forward by stakeholders need to be clearly outlined so participants in events understand how their concerns will inform decision-making. Mechanisms also need to be developed and employed to ensure people throughout the watershed have access to source protection planning engagement follow-up materials: reports, decisions, etc. The source protection website [www.yourdrinkingwater.ca](http://www.yourdrinkingwater.ca) is an excellent tool to achieve this. Making sure our Source Protection Authorities, municipal partners and other groups or organizations are also kept informed of their role and program updates is also important and staff have made ourselves available for presentations and updates when requested.

## **5.2 Resources: The Source Protection Partners**

The Raisin-South Nation Source Protection Region organizational framework is shown in Figure 3. This network of partners is a combination of existing partnerships that have been working successfully on watershed management for decades and new partnerships that have been initiated to achieve the requirements of the *Clean Water Act*.

### ***Source Protection Committee***

The Source Protection Committee is responsible to guide the development of the assessment reports and the source protection plans. The Source Protection Committee will work in cooperation with the source protection authorities to establish work plans and set goals and priorities for source water protection. The Source Protection Committee will use geographically based working groups to guide technical study requirements, ensure input from local municipalities and provide advice on source protection plan requirements.

### ***Source Protection Authorities and Management Committee***

The Raisin and South Nation Source Protection Authorities are responsible for managing the funding requirements for source water protection and to provide input on the Source Protection Committee products like the assessment report and source protection plans. The Source Protection Authorities consist of the existing Board of Directors for the conservation authorities and members from municipalities outside of Conservation Authority jurisdiction. Currently, the South Nation Source Protection Authority contains the same membership as the Board of Directors, whereas the Raisin Region Source Protection Authority has a member representing the portion of Prescott and Russell that lies within the source protection area. The two Source Protection Authorities have agreed to use a Management Committee as a partnership mechanism to manage the day-to-day operations of the source protection program. Through the Management Committee, the Source Protection Authorities provide the technical resources and staffing that the Source Protection Committee needs to achieve the requirements of the *Clean Water Act*.

### ***Working Groups***

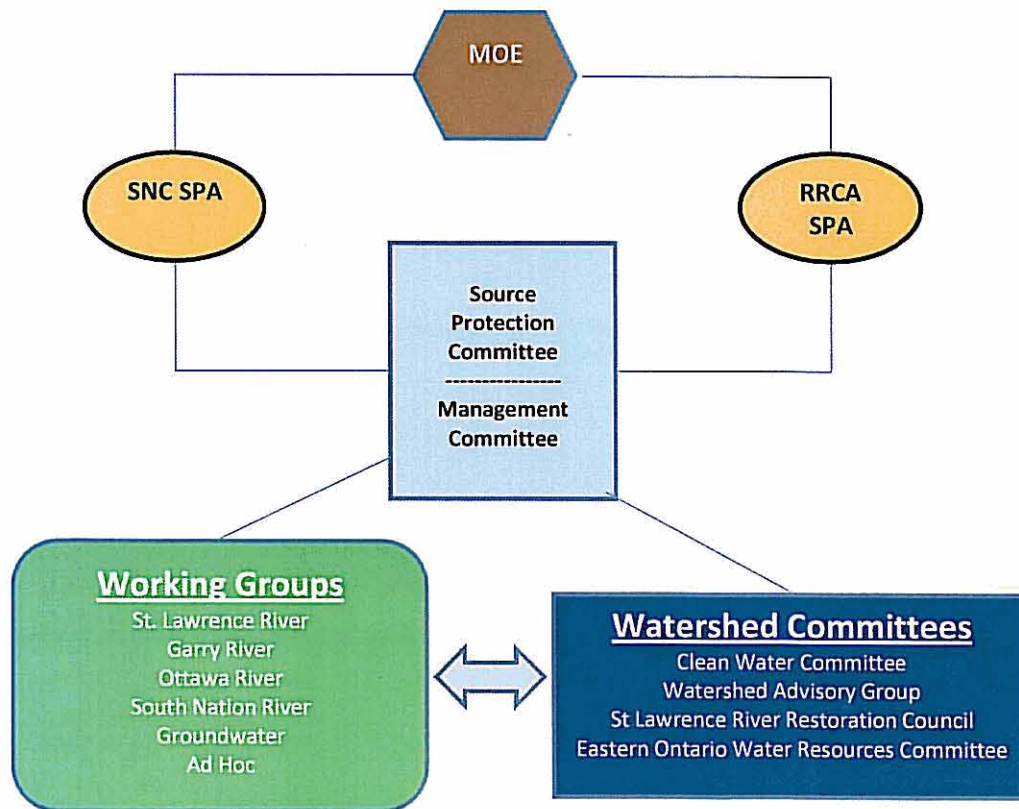
Working groups were established at the outset of the municipal technical studies to guide and oversee the technical studies including project initiation, review and comment on draft reports and deliverables and feedback for the project lead to incorporate into the final report. Five geographically based working groups have been created. They include: the St. Lawrence Working Group, the Ottawa River Working Group, the South Nation

River Working Group, the Garry River Working Group and the Groundwater Working Group. All municipalities with residential drinking water systems are represented on one or more working groups as well as representatives from other stakeholder groups.

The Source Protection Committee will establish Ad Hoc Working Groups from time to time to deal with specific issues.

### ***Watershed Committees***

The four long standing watershed committees have been working with their respective conservation authority for several years and form the backbone of source water protection initiatives in the region. Through their various expertise and mandates, the watershed committees will be a resource for the Source Protection Committee to draw on as the source protection plans are developed.



**Figure 3. Source Protection Region Organizational Framework**

Staff support for the development of source protection plans includes professional staff from both the Raisin Region and South Nation conservation authorities. Staff positions dedicated to the source protection program includes a regional project manager, hydrogeologist, water resources engineer, communication specialist, project coordinators, GIS specialists, database specialist and a Source Protection Committee administrative coordinator.

### 5.3 Assessment Reports

The assessment report is a legislated requirement in the *Clean Water Act 2006* that the Source Protection Committee must develop for each Source Protection Area within the Source Protection Region. Although the *Clean Water Act* provides a general framework for the assessment report, the specific details regarding content and methods will only be available once the province develops and passes a regulation. The anticipated date for a final regulation on the assessment report is June 2008.

In its simplest form, the assessment report will be a summary of the general watershed characteristics, a summary of the municipal technical studies showing the location of vulnerable areas as well as a list of the water quality and quantity risks around municipal drinking water systems. Watershed characteristics have been studied under the watershed characterization process and water budget activities across the entire Source Protection Region. Based on this regional information, it is anticipated that both assessment reports will have similar sections on regional characteristics. As for specific drinking water systems, all of the municipal systems in the Raisin-South Nation Source Protection Region are currently being studied.

Table 1 and Table 2 outline the municipalities or portion of municipalities that lie within each of the Source Protection Areas and the municipal residential drinking water systems that currently exist. All of the municipal systems listed in these tables are currently being studied and are included in the cost estimates in Appendix A.

Appendix A outlines the tasks required for the assessment reports including a description of the task, the lead for the task and whether this has been confirmed, cost estimate and timelines. Due to the strong relationship between the conservation authorities and local municipalities, all of the work completed to date has been led by the Raisin and South Nation source protection authorities. Municipal Council resolutions have been provided to confirm the current lead role of the source protection authorities. Where a task has not been initiated, the lead needs to be confirmed through the development of the terms of reference.

Once the terms of reference has been approved by the MOE, the Source Protection Committee has one year to complete the assessment report for each of the source protection areas.



## 5.4 Source Protection Plans

The source protection plan is a legislated requirement in the *Clean Water Act* that the Source Protection Committee must develop for each Source Protection Area within the Source Protection Region. Although the *Clean Water Act* provides a general framework for the source protection plan, the specific details regarding content and methods will only be available once the province develops and enacts a regulation. The anticipated date for a final regulation on the source protection plan is spring 2009.

The source protection plans will be policy documents that address actions required to protect and enhance drinking water in the Source Protection Region. The Source Protection Committee will establish criteria for policy development, priority areas based on the assessment report, monitoring and implementation requirements. The Raisin-South Nation Source Protection Committee has specifically included the development of policies that address funding requirements for the implementation of source protection plans on private land. The Source Protection Committee also recognizes the importance of working with local municipalities on the development of policies which will influence official plans and zoning by-laws.

The development of the source protection plans for the Raisin Region and South Nation Source Protection Areas will be guided by the same resources identified in the assessment report scope of work. It is anticipated that the roles may shift slightly for some of the stakeholders involved. For instance, as the technical studies are completed for the municipal residential drinking water systems, the working groups may expand their membership to include planners and decision makers who can assist with providing advice to the Source Protection Committee on how to incorporate technical information into source protection plans.

In developing Source Protection Plans, the Raisin-South Nation Source Protection Committee (SPC) intends to propose policies which are environmentally protective, effective, economical and fair to local communities and stakeholders.

While the SPC recognizes the Clean Water Act (CWA) does not allow compensation for affected stakeholders, it has entrenched in law a financial assistance program called the Ontario Drinking Water Stewardship Program (ODWSP). The ODWSP currently has committed dollars until 2011 for early actions ahead of approved source protection plans. The CWA does state the intent of the ODWSP is to provide financial assistance to persons whose activities or properties are affected by the CWA.

The Raisin-South Nation SPC has been and will continue to pressure the province to provide adequate funding to the ODWSP beyond 2011 in order to provide the necessary financial assistance to impacted property owners in accordance to the guiding principles of the Advisory Panel on the Ontario Drinking Water Stewardship Program.

More specifically:

- *“Proposed Principle: The Stewardship Program should ensure sustainable financial assistance for source protection over the long-term while also*

*demonstrating continuous improvement in program design, delivery and results.*<sup>1</sup>

- *“Panel members considered that this was strong rationale for having differences in higher funding amounts and/or percentage maximums for project required under the CWA. In fact, for the highest level of threat, there should be the flexibility to allow up to 100 per cent funding in exceptional circumstances (e.g., demonstrated financial hardship), though this is not expected to be the general rule. Exceptions that might also qualify for a 100 per cent cost share could be measures that provide no benefit to the property owner”*<sup>2</sup>

Appendix B highlights the principle tasks required for the creation of source protection plans. Through the review of the terms of reference, feedback will be requested from local municipalities on the roles and implementation of these tasks. Due to the absence of the source protection plan regulation, cost estimates and timelines have not been finalized. Only general timelines can be set at this point in the process. The overall timelines are reflected in Figure 4, the multi-year schedule which provides a schematic of the start date and completion date for the major source protection tasks.

## **6.0 List of Matters that Affect Other Source Protection Committees**

The Raisin-South Nation Source Protection Region is the most eastern region in the province and is bordered by the Mississippi-Rideau Source Protection Region and the Cataraqui Source Protection Area. Several issues need to be discussed with each of the neighbouring Source Protection Committees. Even though the issues are similar, the geographic proximity of these two regions presents contextual differences that need to be addressed during the development of source protection plans. The list of matters is as follows:

### **6.1 Regional Groundwater Flow, Significant Recharge Areas and Vulnerability Mapping**

There will be a need to discuss both technical findings and policy recommendations related to groundwater with neighbouring Source Protection Committees. Groundwater resources in Eastern Ontario may flow between surface watersheds, such that the protection of one aquifer is of common interest to two or more Source Protection Committees. The regional groundwater vulnerability deliverable for drinking water source protection will involve the review of previous work and a more accurate and up-to-date map of highly vulnerable aquifers and significant groundwater recharge areas. As this technical exercise is conducted, it is essential that the mapping is compared and relatively compatible with the mapping in neighbouring Source Protection Regions. In some cases, the deep groundwater system in the Raisin-South Nation Source Protection

<sup>1</sup> Ontario, Ministry of the Environment, Ontario Drinking Water Stewardship Program Advisory Panel, *Advisory Panel on the Ontario Drinking Water Stewardship Program*, Final Report, at page 14 (Toronto, Queen's Printer for Ontario, 2007). also online at: <<http://www.ene.gov.on.ca/publications/6269e.pdf>>.

<sup>2</sup> *Ibid.*, at page 17.

Region is recharged from outside the region. Therefore, understanding the techniques and outputs from neighbouring Source Protection Regions will help create a better representation of the groundwater system in our region.

## **6.2 Coordinated Approach to Surface Water Technical Studies**

Since many of the municipal intakes in the Raisin-South Nation Source Protection Region are along the Ottawa River and St. Lawrence River, the Source Protection Committee will work with adjacent regions to achieve a coordinated approach for methods to delineate intake protection zones. Along the St. Lawrence River this means the Cataraqui Source Protection Area whereas the Mississippi-Rideau lies upstream along the Ottawa River.

## **6.3 Shared Municipalities**

An important issue for discussion with neighbouring Source Protection Committees relates to the municipalities that lie in one or more source protection regions. Although each Source Protection Region will have distinct geographic features that will have an impact on the drinking water systems, municipalities have indicated from the beginning of the technical work that a coordinated approach to the development of well head protection areas and intake protection zones should be undertaken. In addition, once the plan development phase begins, shared municipalities anticipate reasonably consistent policies for drinking water source protection.

## **6.4 Information Management**

In order to ensure accurate delineation of drinking water protection areas a comprehensive approach to information management must be undertaken. The maps and policies produced through source protection must be defensible and reproducible. With the amount of data that are required to produce the legislated requirements, it is important that neighbouring Source Protection Committees discuss information management approaches and aim to achieve similar standards and protocols for sharing information. As noted above, for municipalities that lie in more than one Source Protection Region, a consistent approach to data management will be expected.

## **6.5 St. Lawrence River Agreements**

If a source protection area contains water that flows into the Great Lakes, the terms of reference for the preparation of an assessment report and source protection plan for the source protection area shall be deemed to require consideration of the following documents: the Great Lakes Water Quality Agreement, 1978, the Great Lakes Charter, 1978, and the Canada-Ontario Agreement, 2002. Since the Raisin-South Nation Source Protection Region drains into the Great Lakes system and is downstream of the Cataraqui and Quinte Source Protection Regions in eastern Ontario, it is advisable to discuss the implications of this requirement and the level of detail that is required to achieve the intent of the legislation. The status of the Ottawa River as a Great Lakes connecting channel is also a topic for discussion under this section of the Act.



## **6.6 Quebec-Ontario Agreements**

The Raisin-South Nation Source Protection Region has an Ottawa River Working Group that was established at the beginning of the technical studies. The working group includes representatives from Quebec and Ontario and one of the issues is that a significant portion of several intake protection zones include land in Quebec. The City of Ottawa has initiated a study of their Ottawa River intake therefore it is prudent to discuss with the Mississippi-Rideau Source Protection Committee the approach for intake protection zone delineation, threats inventory and source protection plan development.

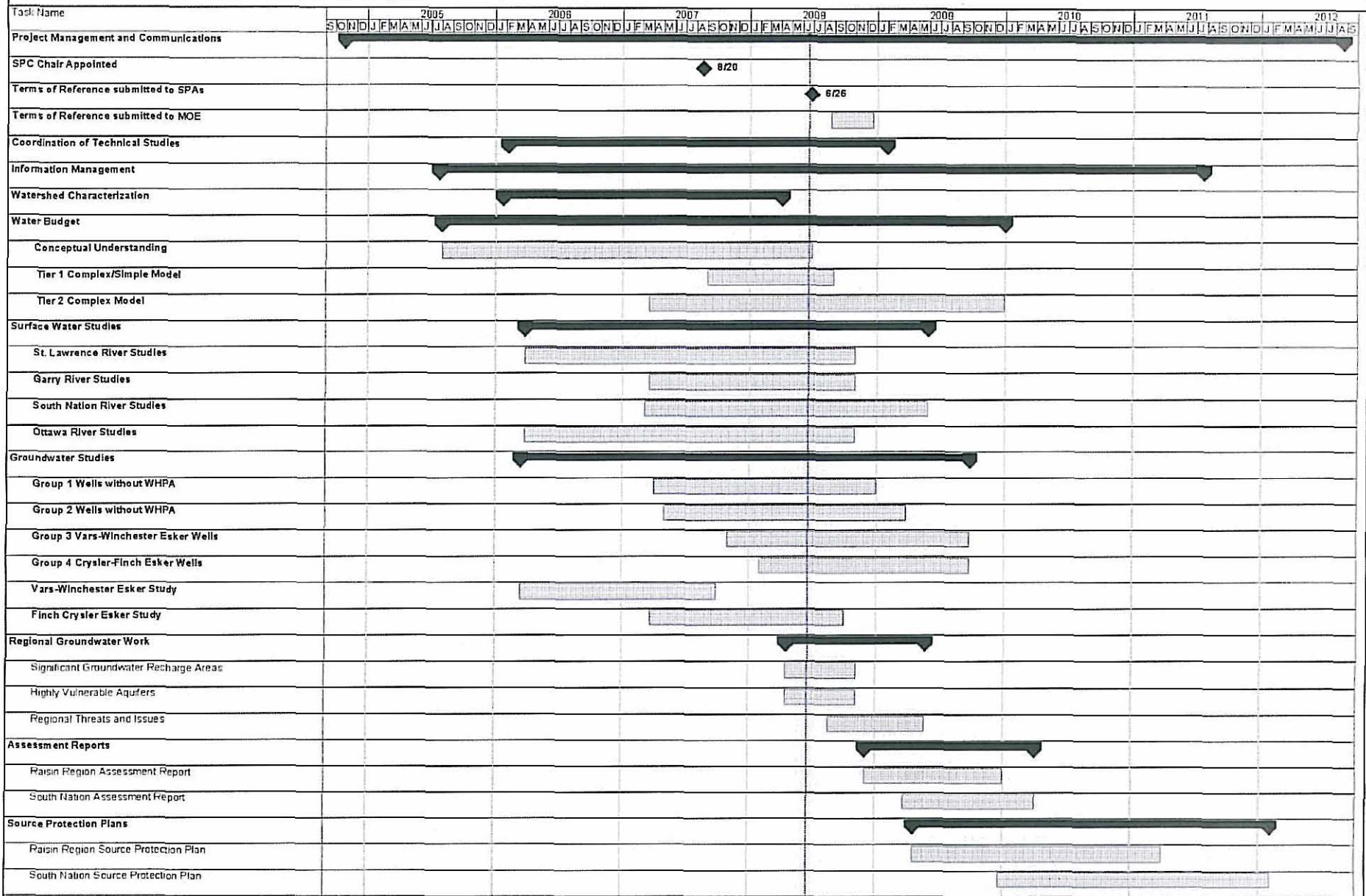
## **6.7 Emergency Response along Rivers**

Contamination from spills upstream of a drinking water intake can pose a risk to the quality of the supply. Since the Raisin-South Nation Source Protection Region is downstream from the Cataraqui Source Protection Area on the St. Lawrence River and the Mississippi-Rideau Source Protection Region on the Ottawa River, lines of communication must be established between regions. The Source Protection Committees will develop policy to transfer their knowledge about spills to municipalities and other authorities who are responsible for emergency response.

## **6.8 Coordinated Approach to Plan / Policy Development**

The Raisin-South Nation Source Protection Committee will work with adjacent Source Protection Committees to assess the costs and benefits of various policy alternatives for addressing risks and to share draft policies in an effort to develop clear and consistent source protection plans. This approach will assist municipalities that fall into two or more source protection areas by contributing to common policy approaches for risks that occur in more than one Source Protection Area.

# Source Protection Multi-Year Schedule Raisin-South Nation Source Protection Region



Project: Source Protection Program  
Date: June 26, 2008

Task

[Task Bar]

Milestone



Summary



Figure 4 Source Protection Multi-year Schedule

Third Draft V 1.0 R 0.0

Appendix A Scope of Work: Assessment Report  
Raisin Region Source Protection Area

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Project Management and Coordination Source Protection Committee	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the assessment report components and direct support to the source protection committee.	RR-SN SPAs	Y	1,404,500	On-going	
Communications	Local area engagement, outreach and creation of communications products that support the assessment report process.	RR-SN SPAs	Y	175,500	On-going	
Information management	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.	RR-SN SPAs	Y	200,000	On-going	
Watershed characterization	Identifying and describing watersheds in the source protection area. May include water quality analysis and peer review for water quality analysis.	RR-SN SPAs	Y	21,514	Oct-06	Mar-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Water Budget						
Conceptual water budget	Describing the overall flow system dynamics for each watershed in the source protection area taking into consideration surface water and groundwater features, land cover (e.g. proportion of urban vs. rural uses), human-made structures (e.g. dams, channel diversions, water crossings), and water takings.	RR-SN SPAs	Y	88,908	Oct-06	Jun-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Tier 1 water budget analysis and stress assessment	Conducting a tier 1 water budget analysis, stress assessment, and delineation of significant groundwater recharge areas.	RR-SN SPAs	Y	65,012	May-07	Aug-08
	May also include the identification of water quantity concerns and an analysis of uncertainty.					
Tier 2 water budget analysis and stress assessment	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	N	150,000	Jun-08	Dec-09
	If determined necessary from a tier 1 water budget analysis and stress assessment, conducting a tier 2 water budget analysis and stress assessment, and refining the delineation of significant groundwater recharge areas.					
Tier 3 water budget analysis and water quantity risk assessment	May also include the identification of water quantity concerns and an analysis of uncertainty.	RR-SN SPAs	N	tbd	tbd	tbd
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
	If determined necessary from a tier 2 water budget analysis and stress assessment, conducting a tier 3 water budget analysis and water quantity risk assessment.	RR-SN SPAs	N	tbd	tbd	tbd
	May include identifying significant, moderate and low water quantity threats.					
	May also include consultation with property owners/residents/stakeholders impacted by a significant drinking water threat scoring and an analysis of uncertainty.	RR-SN SPAs	N	tbd	tbd	tbd
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					

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**Appendix A Scope of Work: Assessment Report**  
**Raisin Region Source Protection Area**

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Regional Groundwater Vulnerability						
Delineate Highly Vulnerable Aquifers (HVA)	Delineating the location and extent of highly vulnerable aquifers in the source protection area and applying vulnerability scores.	RR-SN SPAs	Y	6,666	Sep-07	Oct-08
	An uncertainty analysis may be included in this task.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in HVAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the highly vulnerable aquifers.	RR-SN SPAs	Y	13,333	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assessing risks in HVAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in highly vulnerable aquifers.	RR-SN SPAs	Y	3,333	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Delineate Significant Groundwater Recharge Areas (SGRA)	Applying vulnerability scores to significant groundwater recharge areas in the source protection area (delineated in the water budget process).	RR-SN SPAs	Y	6,666	Sep-07	Oct-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in SGRAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the significant groundwater recharge areas.	RR-SN SPAs	Y	11,666	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assessing risk in SGRAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in significant groundwater recharge areas.	RR-SN SPAs	Y	3,333	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Municipal Residential Drinking Water Systems on Groundwater						
Delineate Wellhead Protection Areas (WHPA)	Delineating the location and extent of the vulnerable area around a drinking water system in the source protection area and applying a vulnerability score.	RR-SN SPAs	Y	213,571	Jul-06	Sep-08
	Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these vulnerable areas may be required.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in WHPAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in wellhead protection areas.	RR-SN SPAs	Y	63,200	Jul-06	Dec-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assess risk in WHPAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in wellhead protection areas. Tier 2 risk assessments will be conducted for all significant risks identified in Tier 1.	RR-SN SPAs	Y	39,000	Jul-06	Dec-08
	Consultation may be required with stakeholders impacted by significant drinking water threats scoring.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report.	RR-SN SPAs	Y	3,333	Sep-08	Dec-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
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Appendix A Scope of Work: Assessment Report  
Raisin Region Source Protection Area

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
<b>Municipal Residential Drinking Water Systems on Surface Water</b>						
Delineate Intake Protection Zones (IPZ)	Delineating the location and extent of the vulnerable area around a drinking water system in the source protection area and applying a vulnerability score.	RR-SN SPAs	Y	312,657	Jul-05	Apr-08
	Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these vulnerable areas may be required.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in IPZs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in intake protection zones.	RR-SN SPAs	Y	157,862	Jul-05	Oct-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assess risk in IPZs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in intake protection zones. Tier 2 risk assessments will be conducted for all significant risks identified in Tier 1.	RR-SN SPAs	Y	75,923	Jul-05	Oct-08
	Consultation may be required with stakeholders impacted by significant drinking water threats scoring.					
	Consultation with adjacent source protection areas or regions may also be required for shared Great Lakes drinking water issues.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report.	RR-SN SPAs	Y	3,333	Sep-08	Dec-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Non-Municipal Drinking Water Systems	Under the <i>Clean Water Act</i> municipal councils may include non-municipal drinking water systems in the source protection plans by resolution.	RR-SN SPAs	N	6,666	tbd	tbd
	In the Raisin-South Nation SPR there are extensive non-municipal systems that could potentially be included.					
	To date, local municipalities have been requested to identify any systems that they may be considering to include.					
	The Ministry of the Environment is currently preparing a guidance document on the implications for including these systems (i.e. cost, liability etc.).					
	It is anticipated that most municipalities will wait until the provincial guidance is available before making a decision. The Source Protection Committee and Source Protection staff will work with municipalities to assess potential non-municipal systems in accordance with the provincial guidance.					
Exempted Systems	The terms of reference can be amended to include these systems at a later date.	n/a	N	n/a	n/a	n/a
	Any municipal residential drinking water systems that may be partially or wholly taken off-line (i.e. not supplying municipal water) within the next 5 years are not to be included in the source protection plan.					
	Municipalities have been requested to identify any of these systems and to forward the council resolution to the SPR staff.					
	For example, the Plantagenet surface water intake will be off-line, therefore it will not be studied for threats and risk assessment.					
Total Cost Estimate for Assessment Report				3,091,176		

Appendix A Scope of Work: Assessment Report  
South Nation Source Protection Area

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Project Management and Coordination Source Protection Committee	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the assessment report components and direct support to the source protection committee.	RR-SN SPAs	Y	1,404,500	On-going	
Communications	Local area engagement, outreach and creation of communications products that support the assessment report process.	RR-SN SPAs	Y	170,500	On-going	
Information management	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.	RR-SN SPAs	Y	200,000	On-going	
Watershed characterization	Identifying and describing watersheds in the source protection area. May include water quality analysis and peer review for water quality analysis. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	Y	21,514	Oct-06	Mar-08
Water Budget						
Conceptual water budget	Describing the overall flow system dynamics for each watershed in the source protection area taking into consideration surface water and groundwater features, land cover (e.g. proportion of urban vs. rural uses), human-made structures (e.g. dams, channel diversions, water crossings), and water takings. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	Y	177,817	Oct-06	Jun-08
Tier 1 water budget analysis and stress assessment	Conducting a tier 1 water budget analysis, stress assessment, and delineation of significant groundwater recharge areas. May also include the identification of water quantity concerns and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	Y	130,024	May-07	Aug-08
Tier 2 water budget analysis and stress assessment	If determined necessary from a tier 1 water budget analysis and stress assessment, conducting a tier 2 water budget analysis and stress assessment, and refining the delineation of significant groundwater recharge areas. May also include the identification of water quantity concerns and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	N	150,000	Jun-08	Dec-09
Tier 3 water budget analysis and water quantity risk assessment	If determined necessary from a tier 2 water budget analysis and stress assessment, conducting a tier 3 water budget analysis and water quantity risk assessment. May include identifying significant, moderate and low water quantity threats. May also include consultation with property owners/residents/stakeholders impacted by a significant drinking water threat scoring and an analysis of uncertainty. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.	RR-SN SPAs	N	tbd	tbd	tbd
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Appendix A Scope of Work: Assessment Report  
South Nation Source Protection Area

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Regional Groundwater Vulnerability						
Delineate Highly Vulnerable Aquifers (HVA)	Delineating the location and extent of highly vulnerable aquifers in the source protection area and applying vulnerability scores.	RR-SN SPAs	Y	13,333	Sep-07	Oct-08
	An uncertainty analysis may be included in this task.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in HVAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the highly vulnerable aquifers.	RR-SN SPAs	Y	26,666	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assessing risks in HVAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in highly vulnerable aquifers.	RR-SN SPAs	Y	6,666	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Delineate Significant Groundwater Recharge Areas (SGRA)	Applying vulnerability scores to significant groundwater recharge areas in the source protection area (delineated in the water budget process).	RR-SN SPAs	Y	13,333	Sep-07	Oct-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in SGRAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the significant groundwater recharge areas.	RR-SN SPAs	Y	23,333	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assessing risk in SGRAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in significant groundwater recharge areas.	RR-SN SPAs	Y	6,666	Sep-08	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Municipal Residential Drinking Water Systems on Groundwater						
Delineate Wellhead Protection Areas (WHPA)	Delineating the location and extent of the vulnerable area around a drinking water system in the source protection area and applying a vulnerability score.	RR-SN SPAs	Y	1,281,428	Jul-06	Feb-09
	Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these vulnerable areas may be required.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Identifying issues, inventorying threats and assessing hazards in WHPAs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in wellhead protection areas.	RR-SN SPAs	Y	489,200	Jul-06	Mar-09
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Assess risk in WHPAs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in wellhead protection areas. Tier 2 risk assessments will be conducted for all significant risks identified in Tier 1.	RR-SN SPAs	Y	234,000	Jul-06	Sep-09
	Consultation may be required with stakeholders impacted by significant drinking water threats scoring.					
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report.	RR-SN SPAs	Y	6,666	Oct-09	Jan-10
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.					
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Appendix A Scope of Work: Assessment Report  
South Nation Source Protection Area

Assessment Report Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline
Municipal Residential Drinking Water Systems on Surface Water					
Delineate Intake Protection Zones (IPZ)	Delineating the location and extent of the vulnerable area around a drinking water system in the source protection area and applying a vulnerability score.	RR-SN SPAs	Y	584,000	Jul-05    Apr-08
	Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these vulnerable areas may be required.				
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.				
Identifying issues, inventorying threats and assessing hazards in IPZs	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in intake protection zones.	RR-SN SPAs	Y	399,342	Jul-05    Dec-08
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.				
Assess risk in IPZs	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in intake protection zones. Tier 2 risk assessments will be conducted for all significant risks identified in Tier 1.	RR-SN SPAs	Y	149,190	Jul-05    Jan-08
	Consultation may be required with stakeholders impacted by significant drinking water threats scoring.				
	Consultation with adjacent source protection areas or regions may also be required for shared Great Lakes drinking water issues.				
Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report.	RR-SN SPAs	Y	6,000	Oct-09    Jan-10
	Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.				
Non-Municipal Drinking Water Systems	Under the <i>Clean Water Act</i> municipal councils may include non-municipal drinking water systems in the source protection plans by resolution.	RR-SN SPAs	N	13,333	tbd    tbd
	In the Raisin-South Nation SPR there are extensive non-municipal systems that could potentially be included.				
	To date, local municipalities have been requested to identify any systems that they may be considering to include.				
	The Ministry of the Environment is currently preparing a guidance document on the implications for including these systems (i.e. cost, liability etc.).				
	It is anticipated that most municipalities will wait until the provincial guidance is available before making a decision. The Source Protection Committee and Source Protection staff will work with municipalities to assess potential non-municipal systems in accordance with the provincial guidance.				
Exempted Systems	The terms of reference can be amended to include these systems at a later date.	n/a	N	n/a	n/a    n/a
	Any municipal residential drinking water systems that may be partially or wholly taken off-line (i.e. not supplying municipal water) within the next 5 years are not to be included in the source protection plan.				
	Municipalities have been requested to identify any of these systems and to forward the council resolution to the SPR staff.				
	For example, the Plantagenet surface water intake will be off-line, therefore it will not be studied for threats and risk assessment.				
Total Cost Estimate for Assessment Report				5,484,177	

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**Appendix B Scope of Work: Source Protection Plan**  
**Raislin Region Source Protection Area**

Source Protection Plan Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Project Management and Coordination Source Protection Committee	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the source protection plan components and direct support to the source protection committee.	RR-SN SPAs	Y	770,192	On-going	
Communications	Local area engagement, outreach and creation of communications products that support the source protection plan process.	RR-SN SPAs	Y	89,000	On-going	
Information Management	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.	RR-SN SPAs	Y	50,000	On-going	
Establish evaluation criteria for selecting policies	Establishing evaluation criteria to assist with objectively deciding how policies will be considered in a transparent manner. Criteria may consider elements such as the natural, social, and economic environments, including health, cost-benefit considerations, and conformance with existing official plans.	SPC	Y	10,000	Mar-09	May-09
Administrative priority setting of work required to complete SPP based on risk assessments in Assessment Report	Administrative priority setting and strategic planning for the management of the work required to complete the source protection plan based on results of risk assessments documented in the assessment report. (It is anticipated that the number of significant threats, the distribution and location of the threats, etc., may guide the committee in how they will specifically create the plan (e.g. which threats in which vulnerable area will be addressed first), who will be the key players in the plan development, and how they wish to prioritize the work required. Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	6,666	Mar-09	May-09
Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Policy development to address drinking water threats (where required and/or permissible in the Act and source protection plan regulation). Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	6,666	Sep-09	Mar-10
Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Policy development for monitoring activities (where required, advisable and/or permissible in the Act and source protection plan regulation), including determining who is responsible for implementing these policies. Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	6,666	Nov-09	May-10
Policy development for Great Lakes elements (where required/permissible in Act & Regs)	Policy development for Great Lakes associated elements (where directed by the Minister and required or permissible in the Act and source protection plan regulation), including monitoring policies to assist in implementing and determining the effectiveness of achieving Great Lake target(s) policies, determining who is responsible for implementing those policies, and determining the need to identify any of these policies as "designated Great Lakes policies". Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	13,333	Nov-09	Aug-10
Establishing timelines for policy implementation	Establishing timelines for policy implementation after all policies for the SPP are developed, giving consideration to the policies developed, key players affected, capacity for implementation, the assessed risks, and natural, social, and economic considerations, including local community interests/needs. Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	6,666	Nov-10	Feb-11
Consultation on the overall proposed source protection plan	Consultation and submission process of the overall proposed source protection plan. Details on how to conduct the consultations on the overall proposed source protection plan will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	6,666	Feb-11	May-11
Other Source Protection Plan Preparation Tasks	Additional tasks are to be discussed with the Source Protection Committee.	SPC	Y	6,666	tbd	tbd
Total Cost Estimate for Source Protection Plan				971,521		

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Appendix B Scope of Work: Source Protection Plan  
South Nation Source Protection Area



Source Protection Plan Tasks	Description	Lead	Confirmed	Cost Estimate	Timeline	
Project Management and Coordination Source Protection Committee	Undertaking administrative support, staffing, management support, and training necessary to provide project coordination for the source protection plan components and direct support to the source protection committee.	RR-SN SPAs	Y	770,192	On-going	
Communications	Local area engagement, outreach and creation of communications products that support the source protection plan process.	RR-SN SPAs	Y	85,000	On-going	
Information Management	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.	RR-SN SPAs	Y	50,000	On-going	
Establish evaluation criteria for selecting policies	Establishing evaluation criteria to assist with objectively deciding how policies will be considered in a transparent manner.	SPC	Y	10,000	Aug-09	Dec-09
Administrative priority setting of work required to complete SPP based on risk assessments in Assessment Report	Criteria may consider elements such as the natural, social, and economic environments, including health, cost-benefit considerations, and conformance with existing official plans.					
	Administrative priority setting and strategic planning for the management of the work required to complete the source protection plan based on results of risk assessments documented in the assessment report.					
	It is anticipated that the number of significant threats, the distribution and location of the threats, etc., may guide the committee in how they will specifically create the plan (e.g. which threats in which vulnerable area will be addressed first), who will be the key players in the plan development, and how they wish to prioritize the work required.					
Policy development to address drinking water threats (where required and/or permissible in Act & Regs)	Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	13,333	May-09	Mar-10
	Policy development to address drinking water threats (where required and/or permissible in the Act and source protection plan regulation).					
Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	13,333	Jan-10	Jan-11
	Policy development for Great Lakes associated elements (where directed by the Minister and required or permissible in the Act and source protection plan regulation), including monitoring policies to assist in implementing and determining the effectiveness of achieving Great Lake target(s) policies, determining who is responsible for implementing those policies, and determining the need to identify any of these policies as "designated Great Lakes policies".					
Policy development for Great Lakes elements (where required/permissible in Act & Regs)	Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	8,666	Oct-10	Jan-11
	Establishing timelines for policy implementation after all policies for the SPP are developed, giving consideration to the policies developed, key players affected, capacity for implementation, the assessed risks, and natural, social, and economic considerations, including local community interests/needs.					
Establishing timelines for policy implementation	Detailed requirements and guidance will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	13,333	Dec-11	Apr-11
	Consultation and submission process of the overall proposed source protection plan.					
Consultation on the overall proposed source protection plan	Details on how to conduct the consultations on the overall proposed source protection plan will be provided in the Source Protection Plan regulation and guidance document when they are developed.	SPC	Y	13,333	May-11	Aug-11
Other Source Protection Plan Preparation Tasks	Additional tasks are to be discussed with the Source Protection Committee.	SPC	Y	13,333	tbd	tbd
Total Cost Estimate for Source Protection Plan				1,004,856		

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## Appendix C

### Raisin-South Nation Source Protection Committee Members

Category	Name	Representing
<b>Chair</b>	Claude Cousineau	Provincial Appointment
<b>Municipal</b>	Glenn Mackey	Leeds-Grenville
	Chris McDonnell	Stormont, Dundas and Glengarry
	Mary McCuaig	Prescott-Russell
	Norm Levac	City of Cornwall
	Clive Doucet	City of Ottawa
<b>Sector</b>	Shawn McRae	Agriculture
	William Smirle	Agriculture
	Brian Powell	Agriculture
	Joel Potvin	Aggregates
	Margaret Taylor	Commercial/Industrial
<b>Other</b>	Ray Beauregard	Eastern Ontario Water Resource Committee
	Walter Oeggerli	St. Lawrence River Restoration Council
	Denis Perrault	Clean Water Committee
	Don Munro	General Public
	Tom Van Dusen	General Public
<b>Liaisons</b>	Mary Wooding	Ministry of the Environment
	Richard Sarazin	Eastern Ontario Health Unit
	Alton Blair	Raisin Region Source Protection Authority
	Lawrence Levere	South Nation Source Protection Authority

### Raisin-South Nation Source Protection Management Committee Members

Name	Representing
Alton Blair, Chair	Raisin Region Conservation Authority
Roger Houde	Raisin Region Conservation Authority
Bryan McGillis	Raisin Region Conservation Authority
Bill McKenzie	Raisin Region Conservation Authority
Ken Hill	South Nation Conservation
Floyd Dingwall	South Nation Conservation
Lawrence Levere	South Nation Conservation
Dennis O'Grady	South Nation Conservation
Claude Cousineau	Source Protection Committee Chair

## **Appendix D – Clean Water Act References to Financial Assistance**

The *Clean Water Act, 2007* contains the following provisions related to financial assistance:

### **Section 97 establishes the Ontario Drinking Water Stewardship Program with the following purpose:**

97 (2) The purpose of the program is to provide financial assistance in accordance with the regulations to,

- (a) persons whose activities or properties are affected by this Act;
- (b) persons and bodies who administer incentive programs and education and outreach programs that are related to source protection plans; and
- (c) other persons and bodies, in circumstances specified in the regulations that are related to the protection of existing or future sources of drinking water. 2006, c. 22, s. 97 (2).

### **Section 22 of the *Clean Water Act* sets out the required contents of a source protection plan including:**

#### **Source protection plan – preparation**

22. (1) The source protection committee for a source protection area shall, in accordance with the regulations and the terms of reference, prepare a source protection plan for the source protection area. 2006, c. 22, s. 22 (1).

#### **Contents**

##### **Incentive programs; education and outreach programs**

(7) Without limiting the generality of paragraphs 2 and 3 of subsection (2) and paragraphs 1 and 2 of subsection (6), a source protection plan may, in accordance with the regulations, set out policies governing incentive programs and education and outreach programs. 2006, c. 22, s. 22 (7).

**APPENDIX E - Detailed Information on Municipal Residential Drinking Water System(s) in the Raisin Region Source Protection Area**

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220008408	GLEN ROBERTSON WELL SUPPLY	NORTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	NORTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	Groundwater	1
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Services town of Glen Robertson					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	250002311	REDWOOD ESTATES WELL SUPPLY	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	Groundwater	1
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Services community of Redwood Estates					



Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260006867	LANCASTER WATER TREATMENT PLANT	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source Lake St. Francis (St. Lawrence River)  Services towns of Lancaster and South Lancaster					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210001861	GLEN WALTER WATER TREATMENT PLANT	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	SOUTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source St. Lawrence River  Services community of Glen Walter					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220001049	CORNWALL WATER TREATMENT PLANT	CORNWALL, THE CORPORATION OF THE CITY OF	CORNWALL, THE CORPORATION OF THE CITY OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source St. Lawrence River  Services City of Cornwall and town of St. Andrews West					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260066417	LONG SAULT/INGLESIDE REGIONAL WATER TREATMENT PLANT	SOUTH STORMONT, THE CORPORATION OF THE TOWNSHIP OF	CANEAU WATER AND SEWAGE OPERATIONS INC.	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source St. Lawrence River  Services towns of Long Sault and Ingleside					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220001030	ALEXANDRIA WATER TREATMENT PLANT	NORTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	NORTH GLENGARRY, THE CORPORATION OF THE TOWNSHIP OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source Loch Garry, Middle Lake and Mill Pond  Services Town of Alexandria					



### Detailed Information on Municipal Residential Drinking Water System(s) in the South Nation Source Protection Area

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260006841	LIMOGES WELL SUPPLY	NATION MUNICIPALITY, THE CORPORATION OF THE	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Wells are identified as Wells 1 & 2 Services the town of Limoges					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220008033	MOOSE CREEK WELL SUPPLY	NORTH STORMONT, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Groundwater	3
Number of Surface Water Intakes	Comments					
0	Wells are identified as 1R, 2, 3 Services the town of Moose Creek					

<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	220001012	SOUTH DUNDAS REGIONAL WATER TREATMENT PLANT	SOUTH DUNDAS, THE CORPORATION OF THE TOWNSHIP OF	CANEAU WATER AND SEWAGE OPERATIONS INC.	Surface Water	0
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
1	Source St. Lawrence River Services the towns of Morrisburg and Iroquois					

<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	220008051	NEWINGTON WELL SUPPLY	SOUTH STORMONT, THE CORPORATION OF THE TOWNSHIP OF	CANEAU WATER AND SEWAGE OPERATIONS INC.	Groundwater	2
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Wells are identified as Wells 1 & 2 Services the town of Newington					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210001736	PLANTAGENET WATER TREATMENT PLANT	ALFRED AND PLANTAGENET, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source South Nation River System was studied for vulnerability but has been decommissioned					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220001245	PRESCOTT WATER TREATMENT PLANT	PRESCOTT, THE CORPORATION OF THE SEPARATED TOWN OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source St. Lawrence River Services the town of Prescott and adjacent area of Edwardsburgh-Cardinal					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210000639	ROCKLAND WATER TREATMENT PLANT	CLARENCE-ROCKLAND, THE CORPORATION OF THE CITY OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source Ottawa River Services towns of Rockland, Hammond, St. Pascal de Bayon, Cheney and Bourget					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210002263	VARs WELL SUPPLY	OTTAWA, CORPORATION OF THE CITY OF	OTTAWA, CORPORATION OF THE CITY OF	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Wells are identified as Wells 1 & 2 Services the town of Vars					



<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	260004293	WENDOVER WATER TREATMENT PLANT	ALFRED AND PLANTAGENET, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (ALFRED HUB)	Surface Water	0
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
1	Source Ottawa River Services the town of Wendover					

<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	210000586	WINCHESTER WELL SUPPLY	NORTH DUNDAS, THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Groundwater	6
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Wells are identified as Wells 1, 5, 6, 7a, 7b, 7c Services the town of Winchester					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	260006971	BENNETT STREET WELL SUPPLY	LEEDS AND GRENVILLE, UNITED COUNTIES OF	EDWARDS/CARDINAL ENVIRONMENTAL SERVICES	Groundwater	1
Number of Surface Water Intakes	Comments					
0	Services 15 Unit apartment complex in the town of Spencerville					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220003582	CARDINAL WATER TREATMENT PLANT	EDWARDSBURGH-CARDINAL, THE CORPORATION OF TOWNSHIP OF	EDWARDSBURGH/CARDINAL ENVIRONMENTAL SERVICES	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source St. Lawrence River Services the town of Cardinal					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210001219	CASSELMAN WATER TREATMENT PLANT	CASSELMAN, THE CORPORATION OF THE VILLAGE OF	CASSELMAN, THE CORPORATION OF THE VILLAGE OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source South Nation River Services the town of Casselman					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210000728	CHESTERVILLE WELL SUPPLY	NORTH DUNDAS, THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (CHESTERVILLE HUB)	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Wells are identified as Production and Standby Services town of Chesterville					

<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	220008649	CRYSLER WELL SUPPLY	NORTH STORMONT, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN AGENCY (NANTICOKE HUB)	Groundwater	2
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Wells are identified as Production and Standby Services the town of Crysler					

<b>Drinking Water System Type (planned or existing)</b>	<b>Drinking Water System Number</b>	<b>Drinking Water System Name</b>	<b>Owner</b>	<b>Operating Authority</b>	<b>Source Water Type (surface, ground, both)</b>	<b>Number of Wells</b>
Existing	220004297	EMBRUN-RUSSELL- MARIONVILLE WELL SUPPLY	RUSSELL, THE CORPORATION OF THE TOWNSHIP OF	RUSSELL, THE CORPORATION OF THE TOWNSHIP OF	Groundwater	3
<b>Number of Surface Water Intakes</b>	<b>Comments</b>					
0	Wells are identified as Wells 1 & 2 Services towns of Embrun, Marionville and Russell					



Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	210003912	FINCH WELL SUPPLY	NORTH STORMONT, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Wells are identified as Wells 1 & 2 Services the town of Finch					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220002832	HAWKESBURY WATER TREATMENT PLANT	HAWKESBURY, THE CORPORATION OF THE TOWN OF	HAWKESBURY, THE CORPORATION OF THE TOWN OF	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source Ottawa River Services the towns of Hawkesbury, L'Original and Vankleek Hill					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	220002841	LEFAIVRE WATER TREATMENT PLANT	ALFRED AND PLANTAGENET, THE CORPORATION OF THE TOWNSHIP OF	ONTARIO CLEAN WATER AGENCY (NANTICOKE HUB)	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Source Ottawa River Services towns of St. Isidore, Alfred, St. Isidore and Plantagenet					

Drinking Water System Type (planned or existing)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Source Water Type (surface, ground, both)	Number of Wells
Existing	Not Available	SHADOW RIDGE WELL SUPPLY	City of Ottawa	City of Ottawa	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Services the community of Shadow Ridge which is part of the town of Greely					