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## *Chapter 1*

# INTRODUCTION

## **APPROVED ASSESSMENT REPORT for the Saugeen Valley Source Protection Area**

*October 15, 2015*

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for the  
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## 1.0 Introduction

The importance of water cannot be overstated. It is required by all living things. An abundant supply of good quality water is crucial to the well-being of our communities and our society as a whole.

Few know this better than the people of Walkerton, a community located in the heart of the Saugeen River watershed, which is one of the watersheds that make up this very Region. In May of 2000, the residents of this community suffered the effect of the contamination of their drinking water resulting in seven deaths and widespread illnesses.

Good would come from this tragic event. The subsequent inquiry, led by Justice Dennis O'Connor, would call for the protection of drinking water sources by developing watershed-based Source Protection Plans. The *Clean Water Act, 2006*, provides the framework for the Drinking Water Source Protection Program. The purpose of this legislation and program is to protect existing and future sources of drinking water from contamination and overuse.

The Act and its associated regulations and rules call for local committees to prepare important Drinking Water Source Protection documents for each of the major watersheds in the province. This process is designed to guide the people of Ontario as they work to protect their sources of drinking water.

## 1.1 Multi-barrier Approach

There is a multi-barrier approach to the protection of our drinking water with one of the barriers being the protection of drinking water sources. Other barriers include water treatment, a secure water distribution system, water quality monitoring, and the proper training of water system staff. While all of these barriers are important individually, they do complement each other to provide a comprehensive network of methods to prevent contaminants from entering our drinking water sources. Source water protection is the first barrier in this network and one of the most cost-effective. All the other barriers are easier to achieve if the drinking water source is of good quality.



*Figure 1.1.1 - The multi-barrier approach includes source protection, water treatment, monitoring, secure distribution, and proper training*

## 1.2 Source Protections Areas and Source Protection Regions

Justice O'Connor recommended that the Drinking Water Source Protection (DWSP) program be a watershed-based program. The Conservation Authorities of Ontario are watershed-based agencies. As such, it was deemed appropriate that the program be undertaken on a Conservation Authority jurisdiction basis and be administered by Conservation Authorities. For the purposes of the DWSP program, the Conservation Authority jurisdictions are referred to as Source Protection Areas. There are 38 Source Protection Areas across Ontario generally coinciding with the jurisdictions of Conservation Authorities. Some adjacent Source Protection Areas have been grouped together to form Source Protection Regions. There are 19 Source Protection Regions consisting of one or more Source Protection Areas.

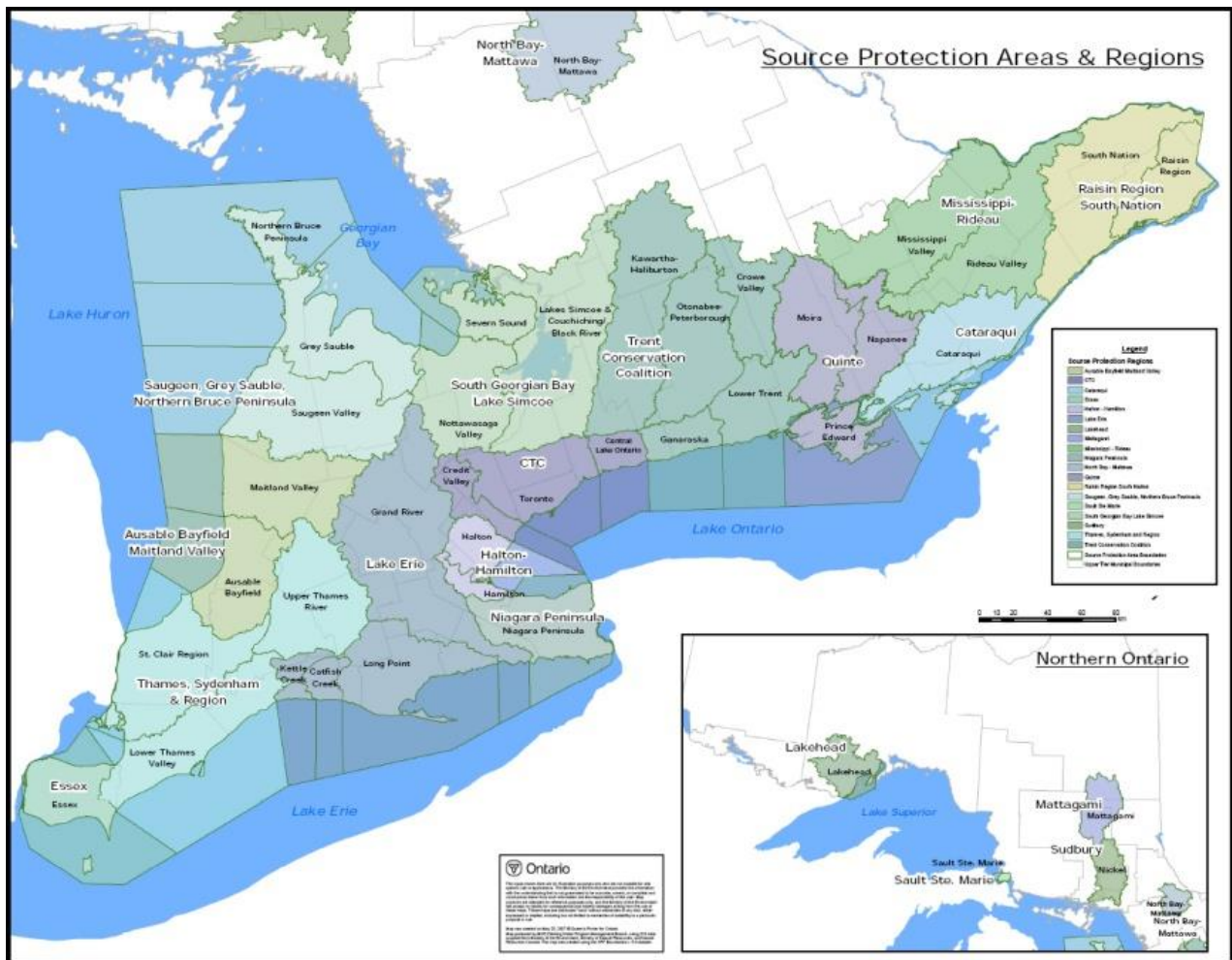


Figure 1.2.1 Source Protection Regions of Ontario

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### **1.3 Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region**

The Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region consists of three Source Protection Areas:

- Saugeen Valley Source Protection Area
- Grey Sauble Source Protection Area
- Northern Bruce Peninsula Source Protection Area

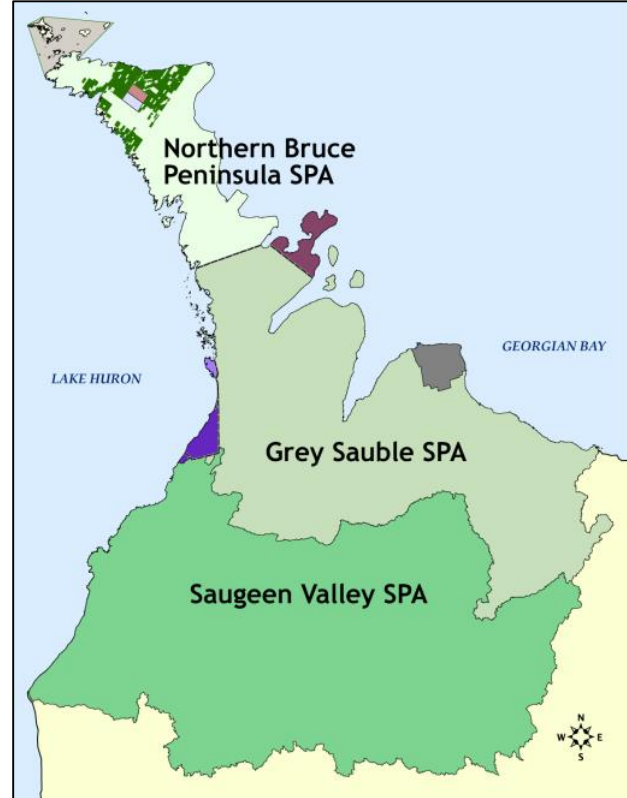
The Northern Bruce Peninsula Source Protection Area is somewhat unique in the Province as it is the only Source Protection Area that roughly follows the boundaries of a municipality and one of only two that do not follow a Conservation Authority watershed jurisdiction. This is due to the fact that this part of Southern Ontario is one of the few areas not included within the jurisdiction of a Conservation Authority.

The Region contains almost the full extents of Grey County and Bruce County, as well as small portions of the Counties of Wellington and Huron. 24 lower-tier municipalities are wholly or partially within the Source Protection Region.

Our Source Protection Region also includes two First Nation communities: the Chippewas of Saugeen, who have reserve land outside of Southampton; and the Chippewas of Nawash, who have the Neyaashiinigmiing reserve in the Cape Croker area.

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

Much of the work in the Drinking Water Source Protection Program is the responsibility of the Source Protection Committee. This is a multi-stakeholder committee that guides the process for all three Source Protection Areas within the Region. The legislation calls for one-third of the committee to represent municipalities, one-third to represent various sectors of the community, and for the remaining one-third to represent other interests. There are also two positions available on the Source Protection Committee for First Nation representatives.



*Fig 1.3.1 - Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region*

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TABLE 1.4.1 – Source Protection Committee for the Saugeen, Grey Sauble, Northern Bruce Peninsula Source Protection Region

Chairman		Mike Traynor
Municipal Representatives	Municipal Grouping #1	Kathie Hughes
	Municipal Grouping #2	Mitch Twolan
	Municipal Grouping #3	Les Nichols
	Municipal Grouping #4	Ken Furlong
	Municipal Grouping #5	Bill Twaddle
Sectoral Representatives	Agriculture	Dr. David Biesenthal
	Agriculture	Robert Emerson
	Agriculture	Brent Lanktree
	Industrial	Vacant
	Commercial	Mark Kraemer
Other Interests	Environmental	Vacant
	Environmental	Vacant
	Health	Andrew Barton
	Public	Bruce Davidson
	Public	Carolyn Day

Former Source Protection Committee members:

Brad McRoberts	Municipal Grouping #1
Howard Greig	Municipal Grouping #4
Sandy Gott	Industrial
Lou D’Alessandro	Health
Les MacKinnon	Environmental
Carolyn Parker	Industrial
Dale Thompson	Environmental

### 1.4.1 Municipal Groupings

The 21 municipalities that are wholly or partially within the Source Protection Region have been arranged into five groups to facilitate the appointment of five municipal representatives on the Source Protection Committee. The groupings are as follows:

Municipal Grouping #1	Township of Georgian Bluffs Municipality of Northern Bruce Peninsula Town of South Bruce Peninsula
Municipal grouping #2	Township of Huron-Kinloss The Municipality of Kincardine Town of Saugeen Shores



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Municipal Grouping #3	Municipality of South Bruce Township of Howick Municipality of Arran-Elderslie Municipality of Brockton Municipality of Morris-Turnberry
Municipal Grouping #4	Township of Chatsworth Town of Hanover Town of Minto Township of Southgate Municipality of West Grey The Township of Wellington North
Municipal Grouping #5	Municipality of Grey Highlands Municipality of Meaford City of Owen Sound Town of the Blue Mountains

### **1.5 Source Protection Planning Process**

It is the responsibility of the Source Protection Committee to prepare three important documents for each of the three Source Protection Areas. These documents are the Terms of Reference, the Assessment Report and the Source Protection Plan.

The Terms of Reference for each of the Source Protection Areas were prepared by the Committee in 2008 and 2009 and approved by the Minister of the Environment on August 17, 2009. The Terms of Reference lists the tasks that must be undertaken to complete the Assessment Reports and Source Protection Plans. They also include the agencies or groups responsible for each task and the timeframe by which the tasks are to be completed.

Assessment Reports are technical documents which contain vast amounts of information concerning the quality and quantity of water in the Source Protection Area. These reports delineate areas that supply water to municipal drinking water systems, assess the vulnerability of these sources and evaluate the threats to sources of drinking water.

Source Protection Plans will contain policies to address the existing and potential significant threats identified through the Assessment Report process. Policy approaches available to the Source Protection Committee include education and outreach programs, incentive programs, land use planning approaches, risk management plans, prohibition, and restricted land uses.

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	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Technical Studies										
SPC Appointed										
Terms of Reference										
Assessment Reports										
Source Protection Plan										
Implementation										

Figure 1.5.1 Drinking Water Source Protection Timelines

### 1.6 Assessment Report Chapter Overview

The Assessment Report is divided into seven principal chapters. Below is a brief summary of each chapter.

#### Assessment Report Chapters

##### 1. Introduction

##### 2. Watershed Characterization

This chapter describes the watersheds in the area. The information is crucial in order to understand the findings later in this report. Topics include: source protection region; source protection area; physical description including soils, bedrock types and land surface; surface water; wetlands; woodlands; aquatic ecology; population; land use; transportation; agriculture; protected areas; recreation; and water quality.

##### 3. Water Budget

This chapter includes groundwater and surface water quantity and flow data. This data reveals the amount of water available for human use, natural purposes and future use. It is like a household budget but deals with water not money. This chapter will evaluate areas in the watershed where possible stresses occur. This chapter analyzes the data to find out where the water quantity issues are in this region.

##### 4. Water Quality Threats and Issues

This chapter has two main sections. The first section is background and methods and the second section is the risk assessment by municipality and system. The second section of this chapter determines threats and risks for each drinking water system grouped by municipality. General information on the municipality is given, such as population and land use. The Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (SGRA) are also explained for each municipality. The most detailed portion describes the groundwater and surface water systems.

##### 5. Climate Change

This chapter looks at possible impacts of climate change on water sources. Within the next few decades, it is not likely that climate change will have a big impact on

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municipal drinking water in our region. Knowledge gaps exist where more study is needed.

### 6. Great Lakes Considerations

The *Clean Water Act, 2006* allows goals to be created by the Minister of the Environment and Climate Change about the Great Lakes that would impact local source protection policies. Currently, no goals have been set.

### 7. Addressing Limitations

This chapter explains where more information and any future research are needed. The necessary tasks as well as a work plan and time line are included.

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## 1.7 Drinking Water Systems

The drinking water systems that have been studied for the Assessment Report are shown in Table 1.7.1.

TABLE 1.7.1 – Drinking Water Systems in the Saugeen Valley Source Protection Area Assessment Report

<b>Municipality</b>	<b>Drinking Water System</b>	<b>GW</b>	<b>SW</b>
Municipality of Arran-Elderslie	Arran-Elderslie Drinking Water System	√	
Municipality of Brockton	Walkerton Drinking Water System	√	
	Chepstow Drinking Water System	√	
	Lake Rosalind Drinking Water System	√	
Municipality of Grey Highlands	Markdale Well Supply	√	
Town of Hanover	Hanover Water Treatment Plant	√	√
Township of Huron-Kinloss	Lakeshore Drinking Water System	√	
	Village of Ripley Well Supply	√	
The Municipality of Kincardine	Scott Point Drinking Water System	√	
	Underwood Drinking Water System	√	
	Tiverton Drinking Water System	√	
	Armow Drinking Water System	√	
	Kincardine Drinking Water System		√
Town of Minto	Minto Pines Subdivision Drinking Water System	√	
	Clifford Well Supply	√	
Town of Saugeen Shores	Southampton Water Treatment Plant		√
Municipality of South Bruce	Mildmay Well Supply	√	
	Teeswater Well Supply	√	
The Township of Wellington North	Mount Forest Drinking Water System	√	
Municipality of West Grey	Durham Well Supply	√	
	Neustadt Well Supply	√	

GW = Groundwater system SW = Surface water system



Figure 1.7.1 Drinking Water Systems in the Saugeen Valley Source Protection Area

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