

How to Read This Report

This report is intended to form the scientific foundation for the planning stage of the Cataraqui Source Protection Committee's goal of protecting existing and future sources of drinking water. It has been prepared to meet the requirements of the Ontario Clean Water Act, 2006. This makes it a highly technical report. Further, the Act assigns a special legal meaning to uses a number of common words. As such, the Source Protection Committee has developed a number of strategies to assist readers in interpreting this report. We hope that you will find the suggestions below to be helpful.

- A. Words with specific technical or legal meanings are put in *italics*. You can refer to the Glossary on page 230 to understand the intended meanings.
- B. In some cases, acronyms have been used to shorten and clarify the report. They are all listed on page (xxxvii).
- C. An Assessment Report Summary has been provided at page (v). It provides a brief overview of the material that is contained in the document. In addition, the key findings of the assessment work to-date are summarized in Chapter 9.
- D. The report is divided up into chapters based on topic (for example: groundwater, surface water, climate change, etc.); however, some readers may wish to understand the science related to their own intake or well. If you are primarily interested in the source water for a specific water well or intake, please refer to the table on page (xxi) to guide you through the report. If you are primarily interested in a topic such as climate change or the Great Lakes, it will be helpful to review the Table of Contents on page (xxii to xxiii) to guide you to the relevant section.
- E. Efforts have been made to make each chapter stand alone; however, care has been taken to provide cross-references to related topics in other chapters and appendices.
- F. The report is meant to be a living document and will be updated as additional science becomes available. For information on how to provide comments or how to get copies of the underlying scientific reports please see page (i) for our contact information.
- G. While the report includes explanations of the concepts involved, there are a number of websites that we recommend for further information about drinking water source protection. We have listed below just a few of the many websites available.
 - a. Ontario Ministry of the Environment Drinking Water Ontario
<http://www.ontario.ca/ONT/portal61/drinkingwater>
 - b. Conservation Ontario: Protect Water
www.conservation-ontario.on.ca/source_protection/index.html
 - c. Cataraqui Source Protection Area
www.cleanwatercataraqui.ca

**Cataraqui Source Protection Area
Assessment Report
(June 2011)**

Explanatory Note

This report was written under the auspices of the Ontario Clean Water Act, 2006 through a provincially-funded and directed drinking water source protection initiative. It was prepared in accordance with technical rules that were specified by the Ontario Ministry of the Environment.

Summary of Report Approvals

A draft version was approved by the Cataraqui Source Protection Committee on April 8, 2010, and published for local review on April 15, 2010.

A proposed version was approved by the Cataraqui Source Protection Committee on July 8, 2010, and was published for local review on July 21, 2010.

The proposed version was endorsed by the Cataraqui Source Protection Authority on September 22, 2010, and was then submitted to the Ontario Ministry of the Environment.

A draft amended proposed version was approved by the Cataraqui Source Protection Committee on April 14, 2011, and was published for local review on April 27, 2011.

An amended proposed version was approved by the Cataraqui Source Protection Committee on June 9, 2011 by the following resolution:

“WHEREAS the Ontario *Clean Water Act, 2006* and its regulations and rules prescribe requirements for the development and approval of assessment reports;

AND WHEREAS an amended and updated version of the proposed report for the Cataraqui Source Protection Area has been developed in accordance with those requirements;

THEREFORE BE IT RESOLVED THAT the Cataraqui Source Protection Committee approves the submission of the Amended Proposed Assessment Report: Cataraqui Source Protection Area (June 2011) to the Cataraqui Source Protection Authority, as outlined in the presentation by CRCA staff on June 9, 2011”.

The amended proposed version was endorsed by the Cataraqui Source Protection Authority on June 22, 2011 and was then submitted to the Ontario Ministry of the Environment on June 27, 2011.

The final version was approved by the Ministry on October 6, 2011. Please see the Ministry’s letter of approval for the Assessment Report: Cataraqui Source Protection Area (June 2011) on the following page.

For More Information

Please visit our website at www.cleanwatercataraqui.ca or contact:

Cataraqui Region Conservation Authority
(613) 546-4228
(877) 956-2722 (toll free in the 613 area code)
(613) 547-6474 fax
crca@cataraquiregion.on.ca

Ministry of
the Environment

Source Protection Programs
Branch

14th Floor
40 St. Clair Ave. West
Toronto ON M4V 1M2

Ministère de
l'Environnement

Direction des programmes de protection
des sources

14^e étage
40, avenue St. Clair Ouest
Toronto (Ontario) M4V 1M2



Log: ENV1174IT-2010-227

October 6, 2011

Mr. Robert Morrison
Catarauqui Source Protection Area
Source Protection Authority Chair
Catarauqui Region CA
Box 160, 1641 Perth Road
Glenburnie, ON
K0H 1S0

Mr. John Williamson
Catarauqui Source Protection Area
Source Protection Committee Chair
4145 Holmes Road,
R.R. #1
Inverary, ON
K0H 1X0

Thank you for the submission of your Amended Proposed Assessment Report (AR) for the Catarauqui Source Protection Area on June 27, 2011. I have completed my review of the Amended Proposed AR and in accordance with my authority under Section 17(3) (a) of the Clean Water Act (CWA) I hereby approve your Amended Proposed AR, as submitted.

I appreciate the efforts undertaken by the Catarauqui Source Protection Committee during the consultation periods for the Amended Proposed Assessment Report that go above and beyond the legislative requirements. Specifically, the extended periods of consultation for both the Proposed and Amended ARs, extensive notification of the public and stakeholders about the consultation periods, and additional municipal and public meetings. The upcoming consultations for the Source Protection Plan will benefit from your extra efforts.

As per section 20 of the CWA, the Source Protection Authority shall ensure that the approved assessment report is made available to the public as soon as reasonably possible on the Internet and in any other manner the Authority considers appropriate.

As per the CWA and General Regulation, your Source Protection Plan is due to be submitted to the Minister of the Environment on August 20, 2012, the fifth (5th) anniversary of the date that the chairs of the source protection committees were appointed.

In addition, at this time I would like to advise you that all final water quality and quantity AR data must be uploaded as follows:

Mr. Robert Morrison & Mr. John Williamson

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- Final water **quality** data is to be uploaded to ARDB@CAMaps within four (4) months of the date on this letter; and
- Final water **quantity** data is to be uploaded to the Ministry of Natural Resources (MNR) data base within four (4) months of the date of this letter.

Should you wish to discuss the review or decision in detail please contact your Liaison Officer to arrange a meeting with ministry staff at the Source Protection Programs Branch.

Thank you for your work to protect Ontario's sources of drinking water.

Sincerely,



Heather Malcolmson, Director (A)
Source Protection Programs Branch
Ministry of the Environment

- c: Steve Knechtel, General Manager/Secretary Treasurer, Cataraqui Region
Conservation Authority
Rob McRae, Project Manager, Cataraqui Region SPA
Keith Willson, Manager, Source Protection Approvals
Katie Fairman, Manager (A), Source Protection Planning
Wendy Lavender, Liaison Officer, Source Protection Implementation
Melanie Ward, Group Leader, Source Protection Approvals
Charley Worte, Conservation Ontario
Mike Garraway, Ministry of Natural Resources

Acknowledgements

Conservation Authority Staff

The Cataraqui Source Protection Committee wishes to acknowledge the contribution of the following Cataraqui Region Conservation Authority staff towards the preparation of this report:

Tabatha Baker	Nicole Irvine	Titia Praamsma
Sheri Burke	Heather Kiley	Sarah Ramey
Donna Cellini	Steve Knechtel	Brianna Rustige
Kimberly Denison	Jana Levison	Sean Watt
Lucas Eades	Karla Maki-Esdon	Matthew Wheeler
Holly Evans	Rob McRae	Christine Woods
Lauren Forrester	Erin Oogarah	Jessica Wright
Stephanie Hsia	Sarah Orovan	Travis York

Numerous other Conservation Authority staff supported the effort between 2005 and 2011.

Consultants and Study Partners

The findings in this report were developed in part through the contributions of the following consultants and partners:

AECOM	Geofirma Engineering Ltd. **	Quinte Conservation
Centre for Water and the Environment, Queen's University Civil Engineering Department*	Golder Associates Ltd.	Raisin Region Conservation
Dendron Resource Surveys Inc.	Lower Trent Conservation	Rideau Valley Conservation
Dillon Consulting Ltd.	Malroz Engineering Inc.	South Nation Conservation
Environment Canada - Canada Centre for Inland Waters	Mississippi Valley Conservation	St. Lawrence County, New York
Dendron Resource Surveys Inc.	Natural Resources Canada	XCG Consultants Ltd.
	Parks Canada - Rideau Canal	

*The Centre for Water and the Environment has been discontinued at the time of this publication.

**Formerly Intera Engineering Ltd.

The three counties, 12 lower-tier and separated municipalities, and two public health units in the Cataraqui Source Protection Area provided advice, knowledge, and data towards the preparation of this report. We acknowledge and appreciate their assistance.

This report was prepared with funding from the Ontario Ministry of the Environment and the Ontario Ministry of Natural Resources. The contents of the Cataraqui Source Protection Area Assessment Report (June 2011) have been endorsed by the Government of Ontario.

Reference Table:

Information about Drinking Water Sources

This table is provided to help the reader to easily locate information about their *drinking water* source within the text and maps of this report. Page numbers indicate the first page of the given section.

Drinking Water System	Volume I Pages	Volume I Sections	Volume II Maps
A.L. Dafoe (Napanee)	166	6.2.8.1	6-44 to 6-50
Bath	160	3.2.7.2	6-37 to 6-43
Brockville	133	6.2.4	6-1 to 6-8
Cana (Kingston)	85	5.2.2	5-12 to 5-19
Fairfield (Amherstview)	155	6.2.7.1	6-30 to 6-36
James W. King (Gananoque)	140	6.2.5	6-9 to 6-15
Kingston Central	146	6.2.6.1	6-16 to 6-22
Lansdowne	51, 94	3.4.2, 5.2.3	5-20 to 5-27
Miller Manor Apartments (Mallorytown)	103	5.2.4	5-28 to 5-35
Picton (Quinte area)	176	6.3	6-59 to 6-65
Point Pleasant (Kingston West)	150	6.2.6.2	6-23 to 6-29
Sandhurst Shores (Napanee)	172	6.2.8.2	6-51 to 6-57
Sydenham	48, 181	3.4.1, 6.4.1	6-66 to 6-72
Westport (Rideau area)	112	5.2.5	5-36 to 5-43