

**Terms of Reference for the
Assessment Report and Source Protection Plan
Greater Sudbury Source Protection Area**

June 8, 2009

Under the *Clean Water Act, 2006* (Ontario Regulation, 287/07)



Preface

This document provides an overview of the planning area, the proposed work, and the process and schedule for preparing an assessment report and source protection plan for the Greater Sudbury Source Protection Area. Appendix II of this document contains the terms of reference in the format required by the Ministry of the Environment for this program.

Glossary of Terms

Assessment Report: a technical document that is prepared by a source protection committee under Section 15 of the *Clean Water Act, 2006* to record its knowledge of a source protection area, and to rank *risks* to *drinking water* within that area.

Drinking water threat: an existing activity, possible future activity or existing condition that results from a past activity, that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water

Drinking water system: a system of works, excluding plumbing that is established for the purpose of providing users of the system with *drinking water*.

Source protection authority: a conservation authority or other person or body that is required to exercise powers and duties under the *Clean Water Act, 2006*. The Greater Sudbury Source Protection Authority is comprised of the Nickel District Conservation Authority Board.

Source protection area: those lands and water that have been defined under Ontario Regulation 284/07 as the “study area” for an *assessment report* and a *source protection plan*.

Source protection committee: a group of individuals who have been appointed under the *Clean Water Act, 2006* by the *source protection authority* to coordinate the source protection activities for a *source protection area*.

Source protection plan: a document that is prepared by a source protection committee under Section 22 of the *Clean Water Act, 2006* (and a forthcoming regulation) to direct source protection activities in a *source protection area*. They are subject to approval by the Ministry of the Environment.

Source water: untreated water that is found in groundwater aquifers and surface water lakes and rivers that is used to supply a drinking water system.

Surface water intake protection zone: the area of land and water that contributes to a drinking water system within a specified period of time (i.e. two hours) and that is priority for protection from contamination.

Watershed: the areas of land that drain into a lake, river or a stream.

Wellhead protection area: the surface and subsurface area surrounding a well that supplies a drinking water system, through which contaminants are reasonably likely to move so as to enter a well.



Background

The *Clean Water Act, 2006*, was introduced by the Ontario Government in 2006. On July 3rd, 2007 the Act, along with the first five associated regulations came into force. The purpose of this legislation is to ensure that across the Province of Ontario, watershed communities are able to protect their municipal drinking water sources from contamination and overuse of our current and future supplies. The best way to protect the sources of our drinking water is by looking at them from a watershed perspective.

How does this affect me?

Everybody lives in a watershed and we all rely on water as a drinking water source. Many activities that we do on a daily basis can have an impact on our sources of drinking water. Protecting our water at the source is our first line of defense against future contamination. We all have a role to play in protecting our local sources of drinking water.

The *Clean Water Act, 2006* will bring about changes to the City of Greater Sudbury's Official Plan and zoning by-laws in proximity to our wells and our surface water sources used for municipal drinking water through the development of a source protection plan. You can play an important role by participating and submitting comments, attending open houses and being informed about upcoming public events as the source protection committee develops a source protection plan.

The Source Protection Committee

The source protection committee has local municipal, economic, First Nation, non-profit and public member at large representation. The composition and size of the committee is to a certain extent regulated by the Province of Ontario and determined by the size of the source protection area. The Greater Sudbury Source Protection Committee is composed of a provincially appointed Chair, Mr. Nels Conroy, plus nine other members who were appointed by the Source Protection Authority.

There are three members who represent the City of Greater Sudbury, three who represent economic sectors - mining, land development and small business, one First Nation and three who represent other interests such as environmental non-profit, and two public members at large. For biographies of the members of the Greater Sudbury Source Protection Committee please visit the following link: www.nickeldistrict.ca/SWP%20Web/English/members.htm

Under the *Clean Water Act*; the Nickel District Conservation Authority board serves as the Greater Sudbury Source Protection Authority. The role of the source protection authority is to oversee, review and recommend work done by the source protection committee. It is the Source Protection Authority's responsibility to ensure that information is made available to the public. The mission statement of the source protection committee is to ensure sustainable high quality drinking water sources for the City of Greater Sudbury to meet current and future needs.

Source Protection Program

Under the *Clean Water Act*; the Source Protection Committee was created to oversee a science-based planning process to develop three documents between 2008-2012: the terms of reference, the assessment report and the source protection plan.

1) Terms of reference

This is the "work plan" of the process, outlining who is responsible for carrying out the work needed to develop the assessment report and the source protection plan.

2) Assessment report

The report will identify water sources and potential threats to both water quality and water supplies for the various groundwater and surface water sources of municipal drinking water for the City of Greater Sudbury.

3) Source protection plan

The plan will set out policies on how significant drinking water threats will be reduced, eliminated or prevented, who is responsible for taking action, timelines and how progress will be measured. It will consist of made-in-Sudbury strategies and propose a range of tools that can be used to accomplish these goals

Source Protection Area

The Greater Sudbury Source Protection Area is one of 19 regions across the province working on a source protection plan.

The source protection area is approximately 9,150 km² and covers an area of 60 kilometres in an east-west direction and 145 kilometers in a north-south direction. There are two First Nations within the planning area, Wahnapiitae and Whitefish Lake.

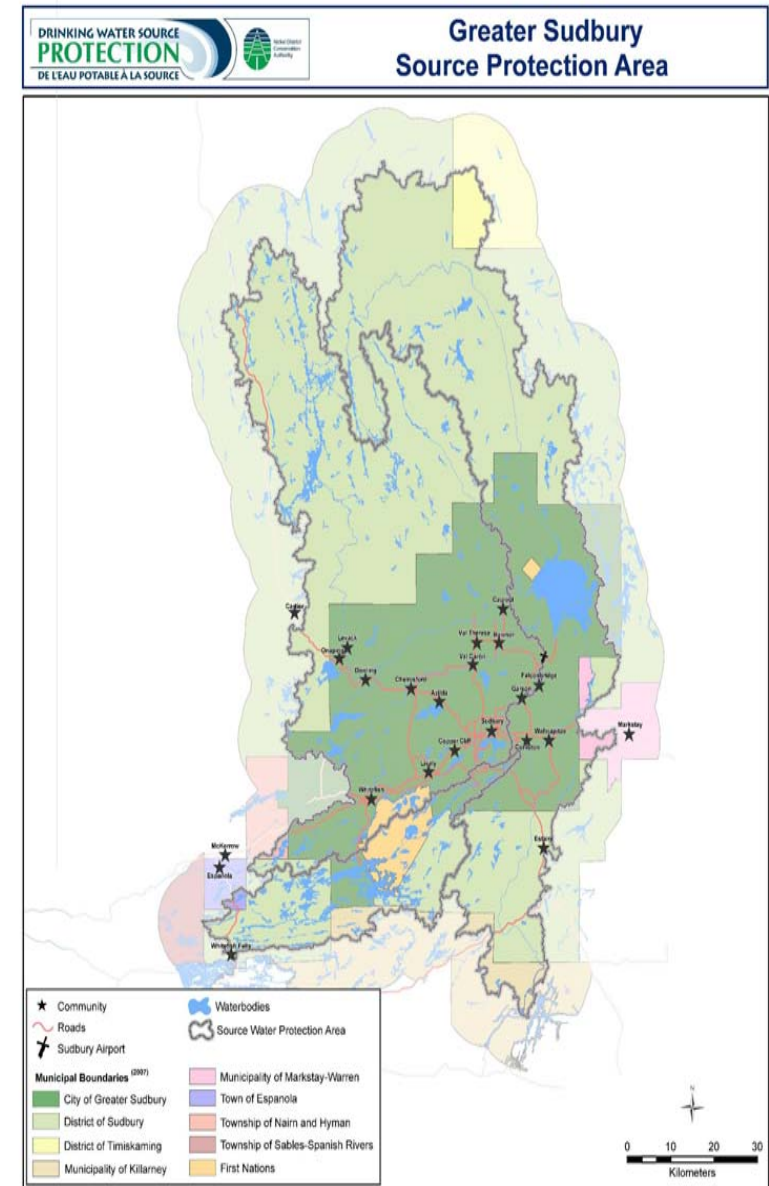
The 3 watersheds in the source protection area are

- Wanapitei River
- Vermillion River
- Whitefish River

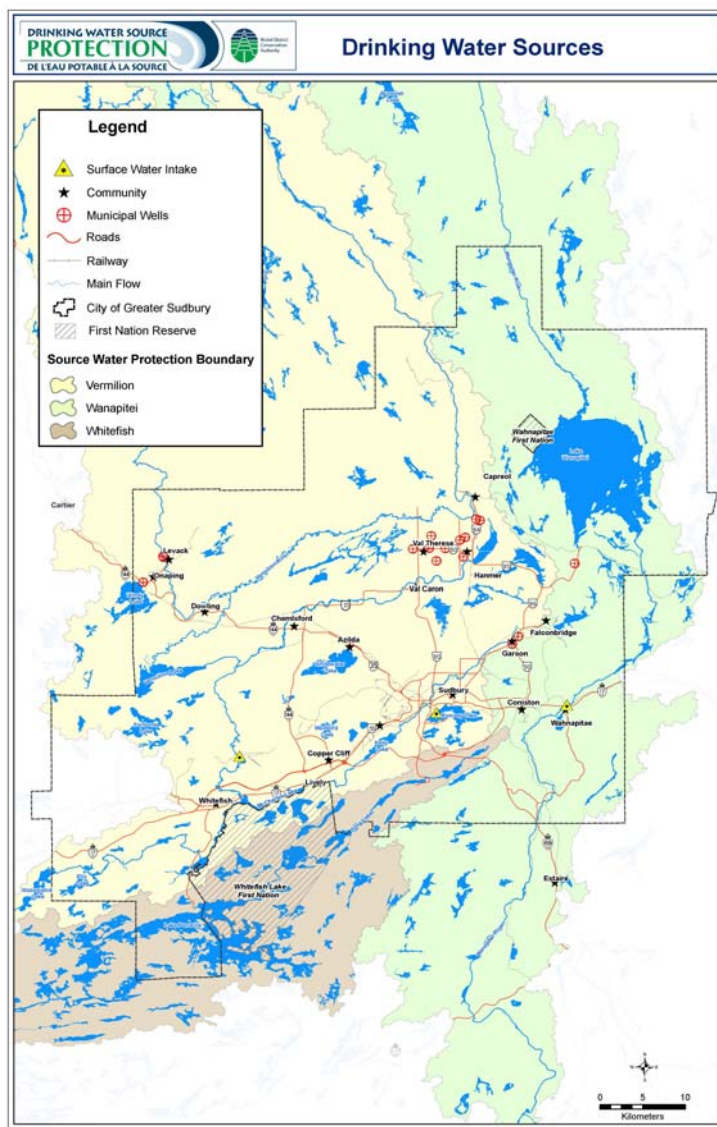
Municipalities

The City of Greater Sudbury is the only municipality with drinking water systems in the Greater Sudbury Source Protection Area. Approximately 70% of Greater Sudbury residents get their drinking water from surface water while 20% receive water from a ground water source. An estimated 10% of residents rely on their own private sources for getting drinking water directly from a well or lake & river.

There are four municipalities that have some jurisdictional area in the watersheds of this source protection area, but they do not have any municipal drinking water systems nor their built-up areas in this source protection area. These municipalities are Markstay-Warren, Espanola, Nairn Centre, and Killarney. Should any of these municipalities develop a municipal residential drinking water system in the Wanapitei, Vermilion or Whitefish River watershed, then under the *Clean Water Act*, they would be required to participate in this source protection planning process.



Map 1. Greater Sudbury Source Protection Area. Refer to Appendix I for an enlarged map.



Map 2. Greater Sudbury Drinking Water Sources. Refer to Appendix I for an enlarged map.

Where do we get our municipal drinking water from?

In general terms, a Municipal Residential Drinking Water System is a water treatment facility that is either owned and or operated by the municipality to provide drinking water to residents in that community. This may be water from groundwater (wells) or surface water sources.

There are currently 24 municipal groundwater wells that provide municipal drinking water to residents of Azilda, Chelmsford, Dowling, Levack, Onaping, Garson, Falconbridge, Capreol and Valley East.

Three surface water sources (Ramsey Lake, Wanapitei and Vermilion Rivers) provide municipal drinking water to residents of the City of Greater Sudbury living in the central, southern and western parts of Sudbury, including Copper Cliff, Garson, Lively and New Sudbury.

- Blezard Valley ~ 9 wells serving approx. 31,600 residents
 - Capreol~ 2 wells serving approx. 3,400 residents
 - Dowling~ 2 wells serving approx. 1,850 residents
 - Falconbridge~ 3 wells serving approx. 750 residents
 - Garson~ 3 wells serving approx. 4,890 residents
 - Levack~3 wells serving approx. 1,350 residents
 - Onaping~2 wells serving approx. 800 residents, one new well (Wickwas) to be added
 - Ramsey Lake ~ David Street Water Treatment Plant
 - Wanapitei River ~ Wanapitei Water Treatment Plant
 - Vermilion River~ serving Copper Cliff, Lively, Naughton and Whitefish – approx. 13,000 residents
- } Combined serving 90,000 residents

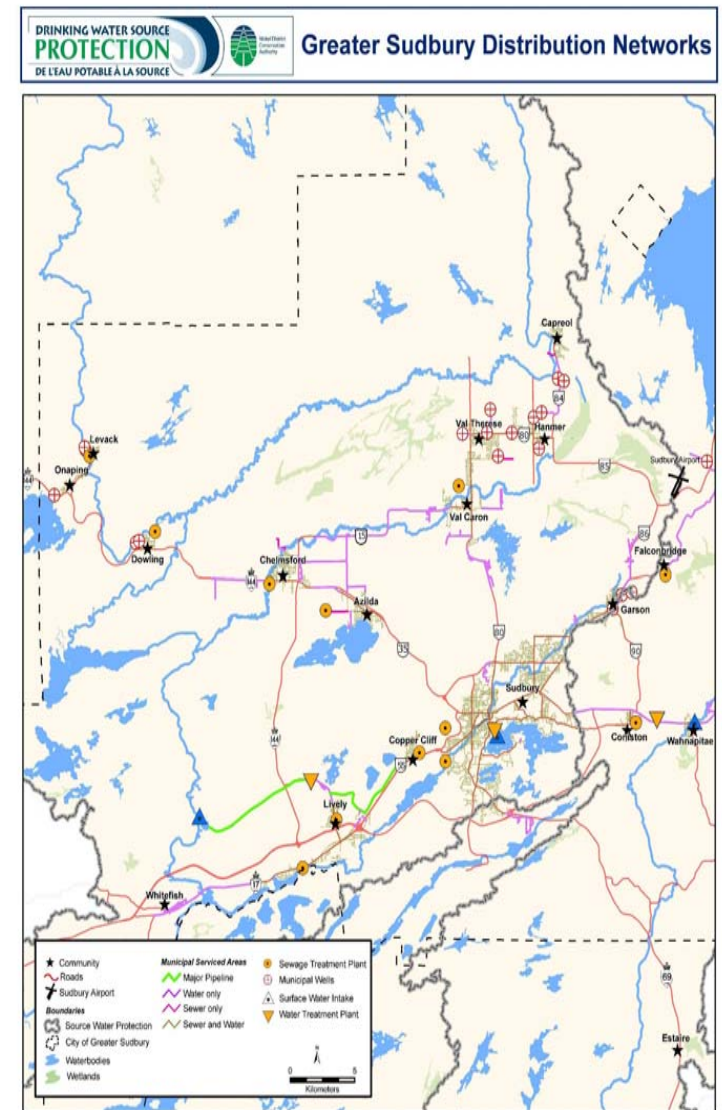
Future Municipal Residential Drinking Water

Systems

The City of Greater Sudbury will soon be starting a master plan for water and wastewater infrastructure, including potential future water supplies for the area. In the shorter term, the City is preparing to add one or two new wells to the Blezard Valley system and a well to the Onaping system. The master planning process will determine long term water supply strategies for the City of Greater Sudbury. Lake Wanapitei was selected as the preferred alternative in a 1998 Class Environmental Assessment, and it was included in the City of Greater Sudbury 2006 Official Plan as a sensitive surface water feature together with Ramsey Lake, the Vermilion River and Wanapitei River. Including Lake Wanapitei in the assessment report will make it possible to also include it in the source protection plan, should this be the outcome of the City's water and wastewater master plan.

First Nations

There are two First Nations in the Greater Sudbury Source Protection Area - Wahnapiatae First Nation and Whitefish Lake First Nation. Both First Nations have appointed a representative for the drinking water source protection program. The Wahnapiatae First Nation has decided to do a source protection pre-screening survey for their drinking water systems. The information gathered will be used to help determine the nature and amount of work appropriate for source protection for the community. This pre-screening will be done with the understanding that this does not consist of consultation, with the exception of the Ministry of the Environment, and that source water protection will not affect treaty rights. It is also understood that participation of the Whitefish Lake First Nation in the source water protection process will in no way affect treaty rights.



Terms of Reference

The work described in the terms of reference is guided by the Ministry of Environment through the *Clean Water Act* and its regulations, Director's rules and guidance modules. This provincial guidance will provide a level of standardization and consistency across the province pertaining to the technical tasks and who is required to complete these tasks in the development of the assessment report and the source protection plan. The terms of reference outlines:

- 1) Drinking water systems included in the assessment report and source protection plan;
- 2) Planning costs; and
- 3) Planning schedule.

To see the provincial timeline under the *Clean Water Act*, with a description of the work associated with each phase of the program, please follow this link: www.nickeldistrict.ca/dwsp/index.php?option=com_content&view=article&id=13&Itemid=11&lang=en

Greater Sudbury Source Protection Plan Timeline

	2005	2006	2007	2008	2009	2010	2011	2012
Watershed Studies			→					
Municipal Technical Studies					→			
Terms of Reference				→				
Assessment Report						→		
Source Protection Plan								→

Tasks

The Greater Sudbury Source Protection Committee, together with the Greater Sudbury Source Protection Authority and Nickel District Conservation Authority drinking water source protection staff, will be responsible for the development and coordination of the assessment report and source protection plan, including project management, related communications, and coordination of technical studies. For the past three years, Nickel District Conservation Authority drinking water source protection staff has been collecting data and information for the assessment report. Assessment report components include:

	Component	Status
1	Watershed Characterization	Complete
2	Groundwater Vulnerability	Updates to comply with the December 2008 assessment report regulation and technical rules being done
3	Surface Water Vulnerability	Two of two reports complete; updates to comply with the December 2008 assessment report regulation and technical rules being done
4	Threats Inventory and Issues Evaluation	Updates to comply with the December 2008 assessment report regulation and technical rules being done
5	Water Quality Risk Assessment	To be done after #4 done
6	Water Budget and Water Quantity Stress Assessment	Three of four reports complete

The assessment report regulation and technical rules will guide the development of the assessment report, including how climate change should be considered in the development of the report.

Cost Summary

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/2011	2011/12	2012/13
Assessment Report	\$610,678	\$715,139	\$754,149	\$862,739	\$680,384			
Source Protection Plan					\$190,468	\$806,295	\$828,143	\$674,722

Community Engagement

This is the first of the three official documents required from the source protection committee. It was posted on the Internet and made available to the public as per Ontario Regulation 287/07 under the *Clean Water Act, 2006*. The draft proposed terms of reference was posted on the Internet from May 22, 2008 until June 26, 2008. More than eighty Greater Sudbury area residents attended two Open Houses, one of which featured a tour on Ramsey Lake around the municipal surface water intake near David Street; and the other included a tour of a municipal well in Hanmer. A second posting and review period extended from August 20, 2008 until September 19, 2008.



Fifteen written comments were received during the two comment periods. All names and addresses were protected from disclosure under the *Municipal Freedom of Information and Protection of Privacy Act*. The comments received became part of the public record and were used solely for the purpose of the source protection committee under the *Clean Water Act*. The source protection committee reviewed all comments received and made changes to the terms of reference as appropriate given the direction from the Ministry of the Environment for the development of the assessment report and the source protection plan.

Under the *Clean Water Act*, there are several opportunities for individuals and organizations including the public, businesses, the municipality, and First Nations to comment and provide feedback throughout the preparation of the assessment report and source protection plan. The source protection committee acknowledges that there may be modifications made to this document from time to time and it should be considered a living document.

Legislated public consultation and notices required for the preparation of the terms of reference

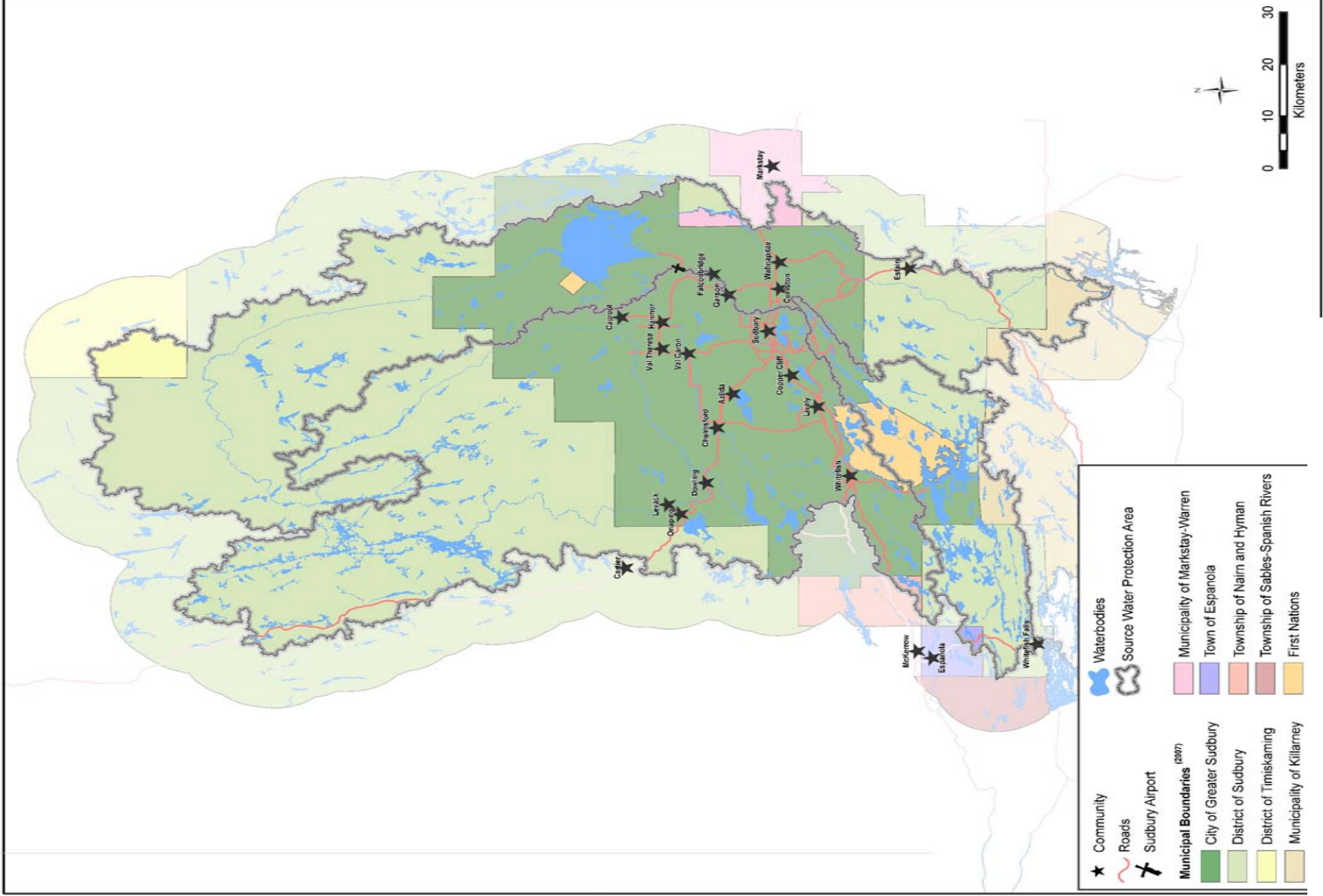
Activity	Date	Lead
Publish a notice in newspaper (Le Voyageur, Northern Life, Sudbury Star) for the public to view the draft proposed terms of reference on the Internet	May 22, 2008	Source Protection Committee
Provide a copy of the draft proposed terms of reference to the Chiefs of the Wahnapiatae and Whitefish Lake First Nations, whose reserves are located in the source protection area.		
Provide a copy of the draft proposed terms of reference to the clerks of the municipalities located in the source protection area.		
Post the draft proposed terms of reference on the Internet		
Requests for comments within 35 days of the notice of the draft proposed terms of reference being published in the newspaper	June 26, 2008	Source Protection Committee
Open House to learn about the <i>Clean Water Act</i> , meet the source protection committee and comment on terms of reference	June 12, 2008 June 17, 2008	Source Protection Committee
Provide any unresolved comments from municipalities and bands to the source protection authority	August 12, 2008	Source Protection Committee
Post proposed terms of reference on the Internet for 30 days	August 20, 2008	Source Protection Committee
Provide a copy of proposed terms of reference to the source protection authority		
Provide a copy of the proposed terms of reference to the Chiefs of bands whose reserves are located in the source protection area.		
Provide a copy of the proposed terms of reference to the clerks of municipalities located in the source protection area.		
Receive comments from the 30 day Internet posting from the public, municipalities, First Nations and others	September 19, 2008	Source Protection Authority
Give a copy of the comments above to the source protection committee.	October 14, 2008	Source Protection Authority
Due date for proposed terms of reference to be submitted to Ministry of the Environment	October 20, 2008	Source Protection Authority
Approval of Terms of Reference by the Ministry of the Environment	June 8, 2009	Ministry of the Environment

For more detailed information please refer to the attached appendix as produced by an electronic tool developed by the Ministry of the Environment (ToR Wizard) to develop a consistent template across the 19 different source protection areas and regions in the province.

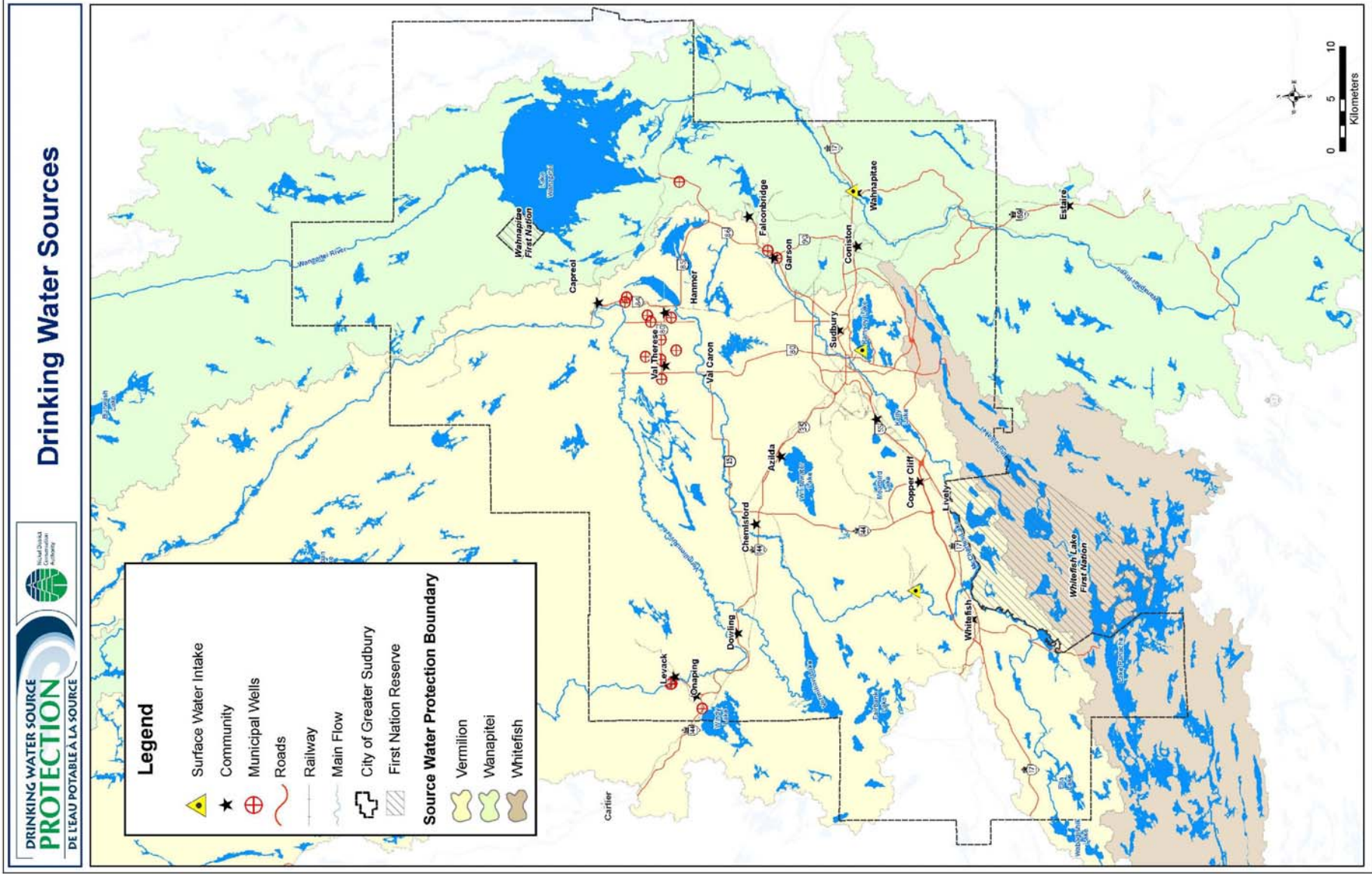
There will be additional public review opportunities for the assessment report and the source protection plan during the period from 2009 to 2012

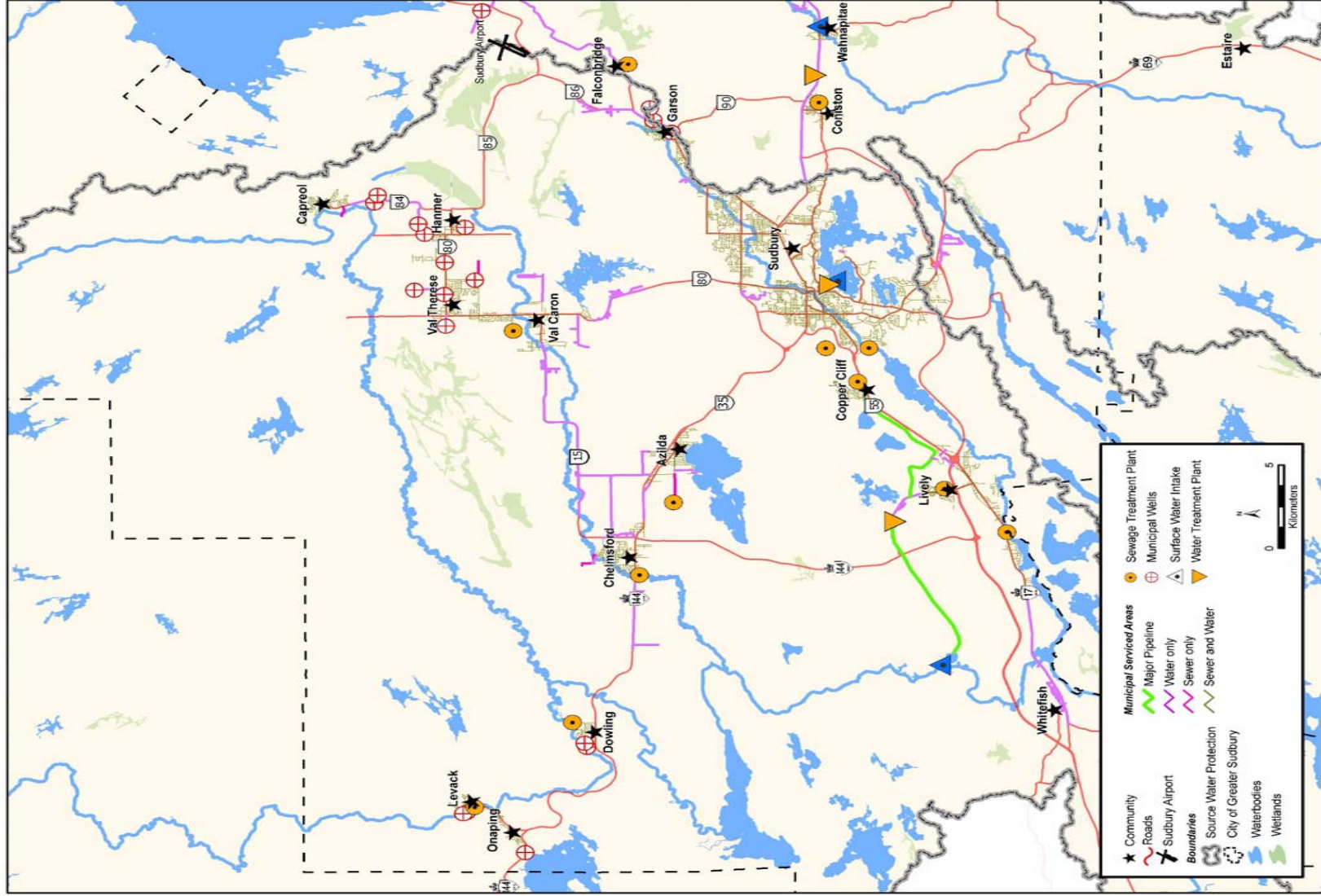
Appendix I

Maps



Map 1. Greater Sudbury Source Protection Area.





Map 3. Distribution of Drinking Water (wells, Ramsey Lake and rivers) and Wastewater in Greater Sudbury. Refer to Appendix I for an enlarged map.

Appendix II

Terms of Reference

Proposed Terms of Reference for the
Greater Sudbury Source Protection Area
Greater Sudbury Source Protection Committee
June 8, 2009

Mission

The mission of the Greater Sudbury Source Protection Committee is to ensure sustainable high quality drinking water sources for the City of Greater Sudbury to meet current and future needs

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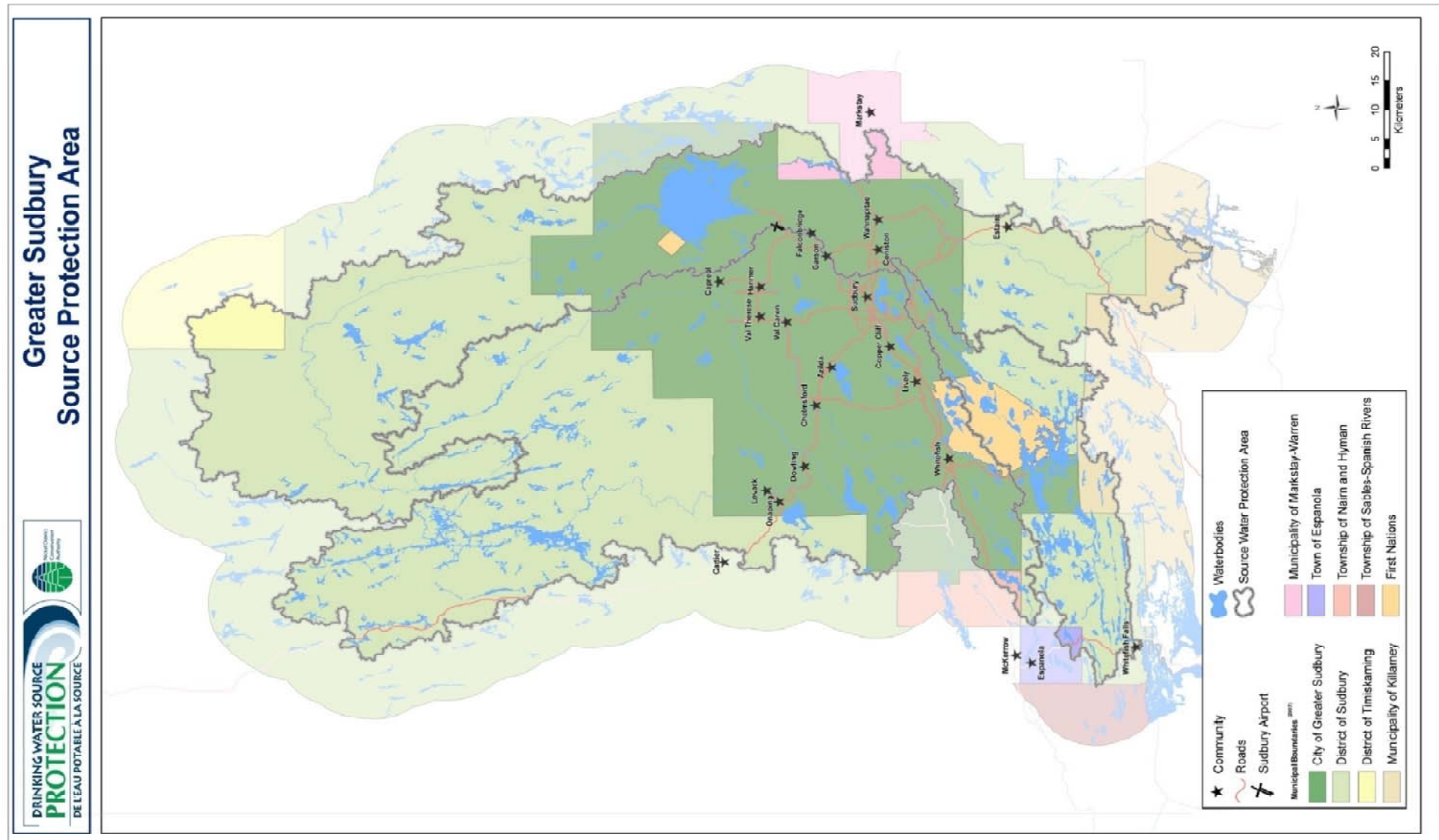
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Map of Source Protection Area



List of Municipalities Located in the Greater Sudbury Source Protection Area

Legal Name of Municipality
Greater Sudbury, City of
Espanola, Town of
Killarney, Municipality of
Markstay-Warren, Municipality of
Nairn, Township of Nairn and Hyman

List of Municipal Residential Drinking Water System(s)

Type of System (existing or planned)	Drinking Water System Number	Drinking Water System Name	Owner	Operating Authority	Type of Source Water (surface, ground, both)
Existing	210000737	Bleazard Valley	City of Greater Sudbury	City of Greater Sudbury	Groundwater
Existing	220003528	Capreol	City of Greater Sudbury	City of Greater Sudbury	Groundwater
Existing	210001665	Dowling	City of Greater Sudbury	City of Greater Sudbury	Groundwater
Existing	240000020/260006477	Falconbridge	Xstrata Nickel	Ontario Clean Water Agency	Groundwater
Existing	220003485	Garson	City of Greater Sudbury	City of Greater Sudbury	Groundwater
Existing	220003467/260006490	Levack	Vale Inco	Vale Inco	Groundwater
Existing	220003519/260006503	Onaping	Xstrata Nickel	Xstrata Nickel	Groundwater
Planned	N/A	Onaping, Wickwas well	City of Greater Sudbury	City of Greater Sudbury	Groundwater
Existing	220003537	Ramsey Lake	City of Greater Sudbury	City of Greater Sudbury	Surface Water
Existing	260006789/240000075	Vermilion River	Vale Inco	Vale Inco	Surface Water
Existing	210001111	Wanapitei River	City of Greater Sudbury	City of Greater Sudbury	Surface Water

Notes:

1. The Levack well system is scheduled to come off line November 30, 2009. Vale Inco notified the City of Greater Sudbury in November 2003 that it will not continue to supply drinking water to the community of Levack. Since then, the City of Greater Sudbury has been seeking an alternative water supply and in April 2008, the company, the city and the Ministry of the Environment agreed that Vale Inco will continue to supply drinking water to the community of Levack until November 30, 2009.
2. A third well, the Wickwas well, is being added to the Onaping system.
3. The City of Greater Sudbury is currently in the process of bringing three new wells on line. These will likely be incorporated into the Bleazard Valley water system. The New Valley wells are not currently included in the source protection planning process. The terms of reference will have to be amended in the future to include the new wells in source protection planning.
4. Lake Wanapitei was selected as the preferred alternative in a 1998 Class Environmental Assessment, and it was included in the City of Greater Sudbury 2006 Official Plan as a sensitive surface water feature together with Ramsey Lake, the Vermilion River and Wanapitei River, in Section 8.3 Drinking Water Resources. Including Lake Wanapitei in the assessment report will make it possible to also include it in the source protection plan, should this be the outcome of the City's water and wastewater master plan.

List of Drinking Water System(s) Included by Municipal Council Resolution (Not Municipal Residential Drinking Water Systems)

Note:

The Skead well supply is currently being operated by the City of Greater Sudbury. It was operated as a communal system prior to 2006. On June 6, 2006, a “Notice of Intention to Issue Order” was served to the City of Greater Sudbury requiring that the City assume responsibility of the Skead well supply. The Section 114 Order was issued during the spring/summer of 2008.

City Council expressed interest in including some of the many lakes in the Sudbury area in the source protection planning process at the March 26, 2008 Council meeting, when they were updated on the drinking water source protection program. This would affect both planned and existing lake clusters. At this time it is not known if any funding will be available for planning for these systems.

List of Drinking Water Systems Serving Reserve(s)

(Not Municipal Residential Drinking Water Systems)

Notes:

1. Both First Nations in the Greater Sudbury Source Protection Area are participating in the source protection program.
2. The Wahnapiatae First Nation has decided to do a pre-screening survey for their drinking water systems. The First Nation and the Ministry of Environment will use the results of the pre-screening survey to determine the appropriate extent of source protection work for the community. This pre-screening will be done with the understanding that this does not consist of consultation, with the exception of the Ministry of the Environment, and that source water protection will not affect treaty rights. A band council resolution has not been received requesting that the Minister recommend to the Lieutenant Governor in Council the making of a regulation that prescribes a drinking water system that serves or is planned to serve a reserve.
3. The Whitefish Lake First Nation is participating in this process with the understanding that it will not affect treaty rights.

The Work Plan to Complete the Assessment Report

By Source Protection Area	Task	Assigned Lead(s)	Estimated Completion Date	Estimated Cost
Greater Sudbury Source Protection Area	Coordinating and supporting projects for the assessment report	Greater Sudbury Source Protection Authority	2009-Dec-31	\$1,734,092
Greater Sudbury Source Protection Area	Undertaking communications initiatives for the assessment report	Greater Sudbury Source Protection Authority	2009-Dec-31	\$70,285
Greater Sudbury Source Protection Area	Information management for the assessment report preparation	Greater Sudbury Source Protection Authority	2009-Dec-31	\$443,666
Greater Sudbury Source Protection Area	Undertaking a watershed characterization	Greater Sudbury Source Protection Authority	2008-Apr-30	\$33,534
Greater Sudbury Source Protection Area	Conducting a conceptual water budget	Greater Sudbury Source Protection Authority	2006-Jun-30	\$99,052
Greater Sudbury Source Protection Area	Conducting a tier 1 water budget analysis and stress assessment	Greater Sudbury Source Protection Authority	2008-Feb-29	\$167,374
Greater Sudbury Source Protection Area	Conducting a tier 2 water budget analysis and stress assessment	Greater Sudbury Source Protection Authority	2009-Jun-01	\$197,147
Greater Sudbury Source Protection Area	Conducting a tier 3 water budget analysis and water quantity risk assessment	Greater Sudbury Source Protection Authority	2009-Sep-30	\$139,885
Greater Sudbury Source Protection Area	Delineating and applying vulnerability scores to highly vulnerable aquifers (HVs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$9,000
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in highly vulnerable aquifers (HVs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$9,000
Greater Sudbury	Assessing risks in highly vulnerable aquifers (HVs)	Greater Sudbury Source Protection	2009-Sep-01	\$7,000

Terms of Reference

Source Protection Area		Authority		
Greater Sudbury Source Protection Area	Applying vulnerability scores to significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$7,000
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$9,000
Greater Sudbury Source Protection Area	Assessing risk in significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$7,000
Greater Sudbury Source Protection Area	Delineating and applying vulnerability scores to wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$347,888
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$210,306
Greater Sudbury Source Protection Area	Assess risk in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2009-Sep-01	\$128,860
Greater Sudbury Source Protection Area	Consultation on the overall proposed assessment report	Greater Sudbury Source Protection Authority	2009-Dec-31	\$1,000
Greater Sudbury Source Protection Area	Other Assessment Report Preparation Task: Consideration of the potential importance of climate change on drinking water source protection	Greater Sudbury Source Protection Authority	2009-Dec-31	\$1,000
Greater Sudbury Source Protection Area	Other Assessment Report Preparation Task: Provision for unanticipated tasks	Greater Sudbury Source Protection Authority	2009-Dec-31	\$1,000

Note: The source protection committee is concerned that the estimate for some line items, such as “Assessing Risks in Highly Vulnerable Aquifers” is very low. The committee must qualify the budget estimate given the unknowns associated with work required for the assessment report and the source protection plan.

The Work Plan to Complete the Source Protection Plan

By Source Protection Area	Task	Assigned Lead(s)	Estimated Completion Date	Estimated Cost
Greater Sudbury Source Protection Area	Coordinating and supporting projects for the source protection plan (SPP)	Greater Sudbury Source Protection Authority	2012-Aug-20	\$1,735,675
Greater Sudbury Source Protection Area	Undertaking communications initiatives for the source protection plan	Greater Sudbury Source Protection Authority	2012-Aug-20	\$74,533
Greater Sudbury Source Protection Area	Information management for source protection plan preparation	Greater Sudbury Source Protection Authority	2012-Aug-20	\$69,626
Greater Sudbury Source Protection Area	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Greater Sudbury Source Protection Committee	2012-Aug-20	\$168,750
Greater Sudbury Source Protection Area	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Greater Sudbury Source Protection Committee	2012-Aug-20	\$168,750
Greater Sudbury Source Protection Area	Establishing timelines for policy implementation	Greater Sudbury Source Protection Authority	2012-Aug-20	\$24,000
Greater Sudbury Source Protection Area	Consultation on the overall proposed source protection plan	Greater Sudbury Source Protection Committee	2012-Aug-20	\$15,000
Greater Sudbury Source Protection Area	Other Source Protection Plan Preparation Task: Extra source protection committee (SPC) meetings for policy development	Greater Sudbury Source Protection Authority	2012-Aug-20	\$243,294

Note: The source protection committee is concerned that the estimate for some line items, such as “Assessing Risks in Highly Vulnerable Aquifers” is very low. The committee must qualify the budget estimate given the unknowns associated with work required for the assessment report and the source protection plan.

The Date the Source Protection Plan is to be Submitted to the Minister for Approval by the Greater Sudbury Source Protection Authority:

2012-Aug-20

Detailed Information

Detailed Information on Municipal Residential Drinking Water System(s)

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	210000737	Blezard Valley	City of Greater Sudbury	City of Greater Sudbury	Groundwater	9
Number of Surface Water Intakes	Comments					
0	The Valley East system is the largest groundwater based system in the City, and provides potable water to the communities of Hanmer, Val Therèse, Val Caron, McCrea Heights, Blezard Valley, Azilda and Chelmsford (approximately 31,600 residents). The raw water is obtained from nine wells distributed from Hanmer to Val Therèse, which are identified as Well A (Deschene), Well B (Kenneth), Well C (Philippe), Well D (Frost), Well E (Notre Dame), Well F (Linden), Well G (Pharand), Well H (Michelle), and Well I. The well locations follow the major road corridors, and are constructed in unconfined sand and gravel deposits. The system is maintained by the City of Greater Sudbury.					

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	210001665	Dowling	City of Greater Sudbury	City of Greater Sudbury	Groundwater	2
Number of Surface Water Intakes	Comments					
0	The Dowling system provides potable water to the community of Dowling (approximately 1,850 residents). The raw water is obtained from two wells, Lionel and Riverside, which are located immediately adjacent to the Onaping River in the western edge of the community of Dowling, in an unconfined sand and gravel outwash deposit. The system is maintained by the City of Greater Sudbury.					

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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	220003467/260006490	Levack	Vale Inco	Vale Inco	Groundwater	3
Number of Surface Water Intakes	Comments					
0	<p>Water system number: 220003467 (well supply) and 260006490 (distribution system). The Levack system provides potable water to the community of Levack (approximately 1,350 residents). The raw water is obtained from three wells, Inco Well 1, Inco Well 2 and Inco Well 3, which are located immediately adjacent to the Onaping River at the western edge of the community. The wells are located in an unconfined sand and gravel outwash deposit, and are augmented by an induced infiltration system drawing water from the Onaping River. These are GUDI wells - groundwater under the direct influence of surface water. This well system is owned by Vale Inco (formerly Inco Limited), who sell a portion of the supply to the City for distribution to the community.</p> <p>This well system is scheduled to come off line November 30, 2009. Vale Inco notified the City of Greater Sudbury in November 2003 that it will not continue to supply drinking water to the community of Levack. Since then, the City of Greater Sudbury has been seeking an alternative water supply and in April 2008, the company, the city and the Ministry of the Environment agreed that Vale Inco will continue to supply drinking water to the community of Levack until November 30, 2009.</p>					

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	220003485	Garson	City of Greater Sudbury	City of Greater Sudbury	Groundwater	3
Number of Surface Water Intakes	Comments					
0	<p>The Garson system provides potable water to the community of Garson (approximately 4,890 residents). The raw water is obtained from three wells, Orell 1, Orell 3 and Inco Well #1, all of which are located adjacent to the Falconbridge Road corridor in the community of Garson, in an unconfined sand and gravel esker deposit. All three wells are owned and operated by the City of Greater Sudbury.</p>					

Terms of Reference

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	220003519/260006503	Onaping	Xstrata Nickel	Xstrata Nickel	Groundwater	2
Number of Surface Water Intakes	Comments					
0	Water system number: 220003519 (well supply) and 260006503 (distribution system). The Onaping system provides potable water to the community of Onaping (approximately 800 residents). The raw water is obtained from two wells, Hardy Well 3 and Hardy Well 4, which are located near Windy Lake, in an unconfined sand and gravel outwash deposit. Although these wells are very close to Windy Lake, it was determined that they are not under the direct influence of the lake (i.e., not GUDI). The system is maintained by Xstrata Nickel (formerly Falconbridge Limited), with the City purchasing the water and distributing it to the residents of Onaping.					

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	220003528	Capreol	City of Greater Sudbury	City of Greater Sudbury	Groundwater	2
Number of Surface Water Intakes	Comments					
0	The Capreol system provides potable water to the community of Capreol (approximately 3,400 residents). The raw water is obtained from two wells, Well J and Well M, which are located immediately adjacent to Greens Lake (on the Vermilion River system) south of the Capreol community, in an unconfined sand and gravel outwash deposit. These are GUDI wells - groundwater under the direct influence of the adjacent surface water. The system is maintained by the City of Greater Sudbury.					

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	240000020/260006477	Falconbridge	Xstrata Nickel	Ontario Clean Water Agency	Groundwater	3
Number of Surface Water Intakes	Comments					
0	Water system number: 240000020 (well supply) and 260006477 (distribution system). The Falconbridge system provides potable water to the community of Falconbridge (approximately 750 residents), the Falconbridge Smelter Site and the Nickel Rim South Mine. The raw water is obtained from wells # 5,6 and 7, which is located approximately 1 km north of the Sudbury Airport in an extensive unconfined sand and gravel esker deposit. The system is maintained by Xstrata Nickel (formerly Falconbridge Limited), with the City purchasing the water and distributing it to the residents of Falconbridge.					

Terms of Reference

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
Planned	N/A	Onaping system; Wickwas well	City of Greater Sudbury	City of Greater Sudbury	Groundwater	1
Number of Surface Water Intakes	Comments					
0	A third well, the Wickwas well, is being added to the Onaping system. This well will provide potable water to the communities of Levack and Onaping, as well as for Xtrata Nickel operations.					

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	260006789/240000075	Vermilion River	Vale Inco	Vale Inco	Surface Water	0
Number of Surface Water Intakes	Comments					
1	Water system number: 260006789 (Distribution System) and 2400000075 (Water Treatment Plant). The Vermilion Distribution System provides potable water to several communities located west of the urban centre of Sudbury, including Lively, Naughton, Whitefish and Copper Cliff (a total population of approximately 13,000). The water is pumped from the Vermilion River, near Cascades Falls, in Graham Township. The water is treated at the Inco Vermilion Water Treatment Plant. The plant is operated by Vale Inco Limited, and potable water for the above noted communities is sold to the City. The City in turn operates the distribution system.					

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	210001111	Wanapitei River	City of Greater Sudbury	City of Greater Sudbury	Surface Water	0
Number of Surface Water Intakes	Comments					
1	The Wanapitei Water Treatment Plant, together with the David Street Facility on Ramsey Lake, services the urban areas of Sudbury, as well as the communities of Markstay, Coniston and parts of Garson (a total population of approximately 90,000). The raw water is pumped from the Wanapitei River via the Wanapitei Intake, which is situated north of Highway 17 in the community of Wahnapiatae, on the banks of the river.					

Terms of Reference

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	220003537	Ramsey Lake	City of Greater Sudbury	City of Greater Sudbury	Surface Water	0
Number of Surface Water Intakes	Comments					
1	The David Street Facility on Ramsey Lake, together with the Wanapitei Water Treatment Plant, services the urban areas of Sudbury, as well as the communities of Markstay, Coniston and parts of Garson (a total population of approximately 90,000)					

Note:

The City of Greater Sudbury is currently in the process of bringing three new wells on line. These will likely be incorporated into the Blezard Valley water system. New Valley wells are not currently included in the source protection planning process. The terms of reference will have to be amended in the future to include the new wells in source protection planning.

Lake Wanapitei was selected as the preferred alternative in a 1998 Class Environmental Assessment, and it was included in the City of Greater Sudbury 2006 Official Plan as a sensitive surface water feature together with Ramsey Lake, the Vermilion River and Wanapitei River, in Section 8.3 Drinking Water Resources. Including Lake Wanapitei in the assessment report will make it possible to also include it in the source protection plan, should this be the outcome of the City's water and wastewater master plan.

Detailed Information on Drinking Water System(s) Included by Municipal Council Resolution (Not Municipal Residential Drinking Water Systems)

Note:

The Skead well supply is currently being operated by the City of Greater Sudbury. It was operated as a communal system prior to 2006. On June 6, 2006, a “Notice of Intention to Issue Order” was served to the City of Greater Sudbury requiring that the City assume responsibility of the Skead well supply. The Section 114 Order was issued during the spring/summer of 2008.

City Council expressed interest in including some of the many lakes in the Sudbury area in the source protection planning process at the March 26, 2008 Council meeting, when they were updated on the drinking water source protection program. This would affect both planned and existing lake clusters. At this time it is not known if any funding will be available for planning for these systems.

Detailed Information on Drinking Water Systems Serving Reserve(s) (Not Municipal Residential Drinking Water Systems)

Note:

The Wahnapiatae First Nation has decided to do a pre-screening survey for their drinking water systems. The First Nation and the Ministry of Environment will use the results of the pre-screening survey to determine the appropriate extent of source protection work for the community. This pre-screening will be done with the understanding that this does not consist of consultation, with the exception of the Ministry of the Environment, and that source water protection will not affect treaty rights. A band council resolution has not been received requesting that the Minister recommend to the Lieutenant Governor in Council the making of a regulation that prescribes a drinking water system that serves or is planned to serve a reserve.

Detailed Work Plan to Complete the Assessment Report

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Coordinating and supporting projects for the assessment report	Greater Sudbury Source Protection Authority	2005-Jan-01	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$1,734,092

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Undertaking communications initiatives for the assessment report	Greater Sudbury Source Protection Authority	2005-Jan-01	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$70,285

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Information management for the assessment report preparation	Greater Sudbury Source Protection Authority	2005-Jan-01	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$443,666

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Undertaking a watershed characterization	Greater Sudbury Source Protection Authority	2005-Apr-01	2008-Apr-30
Comments		Defined Geographic Area		Estimated Cost
				\$33,534

Terms of Reference

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Conducting a conceptual water budget	Greater Sudbury Source Protection Authority	2005-Oct-01	2006-Jun-30
Comments		Defined Geographic Area		Estimated Cost
				\$99,052

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Conducting a tier 1 water budget analysis and stress assessment	Greater Sudbury Source Protection Authority	2006-Aug-01	2008-Feb-29
Comments		Defined Geographic Area		Estimated Cost
				\$167,374

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Conducting a tier 2 water budget analysis and stress assessment	Greater Sudbury Source Protection Authority	2008-Mar-01	2009-Jun-01
Comments		Defined Geographic Area		Estimated Cost
				\$197,147

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Conducting a tier 3 water budget analysis and water quantity risk assessment	Greater Sudbury Source Protection Authority	2009-Jan-01	2009-Sep-30
Comments		Defined Geographic Area		Estimated Cost
				\$139,885

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Delineating and applying vulnerability scores to highly vulnerable aquifers (HVA's)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$9,000

Terms of Reference

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in highly vulnerable aquifers (HVA's)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$9,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Assessing risks in highly vulnerable aquifers (HVA's)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$7,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Applying vulnerability scores to significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$7,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$9,000

Terms of Reference

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Assessing risk in significant groundwater recharge areas (SGRAs)	Greater Sudbury Source Protection Authority	2008-Sep-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$7,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Delineating and applying vulnerability scores to wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2006-Mar-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$347,888

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Identifying issues, inventorying threats and assessing hazards in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2007-Mar-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$210,306

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Assess risk in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Greater Sudbury Source Protection Authority	2007-Mar-01	2009-Sep-01
Comments		Defined Geographic Area		Estimated Cost
				\$128,860

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Consultation on the overall proposed assessment report	Greater Sudbury Source Protection Authority	2008-Jun-01	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$1,000

Terms of Reference

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Other Assessment Report Preparation Task: Consideration of the potential importance of climate change on drinking water source protection	Greater Sudbury Source Protection Authority	2008-Apr-01	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$1,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Other Assessment Report Preparation Task: Provision for unanticipated tasks	Greater Sudbury Source Protection Authority	2008-Jul-02	2009-Dec-31
Comments		Defined Geographic Area		Estimated Cost
				\$1,000

Note:

The Wahnapiatae First Nation has decided to do a pre-screening survey for their drinking water systems. The First Nation and the Ministry of Environment will use the results of the pre-screening survey to determine the appropriate extent of source protection work for the community. This pre-screening will be done with the understanding that this does not consist of consultation, with the exception of the Ministry of the Environment, and that source water protection will not affect treaty rights. A band council resolution has not been received requesting that the Minister recommend to the Lieutenant Governor in Council the making of a regulation that prescribes a drinking water system that serves or is planned to serve a reserve.

Detailed Work Plan to Complete the Source Protection Plan

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Coordinating and supporting projects for the source protection plan (SPP)	Greater Sudbury Source Protection Authority	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$1,735,675

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Undertaking communications initiatives for the source protection plan	Greater Sudbury Source Protection Authority	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$74,533

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Information management for source protection plan preparation	Greater Sudbury Source Protection Authority	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$69,626

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	Greater Sudbury Source Protection Committee	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$168,750

Terms of Reference

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	Greater Sudbury Source Protection Committee	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$168,750

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Establishing timelines for policy implementation	Greater Sudbury Source Protection Authority	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$24,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Consultation on the overall proposed source protection plan	Greater Sudbury Source Protection Committee	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$15,000

By Source Protection Area	Task	Assigned Lead(s)	Estimated Start Date	Estimated Completion Date
Greater Sudbury Source Protection Area	Other Source Protection Plan Preparation Task: Extra source protection committee (SPC) meetings for policy development	Greater Sudbury Source Protection Authority	2010-Jan-01	2012-Aug-20
Comments		Defined Geographic Area		Estimated Cost
				\$243,294

Summary of Financial Statistics

	Tasks Done by Source Protection Area or Drinking Water System	Estimated Costs for Tasks Under the Assessment Report	Estimated Costs for Tasks Under the Source Protection Plan	Subtotal
	Greater Sudbury Source Protection Area	\$3,623,089	\$2,499,628	\$6,122,717
Total Estimated Costs		\$3,623,089	\$2,499,628	\$6,122,717

Note: The source protection committee is concerned that the estimate for some line items, such as “Assessing Risks in Highly Vulnerable Aquifers” is very low. The committee must qualify the budget estimate given the unknowns associated with work required for the assessment report and the source protection plan.

Estimated Costs for Tasks by Fiscal Year

Fiscal Year defined as April 1 to March 31

Terms of Reference

Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
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Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
Greater Sudbury Source Protection Area										
	Coordinating and supporting projects for the assessment report	\$0	\$273,471	\$283,292	\$343,855	\$470,225	\$363,249	\$0	\$0	\$0
	Undertaking communications initiatives for the assessment report	\$0	\$2,694	\$9,297	\$11,544	\$28,000	\$18,750	\$0	\$0	\$0
	Information management for the assessment report preparation	\$0	\$110,009	\$134,459	\$172,197	\$12,000	\$15,000	\$0	\$0	\$0
	Undertaking a watershed characterization	\$0	\$1,094	\$22,432	\$8	\$10,000	\$0	\$0	\$0	\$0
	Conducting a conceptual water budget	\$0	\$48,410	\$50,642	\$0	\$0	\$0	\$0	\$0	\$0
	Conducting a tier 1 water budget analysis and stress assessment	\$0	\$0	\$89,487	\$77,887	\$0	\$0	\$0	\$0	\$0
	Conducting a tier 2 water budget analysis and stress assessment	\$0	\$0	\$0	\$10,633	\$186,514	\$0	\$0	\$0	\$0
	Conducting a tier 3 water budget analysis and water	\$0	\$0	\$0	\$0	\$0	\$139,885	\$0	\$0	\$0

Terms of Reference

Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
	quantity risk assessment									
	Delineating and applying vulnerability scores to highly vulnerable aquifers (HVAs)	\$0	\$0	\$0	\$0	\$4,000	\$5,000	\$0	\$0	\$0
	Identifying issues, inventorying threats and assessing hazards in highly vulnerable aquifers (HVAs)	\$0	\$0	\$0	\$0	\$4,000	\$5,000	\$0	\$0	\$0
	Assessing risks in highly vulnerable aquifers (HVAs)	\$0	\$0	\$0	\$0	\$3,000	\$4,000	\$0	\$0	\$0
	Applying vulnerability scores to significant groundwater recharge areas (SGRAs)	\$0	\$0	\$0	\$0	\$2,000	\$5,000	\$0	\$0	\$0
	Identifying issues, inventorying threats and assessing hazards in significant groundwater recharge areas (SGRAs)	\$0	\$0	\$0	\$0	\$4,000	\$5,000	\$0	\$0	\$0
	Assessing risk in significant groundwater recharge areas (SGRAs)	\$0	\$0	\$0	\$0	\$3,000	\$4,000	\$0	\$0	\$0
	Delineating and applying vulnerability scores to wellhead protection areas (WHPAs) or intake protection zones (IPZs)	\$0	\$175,000	\$36,450	\$48,938	\$50,000	\$37,500	\$0	\$0	\$0
	Identifying issues, inventorying threats and assessing hazards in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	\$0	\$0	\$61,400	\$61,406	\$50,000	\$37,500	\$0	\$0	\$0
	Assess risk in wellhead	\$0	\$0	\$27,680	\$27,680	\$36,000	\$37,500	\$0	\$0	\$0

Terms of Reference

Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
	protection areas (WHPAs) or intake protection zones (IPZs)									
	Consultation on the overall proposed assessment report	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0
	Other Assessment Report Preparation Task: Consideration of the potential importance of climate change on drinking water source protection	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0
	Other Assessment Report Preparation Task: Provision for unanticipated tasks	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0	\$0
	Coordinating and supporting projects for the source protection plan (SPP)	\$0	\$0	\$0	\$0	\$0	\$125,718	\$520,870	\$536,496	\$552,591
	Undertaking communications initiatives for the source protection plan	\$0	\$0	\$0	\$0	\$0	\$6,250	\$26,250	\$27,563	\$14,470
	Information management for source protection plan preparation	\$0	\$0	\$0	\$0	\$0	\$15,000	\$21,000	\$22,050	\$11,576
	Policy development to address drinking water threats (where required and/or permissible in Act/Regs)	\$0	\$0	\$0	\$0	\$0	\$18,750	\$75,000	\$75,000	\$0
	Policy development for monitoring (where required, advisable and/or permissible in Act & Regs)	\$0	\$0	\$0	\$0	\$0	\$18,750	\$75,000	\$75,000	\$0
	Establishing timelines for	\$0	\$0	\$0	\$0	\$0	\$6,000	\$6,000	\$6,000	\$6,000

Terms of Reference

Drinking Water System Category / Source Protection Area	Tasks	Fiscal Year 04/05	Fiscal Year 05/06	Fiscal Year 06/07	Fiscal Year 07/08	Fiscal Year 08/09	Fiscal Year 09/10	Fiscal Year 10/11	Fiscal Year 11/12	Fiscal Year 12/13
	policy implementation									
	Consultation on the overall proposed source protection plan	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000	\$5,000	\$5,000
	Other Source Protection Plan Preparation Task: Extra source protection committee (SPC) meetings for policy development	\$0	\$0	\$0	\$0	\$0	\$0	\$77,175	\$81,034	\$85,085
Fiscal Year Total		\$0	\$610,677	\$715,140	\$754,149	\$862,739	\$870,852	\$806,295	\$828,142	\$674,723

Note: The source protection committee is concerned that the estimate for some line items, such as “Assessing Risks in Highly Vulnerable Aquifers” is very low. The committee must qualify the budget estimate given the unknowns associated with work required for the assessment report and the source protection plan.

Process Checklist

Regulatory Process	Completion Date	Done By
Give a copy of the comments on proposed terms of reference to the source protection committee.	2008-Oct-14	SPAuthority
Make the draft proposed terms of reference available at other locations.	2008-May-22	SPCommittee
Make the proposed terms of reference available at other locations.	2008-Aug-22	SPCommittee
Municipal council resolutions have been passed agreeing upon work.	Not Applicable	SPCommittee
Notice for consultation on draft proposed ToR includes information on public meeting scheduled at least 21 days after newspaper notice is published.	2008-Jun-12	SPCommittee
Notify band Chiefs on the commencement of the terms of reference.	2008-Mar-07	SPCommittee
Notify municipal clerks on the commencement of the terms of reference.	2008-Mar-06	SPCommittee
Post proposed terms of reference on the Internet for 30 days.	2008-Aug-20	SPCommittee
Post draft proposed terms of reference on Internet.	2008-May-22	SPCommittee
Provide a copy of draft to the chiefs of bands whose reserves are located in the source protection area.	2008-Jun-19	SPCommittee
Provide a copy of draft proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Jun-19	SPCommittee
Provide a copy of proposed terms of reference to the source protection authority.	2008-Aug-13	SPCommittee
Provide a copy of proposed terms of reference to the chiefs of bands whose reserves are located in the source protection area.	2008-Aug-18	SPCommittee
Provide a copy of proposed terms of reference to the clerks of municipalities located in the source protection area.	2008-Aug-13	SPCommittee
Provide copy of draft proposed terms of reference to chairs of source protection committees who have been listed in table that describes matters that affect other source protection areas.	Not Applicable	SPCommittee
Provide any unresolved comments from municipalities and bands to the Minister as part of the approval package for the proposed terms of reference.	Not Applicable	SPAuthority
Provide any unresolved comments from municipalities and bands to the source protection authority on the draft proposed terms of reference.	Not Applicable	SPCommittee
Publish newspaper notice to publicly view draft proposed terms of reference on Internet and at other locations (as determined by the source protection committee).	2008-May-22	SPCommittee
Receive comments from the 30 day Internet posting from the public, municipalities, bands, and other stakeholders.	2008-Sep-19	SPAuthority
Notice for consultation on draft proposed terms of reference includes requests for comments submitted within 35 days of notice published in the newspaper.	2008-May-22	SPCommittee
Give copy of draft proposed terms of reference to groups created pursuant to Great Lakes Water Quality	Not Applicable	SPCommittee

Agreement & involved in developing/implementing remedial action plans (RAPs) & Lakewide management plans (LaMPs).		
Make provisions to consider Great Lakes Agreements.	Not Applicable	SPCommittee

Appendix: Full Task Descriptions

Subject Area	Task Name	Full Task Description
Assessment Report Preparation	Coordinating and supporting projects for the assessment report	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.
Assessment Report Preparation	Undertaking communications initiatives for the assessment report	Local area engagement, outreach and creation of communications products that support the assessment report process.
Assessment Report Preparation	Information management for the assessment report preparation	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.
Assessment Report Preparation	Undertaking a 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.
Assessment Report Preparation	Conducting a 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.
Assessment Report Preparation	Conducting a 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.
Assessment Report Preparation	Conducting a 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.
Assessment Report Preparation	Conducting a 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.
Assessment Report Preparation	Delineating and applying vulnerability scores to highly	Delineating the location and extent of highly vulnerable aquifers in the source protection area and applying vulnerability scores. An uncertainty analysis may be included in this task. Details on how to complete this task

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	vulnerable aquifers (HVAs)	will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in highly vulnerable aquifers (HVAs)	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the highly vulnerable aquifers. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assessing risks in highly vulnerable aquifers (HVAs)	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in highly vulnerable aquifers. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Applying vulnerability scores to significant groundwater recharge areas (SGRAs)	Applying vulnerability scores to significant groundwater recharge areas in the source protection area (delineated in the water budget process). Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in significant groundwater recharge areas (SGRAs)	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in the significant groundwater recharge areas. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assessing risk in significant groundwater recharge areas (SGRAs)	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in significant groundwater recharge areas. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Delineating and applying vulnerability scores to wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Delineating the location and extent of the vulnerable area around a drinking water system (wellhead protection areas for drinking water systems using groundwater or intake protection zones for drinking water systems withdrawing from surface water) in the source protection area and applying a vulnerability score. Uncertainty analysis and peer review may be required. In addition, consultation with property owners/residents/stakeholders affected by the delineation and scoring for these two 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.
Assessment Report Preparation	Identifying issues, inventorying threats and assessing hazards in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Listing and describing drinking water quality issues, inventorying threats and assessing hazards (including uncertainty analysis) in wellhead protection areas and/or intake protection zones. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Assessment Report Preparation	Assess risk in wellhead protection areas (WHPAs) or intake protection zones (IPZs)	Identifying any significant, moderate, low, and negligible drinking water threats, undertaking an issues evaluation, and analysing uncertainty in wellhead protection areas or intake protection zones. 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

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		guidance when they are developed.
Assessment Report Preparation	Consultation on the overall proposed assessment report	Meeting the legislative and regulatory requirements on the consultation and submission process of the proposed assessment report. Details on how to complete this task will be available in the Assessment Report regulation, Director's rules, and guidance when they are developed.
Source Protection Plan Preparation	Coordinating and supporting projects for the source protection plan (SPP)	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.
Source Protection Plan Preparation	Undertaking communications initiatives for the source protection plan	Local area engagement, outreach and creation of communications products that support the source protection plan process.
Source Protection Plan Preparation	Information management for source protection plan preparation	Conducting overall data management, data sharing agreements, standards, mapping, software and maintenance.
Source Protection Plan Preparation	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.
Source Protection Plan Preparation	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.
Source Protection Plan Preparation	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.
Source Protection Plan Preparation	Establishing timelines for policy implementation	Establishing timelines for policy implementation after all policies for the source protection plan (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.
Source Protection Plan Preparation	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.