

Lake Erie Region Source Protection Committee
Agenda

Thursday, June 20, 2019

1:00 pm

Auditorium

Grand River Conservation Authority
400 Clyde Road, Box 729
Cambridge, ON N1R 5W6

Pages

1. Call to Order
2. Roll Call and Certification of Quorum – 17 Members Constitute a Quorum (2/3 of Members plus Chair)
3. Chair's Remarks
4. Review of Agenda
5. Declarations of Pecuniary Interest
6. Minutes of the Previous Meeting
7. Hearing of Delegations
8. Presentations
9. Correspondence
 - a. RE: Source Water Protection Committee Meeting and the Jet Fuel Spill into Mill Creek 1
Correspondence from Martin Keller, Source Protection Program Manager, Lake Erie Source Protection Region to Laura Murr
10. Reports
 - a. SPC-19-06-01 Source Protection Program Update 5

b.	SPC-19-06-02 S.34 Draft Updated Long Point Region Assessment Report and Source Protection Plan: Otterville (Oxford County)	13
c.	SPC-19-06-03 Centre Wellington Tier 3 Water Quantity Risk Assessment: Draft Results	15
d.	SPC-19-06-04 County of Brant Draft Water Quantity Policy Approaches	19
e.	SPC-19-06-05 Wellington County Draft Water Quality Policy Approaches	23

11. Business Arising from Previous Meetings

- a. Lake Erie Region Source Protection Committee request under Technical Rule 119, from February 3, 2011, Re: rehabilitation activities at an aggregate operation within a vulnerable area of a municipal drinking water system that allows ponding of water.

12. Other Business

- a. Question and Answer Period

13. Closed Meeting

14. Next SPC Meeting

October 3, 2019 at 1:00pm, Grand River Conservation Authority, 400 Clyde Road, Cambridge, ON

15. Adjourn

From: [Martin Keller](#)
To: [Laura murr](#)
Cc: [Ilona Feldmann](#); [Joe Farwell](#)
Subject: RE: Re source water protection committee meeting and the Jet Fuel Spill into Mill Creek
Date: June 12, 2019 9:21:28 AM
Attachments: [image001.png](#)

Good morning Laura,

Thank you again for your email of February 6, 2019. I am writing in follow up to my reply on February 7, 2019, in which I indicated your email would be tabled as correspondence at the February 7, 2019 Lake Erie Source Protection Committee meeting. A printed copy of your correspondence was provided to the Committee.

At the meeting, it was determined that staff would bring a report to the Committee, once more information about the spill was known, as noted in the [February 7, 2019 meeting minutes](#). This email response, along with our previous correspondence is being including in the agenda of the June 20, 2019 Lake Erie Source Protection Committee meeting.

Currently in Ontario, multiple agencies, including the municipalities, the Ministry of the Environment, Conservation and Parks (MECP), and source protection authorities work together to ensure the safety of municipal drinking water.

Under the Clean Water Act, the Source Protection Committee's role is to develop source protection plans, specifically policies, to protect the sources of municipal drinking water, which include both groundwater and surface water sources. The Grand River Source Protection Plan includes policies to ensure municipal emergency response plans are updated with mapping of vulnerable areas around municipal wells and intakes.

Under the Safe Drinking Water Act, the role of municipalities (as the owners of drinking water systems) is the collection, treatment and distribution of safe drinking water. If you have further questions about the impacts of the jet fuel spill on municipal drinking water, please contact the Region of Waterloo.

In your email, you also cited the June 1996 Mill Creek Subwatershed Plan and a recommendation to develop an emergency response plan for Mill Creek. Emergency response planning is a municipal responsibility. You may wish to contact the Township of Puslinch regarding any emergency response plan that may have been developed as a result of that recommendation.

In the case of the jet fuel spill that occurred on January 13, 2019, the lead agency is the Ministry of the Environment, Conservation and Parks (MECP), under the Environmental Protection Act. The MECP is responsible for oversight of the clean-up, assessment, sampling and monitoring in the event of a spill. If you have any further questions relating to the spill, please contact the MECP Guelph District Office directly at 1-800-265-8658.

Regards,

Martin Keller, M.Sc.

Source Protection Program Manager | Grand River Conservation Authority
400 Clyde Road | PO Box 729 | Cambridge, Ontario N1R 5W6 | Phone: (519) 620-7595 | Fax: (519) 621-4945 |
www.sourcewater.ca



-----Original Message-----

From: Martin Keller

Sent: February 7, 2019 10:06 AM

To: Laura murr ([REDACTED]) <[REDACTED]>

Cc: Ilona Feldmann <ifeldmann@grandriver.ca>; Joe Farwell <[REDACTED]>

Subject: RE: Re source water protection committee meeting and the Jet Fuel Spill into Mill Creek

Hi Laura,

Thank you for your message. We will table it as correspondence at this afternoon's committee meeting, and can bring back a report addressing your concerns at a later committee meeting.

Regards,

Martin Keller, M.Sc.

Source Protection Program Manager | Grand River Conservation Authority

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621-4945 | www.sourcewater.ca

-----Original Message-----

From: Laura [mailto:[REDACTED]]

Sent: Wednesday, February 06, 2019 4:10 PM

To: Ilona Feldmann

Cc: Joe Farwell

Subject: Re source water protection committee meeting and the Jet Fuel Spill into Mill Creek

Good afternoon

I reviewed your agenda and did not see any mention of the January 2019 jet fuel spill into the Mill Creek and potential impacts to groundwater, wells and the Mill Creek and Grand River.

It is my understanding from reviewing the June 1996 Mill Creek Subwatershed Plan prepared for the GRCA pg 7-27 Section 7.2.1.5 Hanlon Expressway/Highway 401 interchange Under "Emergency Response Plan" that the County of Wellington/Township of Puslinch/ GRCA should develop an emergency response plan for potential transportation related accidents, particularly in the Hanlon Expressway/Highway 401 area, which threaten the McCrimmon/Mill Creek systems such a Plan should set forth a clear containment and remediation protocol. " Given current knowledge of the impact of hydrocarbon migration into groundwater was such a contingency plan ever developed? It is my understanding that no booms were placed in the Mill creek until over 24 hours after the spill. This did not seem like a timely intervention to protect the creek and groundwater.

It is my understanding that spill containment is still ongoing 3 weeks post spill and that there is still jet fuel in sections of the creek especially the section of the Mill Creek on a section of the Mill Creek from the 401 to side road 20 that runs through the University of Guelph Aggregate Pit of Guelph.

This is below the water table operation with a? A water taking license. Isn't the pit directly adjacent to the impacted sections of the creek? Is there any cleanup being conducted in this section of the creek?

What is the role of the Committee with regards to spills that threaten groundwater, wells and streams?

Please advise. Thank you for your time

Sincerely Laura Murr

Sent from my iPad

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. SPC-19-06-01

DATE: June 20, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **Source Protection Program Update**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-06-01 – Source Protection Program Update – for information.

REPORT:

2019/2020 Financial Update

On May 1, 2019, Lake Erie Region staff received a draft of the Grand River Conservation Authority's 2019/20 Drinking Water Source Protection Program transfer payment agreement for our review and input. Revisions were sent back to the Ministry of the Environment, Conservation and Parks (MECP) on May 2, 2019. At this time, staff are waiting to receive the final agreement for signature.

Model Management Study Update

MECP has deferred a decision to support projects for Tier 3 model management in the Lake Erie Region and no funding is included in the draft 2019/20 grant funding agreement with the province. GRCA, together with the Region of Waterloo and the City of Guelph, are continuing their discussions and work to develop a model management governance framework. Work at each of the organizations to transfer models and model data from consultants to internal IT frameworks and to make foundational data layers (e.g., geological layers) from the Tier 3 models available to broader audience is ongoing. Insights from these technical tasks will help inform options for a model management governance framework.

Guelph-Guelph/Eramosa water quantity policy development study

Following the presentation of the policy framework and draft list of policy approaches on December 6, 2018, the Project Team, comprised of representatives from the City of Guelph, Township of Guelph/Eramosa, Wellington Source Water Protection, Wellington County, Region of Waterloo, Region of Halton, MECP, and GRCA, have been working on developing draft policy text.

The focus of policy development has been to address water taking and recharge reduction related activities for both aggregate quarry and other activities. As part of early engagement, City of Guelph and Wellington County draft policies were sent to MECP and the Ministry of Natural Resources and Forestry (MNRF) staff for feedback. Provincial comments on aggregate quarry activities related policies were received on April 29, 2019. MECP comments related to non-aggregate activities related policies were received on June 5, 2019.

Discussions at the Project Team to find a balance between the provincial and municipal interests are ongoing. As a result, the Guelph-Guelph/Eramosa Water Quantity Policy Development Process Timeline has been updated (**Table 1**).

Table 1: Guelph-Guelph/Eramosa Water Quantity Policy Development Process Timeline

Task	Date
RMMEP and TMS presented to SPC	June 21, 2018
RMMEP and TMS presented to CLG	June 26, 2018
Project Team developing draft policy approaches	July to October 2018
Draft policy approaches presented to IMG/CLG	November 7/8, 2018
Draft policy approaches presented to SPC	December 6, 2018
Draft policy text presented to SPC	October 3, 2019
Draft policy text presented to IMG/CLG	Late October 2019
Revised policies presented to SPC	December 12, 2019
Revised policy pre-consultation with agencies and municipalities	December 16, 2019 – February 3, 2020
Updated AR/SPP (includes revised policies) presented to SPC	March 12, 2020
Formal Public consultation of updated AR/SPP	March 16 – April 30, 2020
Revised AR/SPP presented to SPC and released to SPA	June 4, 2020
SPA submits updated AR/SPP to MECP	July, 2020

Long Point Region and Grand River Section 36 workplan development

At the time of approval for each Lake Erie Region Source Protection Plan, the Minister specified the timeline and process for the comprehensive review and update of the respective assessment report and source protection plan under Section 36 of the Act. The Kettle Creek and Catfish Creek workplans were submitted to the MECP on October 24 and November 2, 2018 respectively; Grand River and Long Point Region will follow in November 2019.

The Grand River and Long Point Region workplan development process was initiated in November 2018 with the release of municipal worksheets developed by Lake Erie Region staff. The worksheets capture municipal information that is used to help determine the scope of assessment report and source protection plan updates that will be addressed through the Section 36 workplans. All municipalities have submitted their worksheets with the exception of one, for review by Lake Erie Region staff. One-on-one teleconferences with municipalities that identified potential items for inclusion in the workplans are near complete.

The following are major items/tasks that are being discussed for possible inclusion in the workplans:

- Growth and municipal infrastructure changes (e.g., new wells) which require the

- delineation or re-delineation of WHPAs or IPZs for groundwater wells or intakes
- Revision of policies to address policy effectiveness and/or implementation challenges
- Revisiting the Issue evaluations (e.g., chloride, nitrate) based on environmental monitoring data and possibly updating Issue Contributing Areas (ICAs)
- Revisions based on updates to the Technical Rules (2017), e.g., removal of sodium and chloride references from the circumstances related to on-site sewage systems and holding tanks

Tasks included in the Grand River and Long Point Region Section 36 workplans may be undertaken as part of a Section 34 update if warranted, i.e., new or expanded drinking water systems that are time sensitive and require more immediate updates to the assessment report and source protection plan.

As a next step, Lake Erie Region will begin developing and writing the workplans themselves, incorporating the information received from the municipalities. The Implementation Working Group (IWG) has been involved throughout the development process and will have the opportunity to review the draft workplans and provide comments prior their presentation to the Source Protection Committee. The Source Protection Committee will receive the draft workplans for comment at the October 3, 2019 meeting, with submission to the MECP expected in November 2019.

SPC Meeting Outlook

Work to complete the three S.34 updates of the Grand River Source Protection Plan are continuing.

The first update is for the “bundled” Grand River Source Protection Plan and Assessment Report. Public consultation for the bundled update has been extended until July 21, 2019, to allow the Ministry and stakeholders more time to provide comments.

Any comments received during the public consultation period will be brought back to the SPC on October 3, 2019 with additional proposed revisions, as necessary. The Grand River Source Protection Authority is anticipated to submit the amended assessment report and source protection plan to the MECP following its meeting on October 25, 2019.

The second update is for Wellington County (Elora, Fergus, Rockwood and Hamilton Drive) and the County of Brant (water quantity policies for the Bethel Municipal Water Supply). Details of this plan update are contained in reports SPC-19-06-04 and SPC-06-05, respectively. The S.34 update is expected to be presented to the SPC on October 3, 2019 for release for pre-consultation October 7 to November 12, 2019.

The third update will include the addition of new water quantity policies in the City of Guelph, Halton Region, Region of Waterloo and Wellington County source protection plan sections. At this time, draft water quantity policies are anticipated to be presented to the SPC on October 3, 2019. Revised draft policies will be brought back to the committee on December 12, 2019. Pre-consultation is scheduled to begin on December 16, 2019 to February 3, 2020. It is anticipated that the committee will receive the complete S.34 Guelph-Guelph/Eramosa (GGET) draft updated assessment report and source protection plan on March 12, 2020 for consideration and release for public consultation on March 16, 2020.

The Long Point Region Source Protection Plan is also undergoing a S.34 update to reflect changes to the Otterville Wellfield (Oxford County) WHPA and ICA. Pre-consultation period is scheduled from June 24 to July 29, 2019 and public consultation from September 23 to October 27, 2019. Details of the plan update are contained in report SPC-19-06-02.

Updates to the Grand River and Long Point region Assessment Report and Source Protection Plan sections will continue to be presented to the Source Protection Committee (SPC) as work is completed. The next four committee meetings are scheduled for October 3, 2019, December 12, 2019, March 12, 2020 and June 4, 2020.

The following table provides an overview of the next few SPC meetings and anticipated agenda items related to the S.34 “bundled” Grand River, S.34 Wellington/Brant Grand River, S. 34 Otterville Long Point Region, and S.34 GGET Grand River updates.

SPC Meeting Date	Agenda Items			
	S.34 “bundled” Grand River Update (all other sections)	S.34 Otterville Long Point Region Update	S. 34 Wellington/Brant Grand River Update	S. 34 GGET Grand River Update
Apr 8 – July 21, 2019	Formal public consultation period (15 weeks)			
June 20, 2019		<ul style="list-style-type: none"> • Draft updated AR and SPP; release for pre-consultation and public consultation 	<ul style="list-style-type: none"> • Wellington and Brant draft water quality policy approaches 	
June 24 – July 29, 2019		Municipal and ministry pre-consultation period (36 days)		
September 23 – October 27, 2019		Public consultation period (5 weeks)		
October 3, 2019	<ul style="list-style-type: none"> • Revised draft updated AR and SPP: receive public comments for consideration; release the document to the Grand River Source Protection Authority for submission to the Ministry 		<ul style="list-style-type: none"> • Draft updated AR and SPP; release for pre-consultation 	<ul style="list-style-type: none"> • Draft water quantity policies

SPC Meeting Date	Agenda Items			
	S.34 “bundled” Grand River Update (all other sections)	S.34 Otterville Long Point Region Update	S. 34 Wellington/Brant Grand River Update	S. 34 GGET Grand River Update
Oct 7 – Nov 12, 2019			Municipal and ministry pre-consultation period (7 weeks)	
Dec 12, 2019		<ul style="list-style-type: none"> • Revised draft updated AR and SPP: receive public comments for consideration; release the document to the Long Point Region Source Protection Authority for submission to the Ministry 	<ul style="list-style-type: none"> • Complete draft updated AR/SPP; release for public consultation 	<ul style="list-style-type: none"> • Revised water quantity policies (Guelph-Guelph/Eramosa) and updated municipal SPP sections (Guelph, Halton, Waterloo and Wellington) • Updated AR and SPP sections; release for pre-consultation
December 16, 2019 – February 2, 2020				Municipal and ministry pre-consultation period (7 weeks)
Jan 2 – Feb 16, 2020			Formal public consultation period (46 days)	

SPC Meeting Date	Agenda Items			
	S.34 “bundled” Grand River Update (all other sections)	S.34 Otterville Long Point Region Update	S. 34 Wellington/Brant Grand River Update	S. 34 GGET Grand River Update
March 12, 2020			<ul style="list-style-type: none"> • Revised draft updated AR and SPP; receive public comments for consideration; release the document to the Grand River Source Protection Authority for submission to the Ministry 	<ul style="list-style-type: none"> • Complete draft updated AR/SPP; release for public consultation
March 16 – April 30, 2020				Formal public consultation period (46 days)
June 4, 2020				<ul style="list-style-type: none"> • Revised draft updated AR and SPP; receive public comments for consideration; release the document to the Grand River Source Protection Authority for submission to the Ministry

Prepared by:



Ilona Feldmann
Source Protection Program Assistant

Approved by:



Martin Keller, M. Sc.
Source Protection Program Manager

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. **SPC-19-06-02**

DATE: June 20, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **S.34 Draft Updated Long Point Region Assessment Report and Source Protection Plan: Otterville (Oxford County)**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-06-02 – S.34 Draft Updated Long Point Region Assessment Report and Source Protection Plan: Otterville (Oxford County) – for information.

AND THAT the Lake Erie Region Source Protection Committee direct staff to release the Draft Updated Long Point Region Assessment Report and Source Protection Plan for a 36-day pre-consultation period followed by a 35-day public consultation period.

REPORT:

Updates to the Assessment Report

The Draft Updated Long Point Region Assessment Report has been updated to reflect the findings of the Otterville wellhead protection area (WHPA) and issue contributing area (ICA) technical study:

Section 4 – Oxford County:

- Otterville Wellfield Wellhead Protection Area (WHPA), vulnerability scoring, threats and issues evaluation, including delineation of issue contributing area (ICA)

In addition to updated technical work, Section 1 (Introduction) has been updated.

Updates to the Source Protection Plan

As a result of the technical updates in the assessment report, the Long Point Region Source Protection Plan was amended as follows:

Municipal-specific

- Updates to Oxford County, Otterville Wellfield policy applicability maps

General

- New Implementation and Timing policy and revision of existing policy to address upcoming amendments and integration into the plan
- Local threat: The Conveyance of Oil by way of Underground Pipelines changed to Prescribed Drinking Water Threat #22: The Establishment and Operation of a Liquid Hydrocarbon Pipeline
- Prescribed Drinking Water Threats short form names amended to reflect 2017 Tables of Drinking Water Threats

The S.34 Draft Updated Long Point Region Assessment Report and Source Protection Plan is available in its entirety on the June 20, 2019 eScribe meeting site. Content revisions in the documents are highlighted yellow.

Prepared by:



Ilona Feldmann
Source Protection Program Assistant

Approved by:



Martin Keller, M. Sc.
Source Protection Program Manager

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. **SPC-19-06-03**

DATE: June 20, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **Centre Wellington Tier 3 Water Quantity Risk Assessment: Draft Results**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-06-03 – Centre Wellington Tier 3 Water Quantity Risk Assessment: Draft Results – for information.

SUMMARY:

The Centre Wellington Tier 3 Water Budget Study, which began in 2016, is in the process of concluding with the recent completion of the draft Risk Assessment report. A wellhead protection area for water quantity (WHPA-Q) was delineated for Centre Wellington's municipal wells, and the Risk Assessment evaluation resulted in a significant risk level being assigned to the WHPA-Q based on the inability of the current wells to meet future water demand. A Risk Management Measures and Evaluation Process (RMMEP) will begin this summer to better understand the drivers of the significant risk level with the final results presented to the Source Protection Committee this fall. Water quantity policy development will begin following the completion of the RMMEP.

REPORT:

History

The GRCA completed a Tier 2 Water Budget Study and Stress Assessment for the Grand River watershed in 2009. As a part of the Stress Assessment, the Irvine subwatershed, which encompasses the Township of Centre Wellington, was identified has having a moderate potential for stress when water demand was increased by 10% as a part of the assessment for future water demand.

This 'moderate' classification triggered the requirement for a Tier 3 Water Budget Study to be completed for the Centre Wellington municipal drinking water system. The project was put on hold as the Township had not completed a Water Supply Master Plan (WSMP), which would provide future municipal water demand information.

In 2016, Nestle Waters Canada purchased the Middlebrook well, located to the southwest of Elora, with the purpose of withdrawing water as a back-up well to their Aberfoyle water-bottling operation. This proposed water taking caused local public concern and outcry; the Ministry of Environment, Conservation, and Parks (MECP) requested the GRCA to commence the Tier 3 study to evaluate the future sustainability of the municipal water supply. As long-term municipal demand was not available, the project was initiated as a 'scoped' Tier 3 such that some, but not all, of the Risk Assessment scenarios could be completed.

In addition to the start of the Centre Wellington Scoped Tier 3 Study, the Province also placed a province wide moratorium on new and proposed water bottling Permit To Take Water

applications, including pumping tests. The moratorium is currently in place to the end of 2019.

In 2018, the Township began its WSMP, which is now substantially complete. Information from the WSMP, specifically projections on future municipal water demand, informed the Tier 3 study, such that it could be completed in full and not as a scoped study. In turn, the Tier 3 numerical groundwater flow model was used to complete scenarios to assist in the development of the WSMP.

Background

The Township of Centre Wellington relies completely on groundwater to meet its municipal water demand.

Three municipal water supply wells are located in Elora (Wells E1, E3, and E4), and six municipal wells are located in Fergus (Wells F1, F2, F4, F5, F6, and F7). Each of the water supply wells are completed in bedrock and were constructed between 1935 and 2002. Fergus Well F2 is designated Groundwater Under Direct Influence of Surface Water (GUDI), and currently inactive.

Originally separate, the Fergus and Elora water distribution systems were combined into the single, Centre Wellington distribution system in October 2005 with the Aboyne Booster Station. The current water supply system provides drinking water to approximately 19,330 residents in Elora and Fergus.

Tier 3 Water Budget Study

The Tier 3 Water Budget Study was designed to assess the long-term availability of water to the Centre Wellington municipal wells. The study was completed in 3 phases: a physical characterization of the study area, the development and calibration of a numerical groundwater flow model, and the completion of risk assessment scenarios and development of the wellhead protection area for water quantity (WHPA-Q). The first two phases of the study are complete, and the risk assessment is currently draft and in peer review.

The study area for the project encompasses the Township of Centre Wellington and portions of neighbouring townships of Woolwich, East Garafraxa, Mapleton, Guelph/Eramosa, Wellington North, and Towns of Grand Valley and Erin. Municipal groundwater supplies are sourced from the bedrock Goat Island and Gasport Formations. The bedrock geology is complex in this area with karstic features and zones of fractured bedrock.

Draft Risk Assessment Results

The draft WHPA-Q for the Centre Wellington municipal wells is shown in Figure 1. The WHPA-Q is determined using current municipal pumping rates and shows the area where municipal wells lower the aquifer (cone of influence of municipal wells and cone of influence of other permitted water takings that intersect). The WHPA-Q encompasses the majority of the Township to the west of Belwood Reservoir, and extends into the Township of Mapleton to the west and the Township of Woolwich to the south. The WHPA-Q delineates an area where more detailed work needs to be completed to investigate potential interference with municipal wells when a new pumping source is being considered.

The Risk Assessment scenarios resulted in a significant risk level when assessing future municipal demand. The WSMP identified population growth and water demand to a planning horizon of 2041. Based on this information, the Township will not be able to meet their average daily or maximum day water demand by the year 2041 with the existing municipal wells and

infrastructure. New options to meet demand, for example new wells or changes to the existing configuration, such as the deepening of wells, will be required. A significant risk level also requires development of water quantity policies.

Peer Review

A provincial peer review team consisting of qualified, independent, local experts in the fields of hydrogeology and hydrology have met at each project milestone (work planning, physical characterization, model development and calibration, risk assessment) to provide comments on the technical components of the reports. The purpose of peer review is to ensure water budgets are scientifically defensible and consistent with the expectations of the water budget technical rules and guidance. The MECP, Ontario Geological Survey, and township engineers for the County of Wellington townships surrounding Centre Wellington have also provided review comments. Peer review of the risk assessment is currently in progress.

Public and Stakeholder Engagement

Engaging the public and stakeholders has been an important component of the Centre Wellington Tier 3 study. The Lake Erie Source Protection Region's website (www.sourcewater.ca) includes web pages specific to [Centre Wellington's Tier 3 study](#) and contains technical reports, presentations, and meeting summaries.

A Community Liaison Group (CLG) of local stakeholders and community members was established at the beginning of the study and follows a Terms of Reference developed for the project. The CLG has met 3 times to date at each milestone reached in the project (initial work plan/kick-off, physical characterization, model development). At these meetings, technical work is presented to the group and comments are solicited before the reports are finalized.

Next Steps

A peer review meeting for the Risk Assessment report was held on May 23, 2019 and the report will be updated to address peer reviewer comments this summer. In conjunction with revisions to the Risk Assessment report, a Risk Management Measures and Evaluation Process (RMMEP) will begin this summer to evaluate and rank potential water quantity threats to the municipal wells.

A CLG meeting is planned for the end of September to present the Risk Assessment and RMMEP results. Final study results will be presented to the Lake Erie Region Source Protection Committee at the October meeting.

Following completion of the RMMEP, the GRCA will work with the Township of Centre Wellington, Wellington Source Water, and the Region of Waterloo to evaluate water quantity policy options to address the significant risk level within WHPA-Q.

Prepared by:



Sonja Strynatka, P.Geo.
Senior Hydrogeologist

Approved by:



Martin Keller, M. Sc.
Source Protection Program Manager



Figure 1: Township of Centre Wellington draft WHPA-Q delineation.

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. **SPC-19-06-04**

DATE: June 20, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **County of Brant Draft Water Quantity Policy Approaches**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-06-04 – County of Brant Draft Water Quantity Policy Approaches – for information.

REPORT:

On June 21, 2018, the Whitemans Creek Tier 3 Water Budget and Local Area Risk Assessment was presented to the Source Protection Committee (SPC-18-06-10). The results of the risk assessment scenarios predict that the Bethel wellfield is capable of meeting existing water demands for current and future land use during average climate and drought conditions. However, the risk assessment scenario suggests that the wellfield may not be able to meet future demand under drought conditions. Consequently, the wellhead protection area for water quantity (WHPA-Q) was assigned a risk level of significant. Additionally, the significant risk level was given a high level of uncertainty due to the lack of long-term history of operations of the well field resulting in only a short period of record available to calibrate the numerical model. Since the Tier 3 Assessment assigned a significant risk level for the Bethel wellfield, all water takings that could potentially impact the municipal systems were identified as significant drinking water threats as well as areas that may have reduced recharge. A total of 19 consumptive demand threats were identified, including both permitted and non-permitted takings, and a total of 243 ha of recharge reduction activities associated with future land development.

Lake Erie Region staff began early stage policy discussions with the Ministry of the Environment, Conservation and Parks (MECP) in the summer 2018; the policy development team (staff from the County of Brant, Grand River Conservation Authority and MECP) collaboratively began developing draft water quantity policy approaches in April 2019 based upon previous water quantity policy development work. The draft approaches have been developed to reflect the needs of the County and the municipal resources available while achieving the objectives of the Source Protection Plan (see **Table 1**). The policy approaches address consumptive water demand and recharge reduction activities, using a combination of policy tools such as prescribed instruments, land use planning, specify action, and education and outreach.

Next Steps

The Source Protection Committee has the ultimate responsibility regarding the water quantity policies to be included in the Grand River Source Protection Plan. With direction from the Committee, the policy development team will draft water quantity policies based on the identified policy approaches. Draft water quantity policies will be developed during the summer and presented to the committee for review at the October 3, 2019 meeting as part of the S.34

Wellington/Brant Source Protection Plan update. The pre-consultation period is scheduled from October 7 to November 12, 2019.

Prepared by:



Ilona Feldmann
Source Protection Program Assistant

Approved by:



Martin Keller, M. Sc.
Source Protection Program Manager

Table 1: Draft Water Quantity Approaches for the County of Brant

Prescribed Drinking Water Threat Activity			
Consumptive Water Taking			
Tool	Existing / Future	Approach	Implementing body
Prescribed Instrument (PI)	Existing and Future	Manage water takings through Permit to Take Water Approvals to include appropriate terms and conditions to demonstrate that the taking will not adversely impact the aquifer's ability to meet municipal and other water supply requirements.	Ministry
Prescribed Instrument	Existing and Future	Manage water takings through Aggregate Resources Act Licenses Approvals, review and amendments to existing and future Aggregate Act Licenses to include the terms and conditions addressing operational, consumptive water taking, rehabilitation; to include the results from the Tier 3 Assessment.	Ministry
Land Use Planning	Future	Manage future growth servicing using municipal land use planning Planning Authority to complete a Growth Management Strategy and ensure sustainable water quantities (current and planned municipal water supplies) to support growth Servicing and Financing (managing costs of growth, affordability).	Municipality
Specific Action	Future	Identification of additional water supplies Consideration of locating additional water supply outside of the WHPA-Q1 where practical during strategic growth management and land needs assessment.	Municipality
Specify Action	Future	Manage Water Supply and Water Quantity Policy Implementation Ministry to fund municipal capacity to support water management decisions and updates to the Water Supply Master Plan.	Ministry

Tool	Existing / Future	Approach	Implementing body
Specify Action	Existing and Future	<p>Maintenance of Tier 3 Water Budget Model</p> <p>Request the Ministry of the Environment, Conservation and Parks should support and fund the ongoing support and maintenance of the Whitemans Creek Tier 3 Water Budget model, Water Resources Technical Working Group, and Climate change Assessment Model.</p>	Ministry
Education and Outreach	Existing and future	<p>Implement public Education and Outreach initiatives related to Water Conservation</p> <p>Initiatives geared towards property and business owners and updating water conservation plans using the findings from the Whitemans Creek Tier 3 Water Budget.</p>	Municipality
Recharge Reduction			
Prescribed Instrument (PI)	Existing and Future	<p>Manage Stormwater Management Facilities through Environmental Compliance Approvals</p> <p>Environmental Compliance Approvals within the WHPA-Q1 to be reviewed and if necessary amended to ensure that terms and conditions are incorporated that include groundwater recharge considerations and relevant monitoring programs.</p>	Ministry
Land Use Planning	Future	<p>Manage recharge reduction through Land Use Planning</p> <p>For applications under the Planning Act within the Tier 3 Water Budget WHPA-Q1 identified as having significant water quantity threats, the Planning Authority shall ensure recharge is maintained through the land use planning process by way completing a Water Balance assessment.</p>	Municipality

LAKE ERIE REGION SOURCE PROTECTION COMMITTEE

REPORT NO. **SPC-19-06-05**

DATE: June 20, 2019

TO: Members of the Lake Erie Region Source Protection Committee

SUBJECT: **Wellington County Draft Water Quality Policy Approaches**

RECOMMENDATION:

THAT the Lake Erie Region Source Protection Committee receives report SPC-19-06-05 – Wellington County Draft Water Quality Policy Approaches – for information.

REPORT:

On December 6, 2018, revised Wellhead Protection Area (WHPAs) and new Issue Contributing Areas (ICAs) for the Township of Centre Wellington's municipal water supply (Fergus and Elora) were presented to the Source Protection Committee. Three ICAs were delineated using the numerical groundwater flow model developed as a part of the Centre Wellington Tier 3 Water Budget Study: a chloride ICA around well E3 in Elora, and chloride and TCE ICAs around well F1 in Fergus. There is an existing TCE ICA in the Township of Puslinch that extends from the City of Guelph into the Township; however, the establishment of chloride ICAs is new to the County.

The new chloride ICAs in Fergus and Elora triggered a municipal review of prescribed drinking water threat policies related to chloride. Draft water quality policy approaches developed by the County, in consultation with Lake Erie Region staff, are presented in **Table 1**. Policies resulting from the draft policy approaches will not all have the same legal effect. Incentive policy WC-CW-1.6 did not require any revisions and was therefore not included in the table. In addition, County staff will be reviewing implementation and timing policies WC-CW-1.1 and 1.2, and definitions.

Next Steps

The Source Protection Committee has the ultimate responsibility regarding the policies to be included in the Grand River Source Protection Plan. With direction from the Committee, Wellington Source Water Protection together with Lake Erie Region staff will draft policies based on the identified policy approaches during the summer. Draft policies will be presented to the Committee for review at the October 3, 2019 meeting, as part of the S.34 Wellington/Brant Source Protection Plan update. The pre-consultation period with Ministry agencies and affected municipalities is scheduled from October 7 to November 12, 2019.

Prepared by:



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Approved by:



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Table 1: Draft Water Quality Approaches for Wellington County

Prescribed Drinking Water Threat Activity					
Application of Road Salt					
Tool	Proposed Change	Existing and / or Future	Approach	ICA Threshold	Non-ICA Threshold
S.58 Risk Management Plan	New policy	Existing and Future	Manage through a RMP	Where significant and required where the salt application area (term to be defined) is equal to or greater than 200 square metres or 8 parking spots. This policy applies to all land uses except residential consisting of four units or fewer.	
Land Use Planning	New policy	Future	Manage new development through Official Plan policies and application requirements	Applies to major development (term to be defined)	Not Applicable
Specify Action	Amend policy WC-CW-12.1	Existing and Future	Manage through Salt Management Plans; must be included in a RMP	Within the ICA	Not Applicable
Specify Action	New policy	Future	Enhance road design measures	Within the ICA	Within WHPA-A, B, score of 10

Tool	Proposed Change	Existing and / or Future	Approach	ICA Threshold	Non-ICA Threshold
Specify Action – transport pathways	New policies	Existing and Future	Prioritize inspection and abatement activities related to well maintenance and abandonment pursuant to Reg. 903 Review transport pathways and possible actions to be taken	Within the ICA	Not Applicable
Monitoring	Amend policy WC-CW-1.14	Existing and Future	Establish well monitoring program	Wells E3 and F1 for chloride	Not Applicable
Education and Outreach	New policy	Existing and Future	Implement education initiative related to the application of road salt	Applies to all significant threat activities	
Storage of Road Salt					
S.57 Prohibition	Amend policy WC-CW-13.2	Future	Prohibit	WHPA-A only, >1 tonne or >1,000L of brine	WHPA-A and IPZ-1 only, >5,000 tonnes with outside storage
S. 58 Risk Management Plan	Amend policy WC-CW-13.1	Existing and Future	Manage through a RMP	>1 tonne or >1,000L of brine or any quantity where salt application RMP required	Applies where significant

Tool	Proposed Change	Existing and / or Future	Approach	ICA Threshold	Non-ICA Threshold
Land Use Planning	New policy	Future	Manage new development through Official Plan policies and application requirements	Applies to major development (term to be defined)	Not Applicable
Specify Action	New policy	Future	Enhance road design measures	Within the ICA	Within WHPA-A, B, score of 10
Monitoring	Amend policy WC-CW-1.14	Existing and Future	Establish well monitoring program	Wells E3 and F1 for chloride	Not Applicable
Education and Outreach	Amend policy WC-CW-13.3	Existing and Future	Implement education initiative related to the storage of road salt	Applies to all significant threat activities	

Sewage System or Sewage Works – Sanitary Sewers and Related Pipes

Prescribed Instrument (PI)	Amend policy WC-MC-3.4	Future	Prohibit through Environment Compliance Approval process	Applies to all significant threat activities; does not apply to the expansion, modification, optimization, re-rating, operation, maintenance or replacement of existing sewage treatment plants
Prescribed Instrument (PI)	Amend policy WC-MC-3.5	Existing and future	Manage through Environmental Compliance Approval process	Existing or new sanitary sewers and related pipes or existing sewage treatment plants

Tool	Proposed Change	Existing and / or Future	Approach	ICA Threshold	Non-ICA Threshold
Sewage System or Sewage Works – Discharge from a Stormwater Management Facility					
S.58 Risk Management Plan	New policy	Existing and Future	Manage through a RMP	Required where a Prescribed Instrument does not apply; “stormwater management facilities” term to be defined	Not Applicable
Prescribed Instrument (PI)	Amend policy WC-MC-3.7	Existing and Future	Manage through Environmental Compliance Approval process	Required where a Prescribed Instrument applies	
Land Use Planning	New Policy	Future	Manage new development through Official Plan policies and application requirements	Applies to major development (term to be defined)	Not Applicable

Storage of Snow					
Tool	Proposed Change	Existing and / or Future	Approach	ICA Threshold	Non-ICA Threshold
S.57 Prohibition	Amend policy WC-CW-14.2	Future	Prohibit	WHPA-A only, >0.01 ha below grade, >1ha above grade	WHPA-A , IPZ-1 only, >0.01 ha below grade, >1ha above grade
S. 58 Risk Management Plan	Amend policy WC-CW-14.1	Existing and Future	Manage through a RMP	Required where the salt application area is equal to or greater than 200 square metres or 8 parking spots; exception for residential consisting of four units or fewer	Applies where significant
Land Use Planning	New policy	Future	Manage new development through Official Plan policies and application requirements	Applies to major development (term to be defined)	Not Applicable
Specify Action	New policy	Future	Enhance road design measures	Within the ICA	Within WHPA-A, B, score of 10
Education and Outreach	Amend policy WC-CW-14.3	Existing and Future	Implement education initiative related to the storage of snow	Applies to all significant threat activities	