

Grand River Source Protection Plan Update

Water Quantity Webinar Presentation Summary Notes

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Welcome to the Wellington County virtual public consultation webinar for the proposed update of the Grand River Source Protection Plan. The public consultation period is open from January 25, 2021 up to and including March 8, 2021.

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Tonight's webinar will be provided in three main blocks. Following the review of the agenda, administrative items, introductions and rules of engagement, there will be a presentation at 7:15pm, question period at 8:00pm, and formal comment period at 8:40pm. We will adjourn at 9:00pm. The length and timing of each item in the agenda is a guide.

Presenting the webinar today is Martin Keller, Program Manager, Lake Erie Source Protection Region, Ilona Feldmann, Program Assistant, Lake Erie Source Protection Region, and Kyle Davis, Risk Management Official, Wellington Source Water Protection.

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The webinar today is being hosted through Zoom. Participants are joining us via computer and phone; public observers are also able to watch the webinar via a YouTube live stream on the Source Protection Plan Update web page. A recording of the meeting will remain on the Source Protection Plan Update web page until the end of the public consultation period on March 8, 2021.

A reminder that this livestream is part of the public record. Additionally, by speaking into your unmuted microphone during the meeting to ask a question or state a comment, you are consenting to the recording of your voice through the livestream.

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The following are rules of engagement for this webinar.

Please mute microphones / phones during the Presentation. Participants using their computer audio can mute by clicking on the microphone icon at the bottom left-hand corner of the Zoom meeting page. When muted the microphone will have a slash through it. Participants using a phone can press *6 to mute their line.

There are two options to view the Zoom web page: 1. Gallery View; 2. Speaker view. Both viewing options are located at the top right-hand corner of the Zoom web page.

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Participants may ask questions and share comments only during the designated Questions period and Comments period following the presentation. Questions asked during this period are not considered official public consultation comments and will not be included in the Grand River Source Protection Plan update submission package to the Ministry of the Environment, Conservation and Parks. The period will begin with questions from phone only participants, followed by questions from participants using a device (computer/tablet/smart phone). Device participants may ask their questions verbally or type their questions using the chat function; questions will be managed by the webinar moderator. Once all questions from device participants have been answered, phone participants will have a final opportunity to ask additional questions.

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Comments shared during the Comment period are considered official public consultation comments and will be included in the Grand River Source Protection Plan update submission package to the Ministry of the Environment, Conservation and Parks. The period will begin with comments from phone only participants, followed by comments from participants using a device (computer/tablet/smart phone). Device participants are requested to verbally share their comments; comments will be managed by the webinar moderator. Once all comments from device participants have been shared, phone participants will have a final opportunity to comment. If participants do not wish to share comments during this webinar, they can also be submitted in writing via email by March 8, 2021 to comments@sourcewater.ca.

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The Grand River Plan was developed through the Source Protection Program under the Clean Water Act. The Act was established in 2006 in response to the 2000 Walkerton E. coli outbreak that resulted in the contamination of the town's drinking water supply. Over 2000 people became ill, and seven people died from their illness. The goal of the program is to protect current and future municipal drinking water sources from contamination (water quality) and depletion (water quantity) by developing science based, locally-developed source protection plans for each watershed.

Source Protection is the first barrier in a multi-barrier approach to protect municipal drinking water.

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The Grand River Source Protection Plan is being updated to include new information that impacts the Township of Puslinch in Wellington County. The Source Protection Plan, or Plan, was originally approved in 2015 and the Plan policies took effect on July 1, 2016. Two recent Plan updates took effect October 1, 2020 and February 3, 2021, respectively.

New information and assessments have been completed that have resulted in further changes:

- Addition of a new water quantity Wellhead Protection Area (WHPA-Q) that impacts the townships of Centre Wellington, Mapleton, and Woolwich.

A number of properties in the WHPA-Q may be subject to source protection plan policies as a result of these changes.

Also, the addition of water quantity policies will affect a small number of properties located in the Town of Erin that are contained within the already existing WHPA-Q for Acton in the Town of Halton Hills.

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This presentation will provide an overview of the WHPA-Q in the Townships of Centre Wellington, Mapleton and Woolwich:

- New WHPA-Q map
- information on what activities and drinking water threats may exist within the WHPA-Q
- how these activities are being addressed; and
- information on the plan update process and how members of the public can comment on the updated plan.

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Over the last several years, a detailed water budget study has been completed for the municipal drinking water supply system in the Township of Centre Wellington. The aim of the study was to identify if the Township's groundwater supply wells can meet current and future (up to 2041) municipal water demands.

The study included the nine (9) deep bedrock water supply wells in Fergus (6 wells) and Elora (3 wells), and also included an assessment of the potential impact of pumping the municipal wells on other water uses, e.g., streams and wetlands.

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This slide provides an overview of the timeline of the water budget technical study, the policy development, and process to update the Grand River Source Protection Plan. We are currently in the public consultation phase of the update process. The Lake Erie

Region Source Protection Committee will consider any comments received, and then release the updated Plan to the Grand River Source Protection Authority for submission to the MECP.

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This slide shows the results of the technical study. A wellhead protection area for water quantity (WHPA-Q) is proposed for the Centre Wellington municipal water supply. The WHPA-Q is assigned a significant risk level as a result of predictions that the existing water supply wells cannot provide sufficient water in the future under average annual pumping rates given the projected growth rate for the Township of Centre Wellington.

The WHPA-Q is a screening area that represents the area that may be affected by current or future pumping from municipal and non-municipal wells, and is therefore the area where water quantity policies may apply.

The WHPA-Q is located predominantly in the Township of Centre Wellington, but also extends into Mapleton and Woolwich. It covers Elora, Fergus, Salem and Alma.

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There are two activities that must be assessed as per the Clean Water Act that may have the potential to be a significant drinking water threat in the WHPA-Q:

- Consumptive water taking: an activity that takes water from an aquifer or surface water body without returning the water taken to the same aquifer or surface water body.
- Reducing recharge into the ground: an activity that reduces the recharge of an aquifer such as the construction of impervious surfaces like parking lots or buildings. This is primarily a result of land use change.

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As part of the technical study, an assessment was undertaken to estimate the relative impact of water takings and land use changes on groundwater levels at Township of Centre Wellington municipal wells. This assessment provided insights that informed policy development to mitigate current and future drinking water quantity threats.

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This slide shows the approach taken for the drinking water threats analysis. Different scenarios were developed to estimate the relative impact of different water takings or areas of land use change may have on simulated water level at municipal wells. Non-municipal water takings were analysed using different categories, e.g., permitted compared to non-permitted takings, and within the non-permitted category, domestic takings and livestock water takings. Land use changes in Fergus and Elora were assessed based on planned development in the Official Plan.

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The results of the threats analysis can be summarized as follows:

1. Largest influence on future groundwater levels is from increased municipal pumping to meet future population growth
2. Cumulative effect of existing unserviced domestic water well pumping on water supply aquifer is minimal
3. Effect of future land development on future groundwater levels in the water supply aquifer is minimal
4. While effect of existing permitted, non-municipal takings on water supply aquifer was minimal, increased or new large groundwater takings may affect groundwater levels at municipal wells depending on location and pumping rate
5. Effect of existing livestock watering on water supply aquifer is minimal

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This slide provides a summary of the key takeaways from the technical studies that informed policy development:

- Focus on management and optimization of municipal water takings using insights from Water Supply Master Plan
- Decrease future municipal demand – water conservation and demand management
- Increase future municipal supply – optimize/redevelop existing wells and install new wells
- Assess potential interference with municipal wells to mitigate impacts from new or expanded non-municipal takings
- Maintain recharge to support existing water budget, water quality and ecological functions
- Consider ongoing model maintenance and funding
- Consider maintaining groundwater and surface water monitoring program
- No climate change risk predicted to quantity of municipal groundwater supply to 2050 time horizon

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The proposed water quantity policies will apply in the WHPA-Q. The majority of the area of the WHPA-Q is within the townships of Centre Wellington and Mapleton, and water quantity policies will be contained in the Wellington County chapter of the Grand River Source Protection Plan. A small portion of the WHPA-Q extends into Woolwich and will be covered by policies in the Region of Waterloo chapter of the Plan.

Policies were collaboratively developed by the Wellington County and Region of Waterloo to ensure consistency across the WHPA-Q.

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There are a number of tools, or types of policies, that we can use under the Clean Water Act to manage significant drinking water threats and minimize or eliminate the risks to drinking water sources.

These tools can include education and outreach policies that establish programs to educate the public about a particular threat activity, to more restrictive policies such as prohibition of a significant threat activity. Prohibition policies are used as a tool of last resort, meaning they are only used in circumstances when all other policy options are unable to adequately protect the municipal drinking water.

Lake Erie Source Protection Region and municipalities work together to develop and update policies. The goal is to have policies that protect municipal drinking water and reflect municipal needs and resources.

Important to note that source protection policies that use other provincial regulatory approvals (prescribed instruments) or Land Use Planning approaches must stay within existing regulatory or legislative authority. I.e., source protection plan policies cannot ask for something that is not allowed under the existing legislation or regulation.

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There are two prescribed drinking water threats that need to be addressed through policies in a WHPA-Q with a significant risk level:

- Consumptive water taking (water that is taken and not returned to the same aquifer)
- Activities that reduce groundwater recharge

Policies that are proposed address both currently existing as well as future water takings, and they address future activities that reduce groundwater recharge, such as roads, parking lots, and development.

Draft water quantity policies were developed by the Project Team on behalf of the Lake Erie Region Source Protection Committee, and included representation by Wellington County as the municipal chapter lead.

The Project Team presented draft policies to the Committee on June 25 and October 1, 2020, and January 21, 2021, and the proposed policies are now part of the public consultation process.

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Draft policies can be grouped into three major themes:

- Management through existing Provincial Prescribed Instruments

- Growth and Development / Land Use Planning
- Municipal Water Management

Municipal water management policies is a catchall category that includes policies such as optimization of the municipal system, education & outreach, and others.

Draft policies are designed to work in tandem with each other in an adaptive management framework. Adaptive management includes a feedback cycle where data is collected, management tools are evaluated and adapted / modified based on results. The cycle then starts again.

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Prescribed instruments; i.e., regulatory instruments that the province manages, are one of the main ways we have chosen to address significant drinking water threats for water quantity.

Mostly, these are legally binding policies directing provincial ministries to manage water takings that are significant drinking water threats using Permits To Take Water (PTTW), Aggregate Resources Act (ARA) approvals and recharge reduction through Environmental Compliance Approvals.

The proposed provincial water quantity framework will support policy implementation in areas such as area-based water quantity management, water use prioritization, data / monitoring, host municipality support for water bottling.

These policies primarily affect municipalities, industries, institutions (i.e. research facilities), commercial and residential subdivisions.

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Increased emphasis has been put on the integration of water supply considerations growth and development policies. This includes the requirement that new development should maintain existing groundwater recharge rates, and there are increased study requirements in the Official Plan for developments proposing to take more than 50,000 Litres of water per day.

The draft policies also propose increased coordination between the province and municipalities for developments that take more than 50,000 Litres of water per day, and strengthening County Official Plan requirements through proposed definitions and report requirements.

These policies primarily affect development properties for industries, institutions, commercial properties and residential subdivisions. It also affects municipalities.

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Given the results and key insights from the technical study, municipal optimization and water conservation is a key policy approach.

Information sharing and monitoring are also a key part of the adaptive management cycle.

Please note the monitoring and education & outreach policies that are designed to address activities with water takings less than 50,000 Litres per day.

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Currently there are no Part IV (prohibition and risk management plan) policies proposed. These tools are to be used when other tools aren't available or won't be sufficient. With respect to prohibition, the Source Protection Committee is obligated to look at all other options before considering prohibition, and the technical study results show that water takings greater than 50,000 Litres per day, including municipal takings, have the largest potential impact. These water takings are subject to Permits To Take Water, and prohibitions or risk management plans are not considered necessary at this time.

The source protection plan framework and plan update process provide for an adaptive management approach that allows reassessment when new information becomes available. Overall, the source protection plan update process is part of the larger Clean Water Act framework including annual reporting that enables reviews where changes and revisions may be needed.

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This slides provides a summary of the number of properties potentially affected by the draft policies:

- 18 Permits To Take Water or potential permits were identified. These are mostly existing, groundwater water takings greater than 50,000 litres per day and include aggregate pits, golf course, research institutions, municipal systems and other uses. This number also includes potential future permits, where we are aware of them.
- 55 properties or groups of properties were identified for potential recharge reduction activities (54 in Centre Wellington and 1 in Mapleton). These properties include land identified for development and range from single properties to large groups of properties.
- No properties were identified in Erin as potentially engaging in either of the two prescribed threat activities
- Recharge reduction activities means properties that are available for future development and could therefore create impervious surfaces such as parking lots

or buildings that could potentially reduce the amount of water recharging to the groundwater

- Notification letters were mailed out to the property owners (approximately 60 letters).

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This slide shows the timeline and process of this plan update going forward. The updates outlined in this presentation are now in the public consultation phase of the Grand River Source Protection Plan update process. Public consultation began on January 25, 2020 with the posting of the updated Grand River Source Protection Plan on Lake Erie Region's website at: www.sourcewater.ca/GR-SPP-Update. Public consultation continues this month and ends on March 8, 2021. Any public comments received during this period and potential revisions will be considered by the Lake Erie Region Source Protection Committee on April 1, 2021. The Committee will then release the updated plan to the Grand River Source Protection Authority for submission to the Ministry for review and approval.

Please note the video recording of this webinar will be available at www.sourcewater.ca/GR-SPP-Update until March 8, 2021.

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If you have any questions about this plan update and how it may impact you and your property, please contact Kyle Davis, Wellington Source Water Protection Risk Management Official by email or phone.

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For any questions about the Source Protection Program in general or about the plan update process, please contact Ilona Feldmann, Lake Erie Region Source Protection Program Assistant by email or phone.

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Thank you for participating!