

## NOTICE OF PROPOSED WELLHEAD PROTECTION AREA UPDATE

### ENVIRONMENTAL ASSESSMENT STUDY - SUPPLY CAPACITY INCREASE FOR PALGRAVE WELL # 4

#### Context - Class EA Study Process

The Region is undertaking a Municipal Class Environmental Assessment (Class EA) study to evaluate and identify the necessary upgrades/modifications resulting from a proposed increase in water taking capacity of the existing municipal production well, Palgrave Well #4, located at 9 Buckstown Trail. An increase of water taking from Palgrave Well #4 will provide additional supply capacity to the existing Palgrave-Caledon East Drinking Water System to meet the long-term water needs of the serviced area.

As part of this process, the current approved wellhead protection areas need to be revised, due to the proposed increase in water taking capacity. A wellhead protection area (WHPA) shows where groundwater is coming from to supply a municipal well, and how fast water (or any pollutants that may be present) is travelling through the ground toward the municipal well. A WHPA is made up of different sized and shaped zones around the municipal well as follows: WHPA-A (100-metre fixed radius around the municipal wellhead), WHPA-B (2-year time-of-travel), WHPA-C (5-year time-of-travel) and WHPA-D (25-year time-of-travel). Refer to the attached Fact Sheet. To delineate the WHPAs B through D (time-of-travel based capture zones), hydrogeological modelling is required that follows the technical framework under the *Clean Water Act*.

#### Why you are receiving this Notice

Under the *Clean Water Act* and the *Safe Drinking Water Act*, an updated WHPA is required to ensure that the groundwater source of municipal drinking water continues to be protected. You are receiving this Notice because your property falls within the proposed updated Palgrave WHPAs. You may, or may not, receive your drinking water from the municipal supply, however, the location of your property determines your inclusion in source protection planning. The proposed WHPAs capture more land area than the current approved WHPAs, incorporating additional properties. Refer to the attached Figure. Please note, you may already be included in the current approved WHPAs, and your property may have been field verified by the Region in the past.

The technical study to re-delineate WHPAs B through D plus the re-assessment of the vulnerability of the aquifer is ongoing. The proposed WHPAs are preliminary draft results and may be subject to further changes prior to approval by the Ministry of the Environment, Conservation and Parks.

#### How will this affect me?

Due to the updates to the Palgrave WHPAs, new and/or additional activities such as septic systems, home heating oil tanks, agricultural land uses, or storage of chemicals, may be identified on properties within the WHPAs, and may need subsequent field verification by the Region to determine whether Source Protection Plan policies apply.

The local Source Protection Plans for the Palgrave WHPAs are the Credit Valley, Toronto and Region, Central Lake Ontario (CTC) Source Protection Plan and the South Georgian Bay Lake Simcoe (SGBLS) Source Protection Plan (depending on the Source Protection Area where your property is situated). Policies that manage, regulate, or restrict land use activities apply within designated vulnerable areas, and only if the activity is carried out under certain circumstances that pose a significant risk to the drinking water supply as defined under the *Clean Water Act*. Refer to the attached List.

#### Let us know what you think

At this stage, we would like to make you aware of the proposed WHPA updates and invite comments. If you have any questions regarding areas where Source Protection Plan policies would apply, or to request further information, please contact the Region's Risk Management Official

(RMO), Therese Estephan, through the project team members to ensure a one-window approach. Refer to the attached Notice for details on how to access the online Public Information Centre (PIC) and instructions on how to submit questions or comments. The Region's RMO will respond to you directly. Comments received will be appropriately addressed and documented as part of the public consultation record.

## **Wellhead Protection Area Amendment Process under the *Clean Water Act***

The Region intends to proceed with locally initiated amendments to the science-based assessment reports and source protection plans under the *Clean Water Act* pending receipt of necessary regulatory approvals and subject to the Class EA completion. A separate process administered by the applicable Source Protection Authorities (Toronto and Region and Nottawasaga) will follow that includes public consultation (minimum of 35 days) to solicit feedback from landowners and businesses in the new WHPAs. The Region will work with the Source Protection Authorities to verify if there are any activities or land uses taking place that would be subject to Source Protection Plan polices.

If you have questions and/or comments regarding this Notice, don't hesitate to contact the undersigned. Please follow the one-window approach as mentioned above.

Sincerely,

Therese Estephan  
Risk Management Official, Region of Peel

Encl.: Fact Sheet: Wellhead Protection Areas (Conservation Ontario)  
Figure: Proposed Updated Wellhead Protection Areas for Palgrave  
List: Prescribed Drinking Water Threats  
Notice of Public Information Centre (PIC) #1 and Revised Project Schedule

cc: Erin Ihnat, Region of Peel  
Sandra Rodriguez, CIMA+

This Notice was first issued on February 3, 2022



# WELLHEAD PROTECTION AREAS

## What is a Wellhead Protection Area?

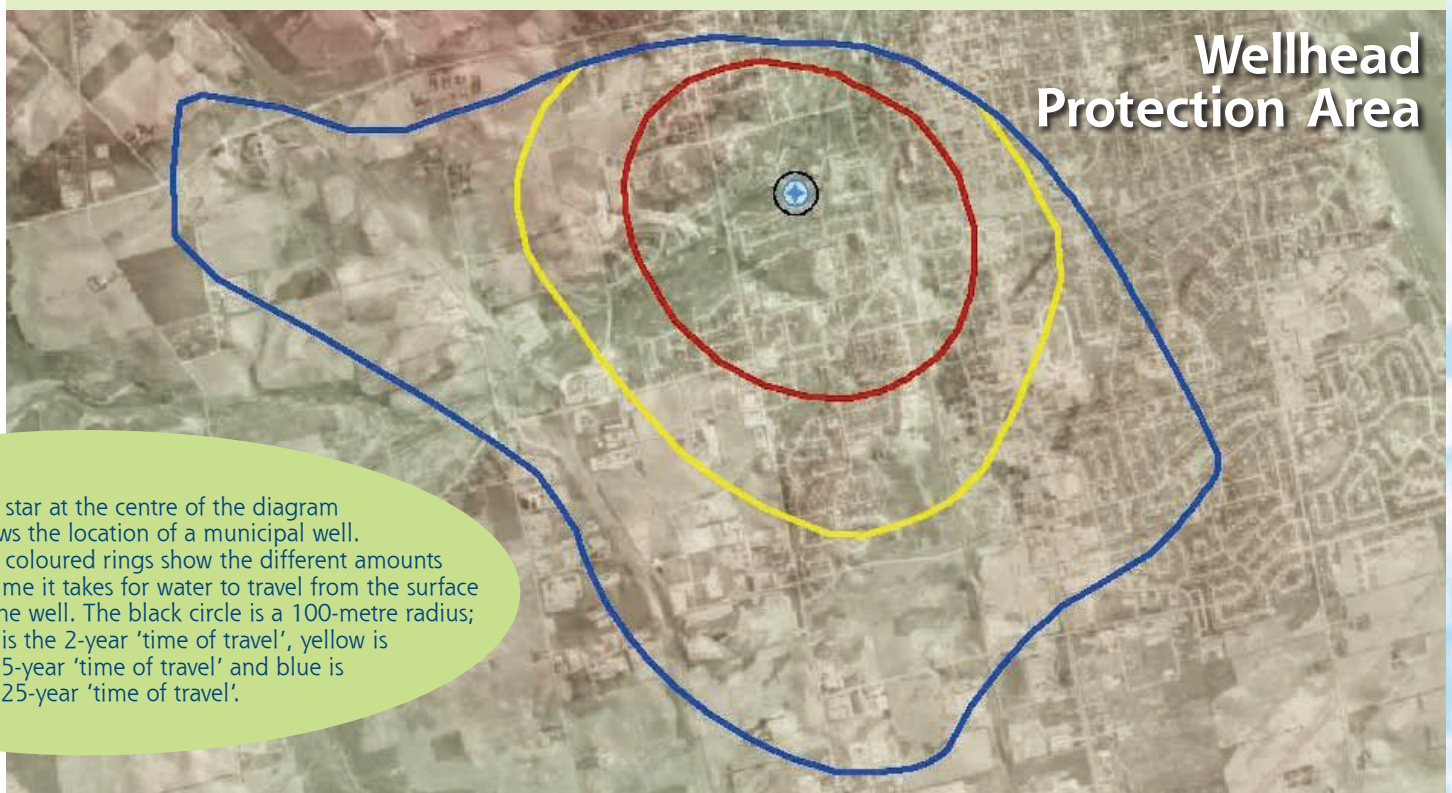
Many municipalities rely on wells to supply drinking water to its residents. Wells of all types, municipal and private, urban and rural, pump water from under the ground. This *groundwater* comes from rain or snow that seeps below ground and pools in cracks or spaces in the soil, sand and rock. These underground sources of water are sometimes known as aquifers. The level of *groundwater*, or the water table, rises and falls depending on the season, temperature, amount of rain or snow and the amount of water withdrawn from the aquifer.



More than 20% of Ontarians use groundwater to meet their daily water needs.

A *wellhead* is simply the physical structure of the well above ground. A *wellhead protection area* is the area around the *wellhead* where land use activities have the potential to affect the quality of water that flows into the well.

The amount of land involved in a *wellhead protection area* is determined by a variety of factors such as the way the land rises or falls, the amount of water being pumped, the type of aquifer, the type of soil surrounding the well, and the direction and speed that groundwater travels. All of these factors help to determine how long it takes water to move underground to the well itself and how much land around the wellhead should be protected.



The star at the centre of the diagram shows the location of a municipal well. The coloured rings show the different amounts of time it takes for water to travel from the surface to the well. The black circle is a 100-metre radius; red is the 2-year 'time of travel', yellow is the 5-year 'time of travel' and blue is the 25-year 'time of travel'.

# WELLHEAD PROTECTION AREAS

## Why do Wellheads Need Protection ?

Pollutants can sometimes seep into the ground and contaminate the water in a well. *Wellhead protection* is a good way to prevent municipal drinking water from becoming polluted because it requires landowners to manage activities that could become potential sources of contamination in the area supplying water to a public well.

Much can be done to prevent groundwater contamination. Under the Clean Water Act, 2006, local Source Protection Committees

will develop plans for protecting municipal well water. They will look at potential sources of *groundwater* contamination in their area, rank them based on their potential to contaminate groundwater, and then determine the best method of managing existing and future land and water uses that pose a significant risk to drinking water. Protecting the area around a well, helps protect a healthy supply of water now and in the future.



## What are Potential Sources of Contamination in Wellhead Protection Areas ?

Pollutants from a variety of activities on the land can seep into the ground and move toward a well. Examples of activities that could negatively affect groundwater if not managed properly include:

- Chemical storage
- Spreading of sewage treatment sludge
- Storage and spreading of road salt
- Animal feedlots
- Use and spilling of fertilizers and pesticides
- Accidental spills of hazardous materials
- Septic systems
- Underground storage tanks
- Underground pipelines or sewers
- Landfills
- Private and abandoned wells

## What are the Benefits of Protecting Wellhead Areas ?

A very clear benefit of drinking water source protection in *wellhead protection areas* is protecting public health. In addition, preventing drinking water contamination in the first place costs a lot less than cleaning it up after it has been contaminated. There are a number of ways *wellhead protection* impacts our day-to-day lives and reduces the costs to maintain good water supplies:

- Not having to drill new wells when old ones become contaminated
- Avoiding the need to clean up contaminated groundwater
- Reducing the cost of water treatment
- Ensuring a long-term supply of clean water
- Ensuring a positive climate for economic growth





# WELLHEAD PROTECTION AREAS

## What can You do to Protect Local Wellhead Areas ?

To find out if you live near a *wellhead protection area*, contact your local conservation authority. You can find out which conservation authority you live in at [www.conservationontario.ca](http://www.conservationontario.ca)

Even if you don't live in or near a *wellhead protection area* it is important to take steps to protect groundwater. Everything is connected through the water cycle and it is important to remember everyone lives downstream. What you do today can affect local water quality. These are some of the things you can do to protect your groundwater from contamination:

1

**Conserve water.** Not only is conserving water helpful to maintaining a constant supply of drinking water, too little water in a source can mean contaminants are more concentrated and, therefore, may be above acceptable levels.

2

**Be an avid recycler.** Recycling paper products, glass, metals and plastics cuts down on pollution and also reduces the amount of water we use. Manufacturing recycled paper uses 58% less water than making paper from virgin wood pulp. Making glass from recycled materials cuts related air pollution 20% and water pollution 50%.

3

**Dispose of hazardous waste properly.** Take unused paints, cleaners, pesticides, and medical prescriptions to your local hazardous waste facility. Take used engine oil to recycling facilities. Use drop cloths or tarps when working with hazardous materials such as paints, driveway sealers or wood stain to prevent spills from leaking into the ground. If a spill occurs, clean it up with an absorbent material such as kitty litter or sawdust and scoop the contaminant into a container.

4

**Use non-toxic products for cleaning** and environmentally-friendly soaps, shampoos and personal care products. Remember that what you use in your house goes back down your drain.

5

**Clean up pet waste** which contains nutrients and pathogens that can run into storm sewers during a rain storm.

6

**Prevent pollutants from entering into runoff** by reducing or eliminating the use of pesticides, fertilizers, sidewalk salts and by not over-watering your lawn. If you run an agricultural operation and haven't already, consider developing and implementing a Nutrient Management Plan.

7

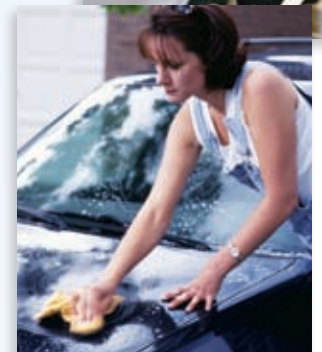
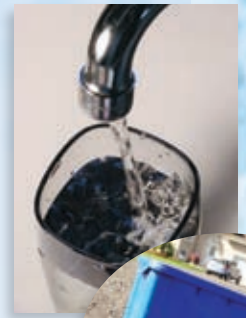
**Take care when refueling gas tanks** for cars, lawn mowers, chainsaws, weed trimmers, tractors or other machinery to avoid spilling fuel on the ground. Also take care when changing engine oil. One litre of gas or oil can contaminate a million litres of groundwater.

8

**Take your car to commercial car washes** designed to prevent pollutant runoff from entering storm sewers. Use commercial car washes that use water efficient sprays, reducing their water consumption.

9

**Stay informed and get involved** in your local source protection process. To find a Drinking Water Source Protection Planning Region or Area near you go to [www.conservationontario.ca](http://www.conservationontario.ca)



# WELLHEAD PROTECTION AREAS

Some additional ways to protect water for those who live on rural properties include:

1

Keep your septic system in proper working order and empty the tank regularly.

2

**Protect and maintain your private well.** Wells provide pathways for contaminants to enter the groundwater. If you have a well, be sure it is sealed properly and if you own a well you no longer use, have it properly decommissioned by a licensed well technician. Test your well water regularly to ensure the water is safe to drink.

3

**Manage animal waste on farms to prevent water contamination.**

If you operate a farm, contact your local Ontario Soil and Crop Improvement Association (OSCIA) at [www.ontariosoilcrop.org](http://www.ontariosoilcrop.org) or your local conservation authority at [www.conservationontario.ca](http://www.conservationontario.ca) for information about workshops you can take to assist you in developing an Environmental Farm Plan (EFP) for your farm business.

4

**Manage livestock grazing.** Overgrazing exposes soil and increases erosion.

5

**Protect the vegetation along the banks of ponds, streams and lakes** to help control erosion, provide food for aquatic life, and maintain cooler water temperatures necessary for some species of fish.

## For More Information on Wellhead Protection Areas

Please contact your local Source Protection Region or Area:



120 Bayview Parkway, Box 11,  
Newmarket, ON L3Y 4W3  
Tel.: 905.895.0716  
Fax: 905.895.0751  
[info@conservationontario.ca](mailto:info@conservationontario.ca)



# [www.conservationontario.ca](http://www.conservationontario.ca)

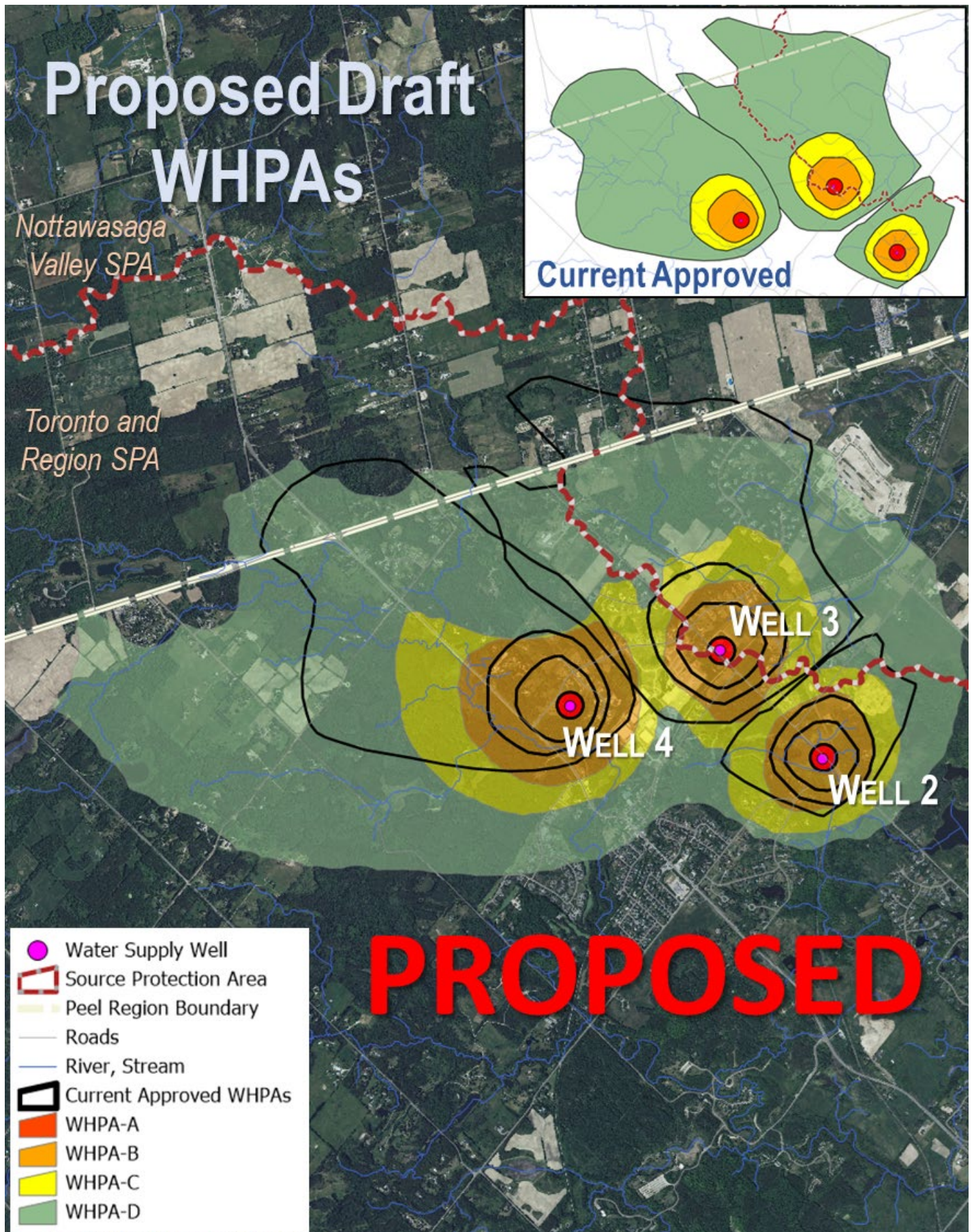
For more information on the Source Protection Program, please visit the Ministry of the Environment's website:

[www.ontario.ca/cleanwater](http://www.ontario.ca/cleanwater)

This project has received funding support from the Ontario Ministry of the Environment. Such support does not indicate endorsement by the Ministry of the contents of the material.



## Palgrave Wellhead Protection Areas (WHPAs)



Disclaimer: This map is for illustrative purposes only. The Region of Peel does not warrant the accuracy, completeness, content, or currency of the information provided. This map has been prepared to meet provincial requirements under the *Clean Water Act* and *Safe Drinking Water Act*. The proposed wellhead protection areas (WHPAs) are preliminary draft results and may be subject to further changes prior to approval by the Ministry of the Environment, Conservation and Parks. The analysis used to produce this map relies on best available information.

Source: Aqua Insight Inc.  
Date: February 2022



## Prescribed Drinking Water Threat Activities

Per Ontario Regulation 287/07, the following activities are prescribed as drinking water threats under the *Clean Water Act, 2006*:

1. The establishment, operation, or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.
22. The establishment and operation of a liquid hydrocarbon pipeline.

The prescribed threat activities numbers 19 and 20 are water quantity threat activities, while the rest are water quality threat activities. The circumstances of occurrence that define whether an activity is a significant, moderate, low or no risk are defined in the Ministry of the Environment, Conservation and Parks (MECP) Tables of Drinking Water Threats available here:

<https://www.ontario.ca/page/tables-drinking-water-threats>



## Environmental Assessment Study

### NOTICE OF PUBLIC INFORMATION CENTRE #1 AND REVISED PROJECT SCHEDULE SUPPLY CAPACITY INCREASE FOR PALGRAVE WELL #4

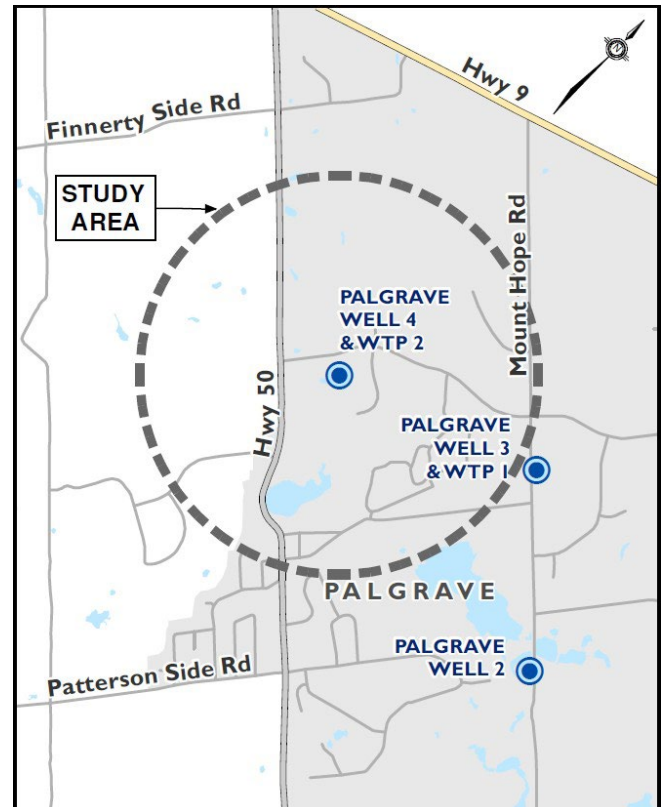
#### Background

The Region of Peel owns and operates the Palgrave – Caledon East Drinking Water System a groundwater-based system, supplying drinking water to the communities of Caledon East, Palgrave, Palgrave Estates, Mono Road, Albion, Centreville, and Cedar Mills, in the Town of Caledon. The system is currently supplied by six (6) municipal groundwater sources located in Palgrave and Caledon East.

#### Class EA Study Process

The Region is undertaking a Municipal Class Environmental Assessment study to evaluate and identify the necessary upgrades/modifications resulting from a proposed increase in water taking capacity of the existing municipal production well, Palgrave Well #4, located at 9 Buckstown Trail. An increase of water taking of Palgrave Well #4 will provide additional supply capacity to the existing Caledon East/Palgrave Drinking Water System to meet the long-term water needs of the serviced area.

A Notice of Commencement for the Supply Capacity Increase for Palgrave Well #4 was issued to advise the starting of the project as a Schedule B project. The Class EA study is now being conducted as a Schedule 'C' project according to the requirements of the Municipal Class Environmental Assessment document (October 2000, as amended in 2007, 2011 & 2015). The study includes an evaluation of alternative solutions and alternative design concepts, an assessment of potential impacts associated with the required works/infrastructure and development of measures to mitigate identified impacts.



As part of the study, a first Public Information Centre (PIC) is planned to allow interested individuals to learn more about the project, activities completed to-date, the preliminary preferred recommended solution, and to provide an opportunity to obtain your feedback on the study.

Given the COVID-19 situation, PIC #1 will be held virtually through the Region's website. Public Information Centre material will be available on the website from: Monday, February 14, 2022, until Friday, March 4, 2022.

You are encouraged to review the Public Information Centre #1 material and provide your feedback, questions or comments. All content and instructions on how to submit questions or comments will be posted on the project webpage: <https://www.peelregion.ca/public-works/environmental-assessments/caledon/palgrave-ea-well4.asp>

Comments received through the course of the study will be considered in finalizing the preferred design concept to accommodate the supply capacity increase of the Palgrave Well #4.

Anyone who wishes to comment on or to be involved in this Municipal Class Environmental Assessment study should indicate their interest, preferably in writing to either of the project team members listed below:

**Erin Ihnat**  
Region of Peel  
[erin.ihn timer@peelregion.ca](mailto:erin.ihn timer@peelregion.ca)



**Sandra Rodriguez**  
CIMA+  
[sandra.rodriguez@cima.ca](mailto:sandra.rodriguez@cima.ca)

The Notice of PIC was first issued on February 3, 2022