Stouffville Water System Upgrades

York Water System Upgrades: Community of Stouffville Class Environmental Assessment

Open House #1
November 23, 2017

York Region

Class EA Study Area

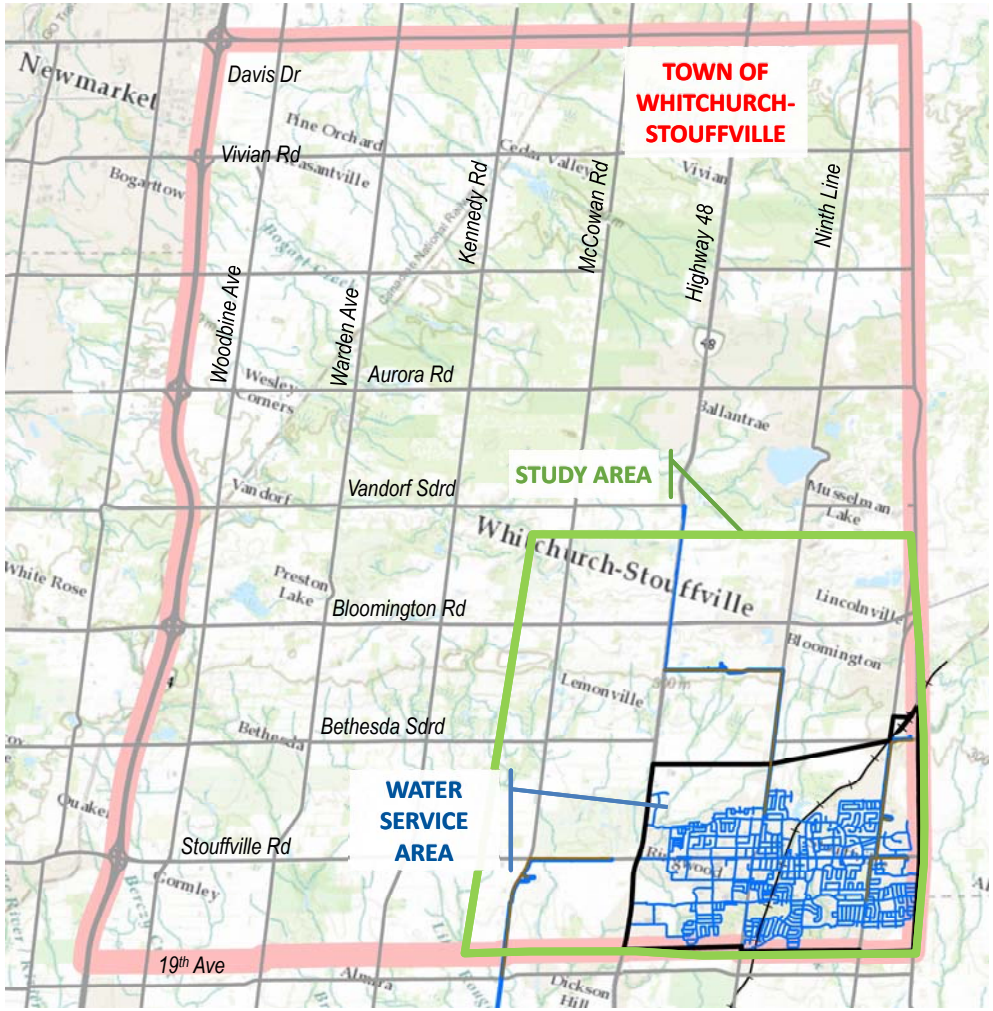
The Study Area extends beyond the Service Area.

Community of Stouffville Service Area

The Stouffville Water Service Area includes the regional groundwater well facilities, the elevated tanks, the lake-based water supply infrastructure, and the area containing all currently serviced residents.

Class EA Study Area

The Class EA Study Area includes the water service area and the lands that could be impacted by any new facilities.



Study Background

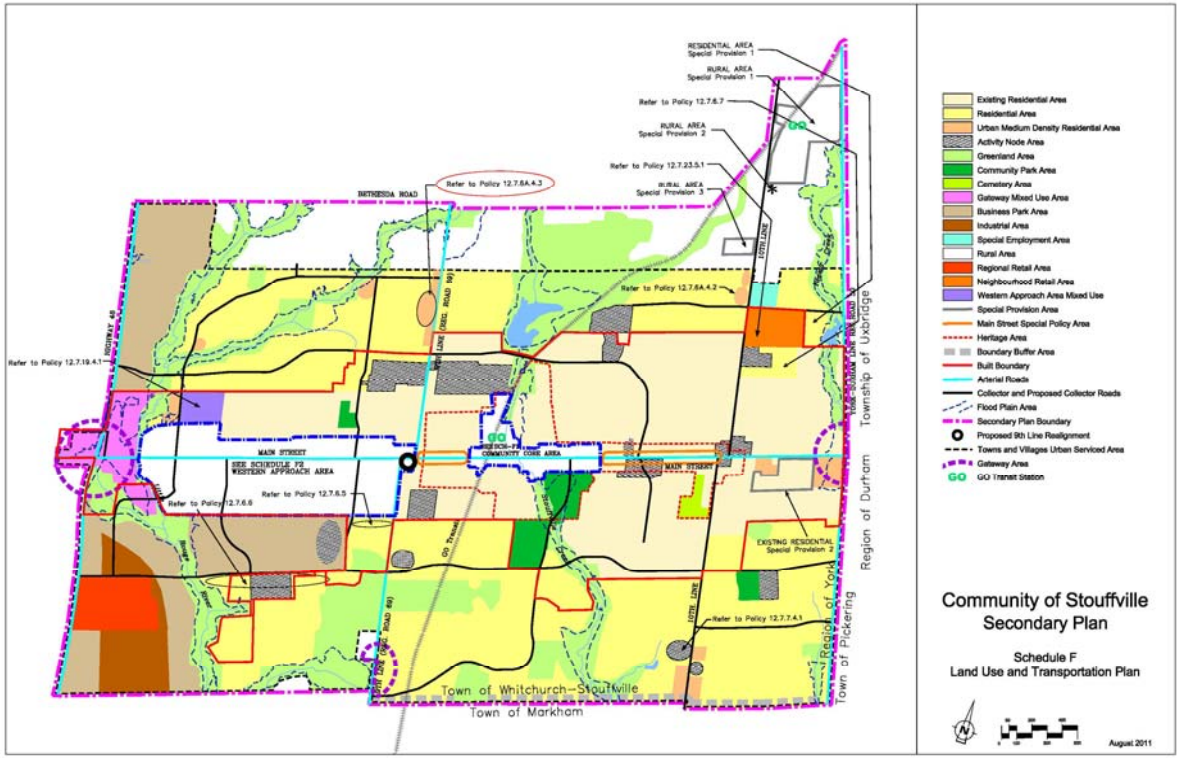
Why are we doing an Environmental Assessment?

Growth in the Community of Stouffville

The Region is reviewing the water supply and storage needs for the Community of Stouffville through to 2041.

Regional Water Infrastructure

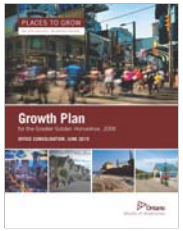
The Region must determine how to supply water to the community, and ensure that the appropriate water storage volumes are available.



Source: Town of Whitchurch-Stouffville Official Plan

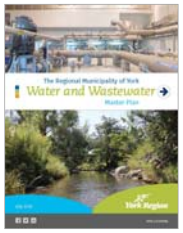
Other Studies & Reports

This Class EA study considers the following documents and studies.



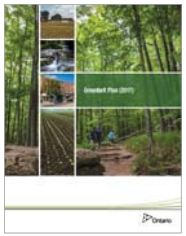
Places to Grow is the Provincial Policy which establishes growth within the Greater Golden Horseshoe Area (including York Region).

The **York Region Official Plan** establishes the planned population projections and water servicing requirements.

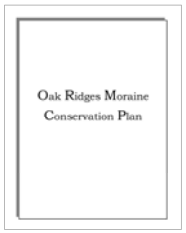


The **York Region 2016 Water and Wastewater Master Plan** establishes the water supply and servicing strategy for all communities within the Region.

We are coordinating with the **Town of Whitchurch-Stouffville Water and Wastewater Master Plan** to ensure that objectives are aligned.

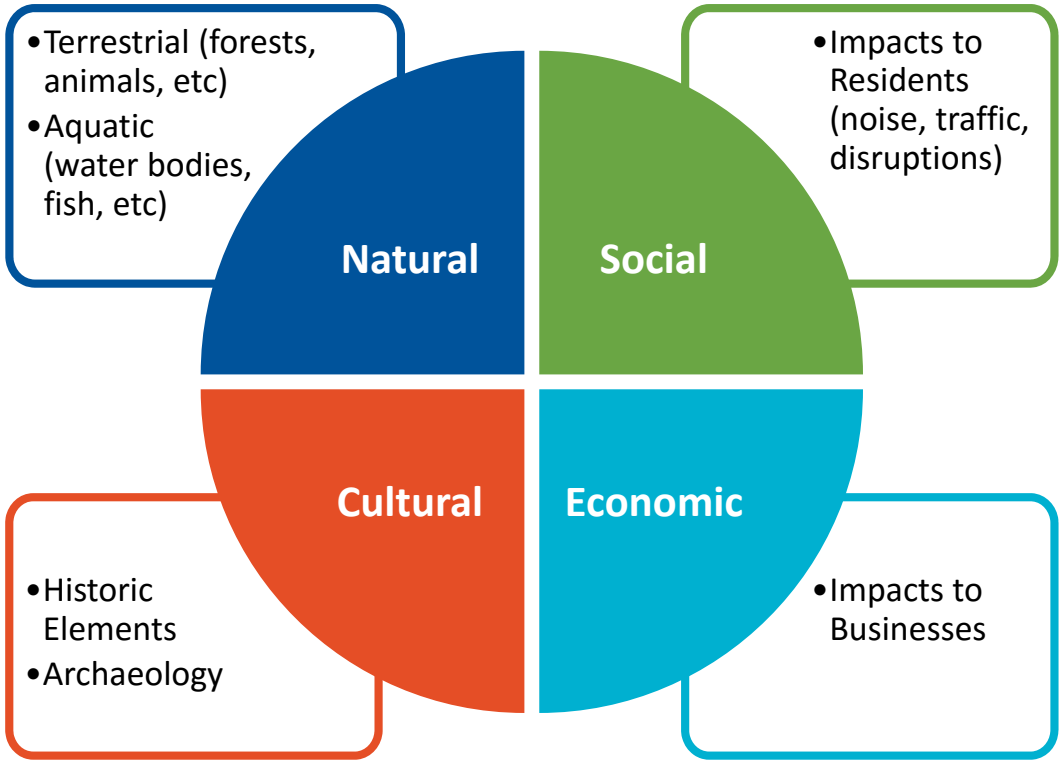


The **Oak Ridges Moraine and Greenbelt Plans** place environmental restrictions on infrastructure projects, recognizing the sensitivity of the lands within the Oak Ridges Moraine and Greenbelt Areas.



Class EA Process Explained

The Class EA Process ensures that the environment is protected.



Public Consultation

Through the Class EA process, there are several opportunities for you to provide input:

- Notice of Commencement (November 2017)
- Public Open Houses:
  - **Open House #1: Tonight**
  - Open House #2: Spring 2018
- Notice of Completion (Fall 2018)

We want to hear from you!

- Comments and concerns
- Local knowledge

Where We Are

We are currently progressing through Phase 2.

Identify the Problem

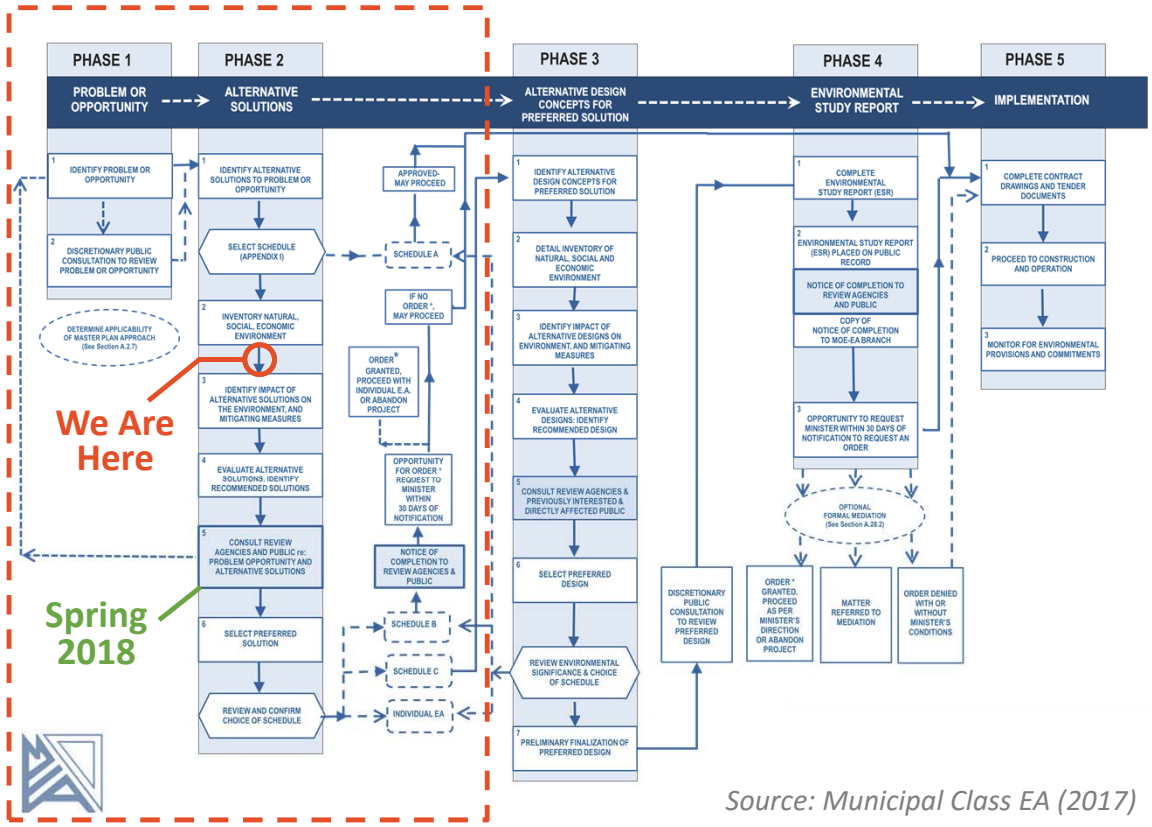
Investment in water facilities will be required to ensure that the level-of-service in Stouffville will be maintained through to 2041.

Identify Alternative Solutions

Several viable supply and storage alternatives are being considered.

Inventory of the Environments

We have identified the Natural, Socio-Cultural, Archeological and Geotechnical considerations.

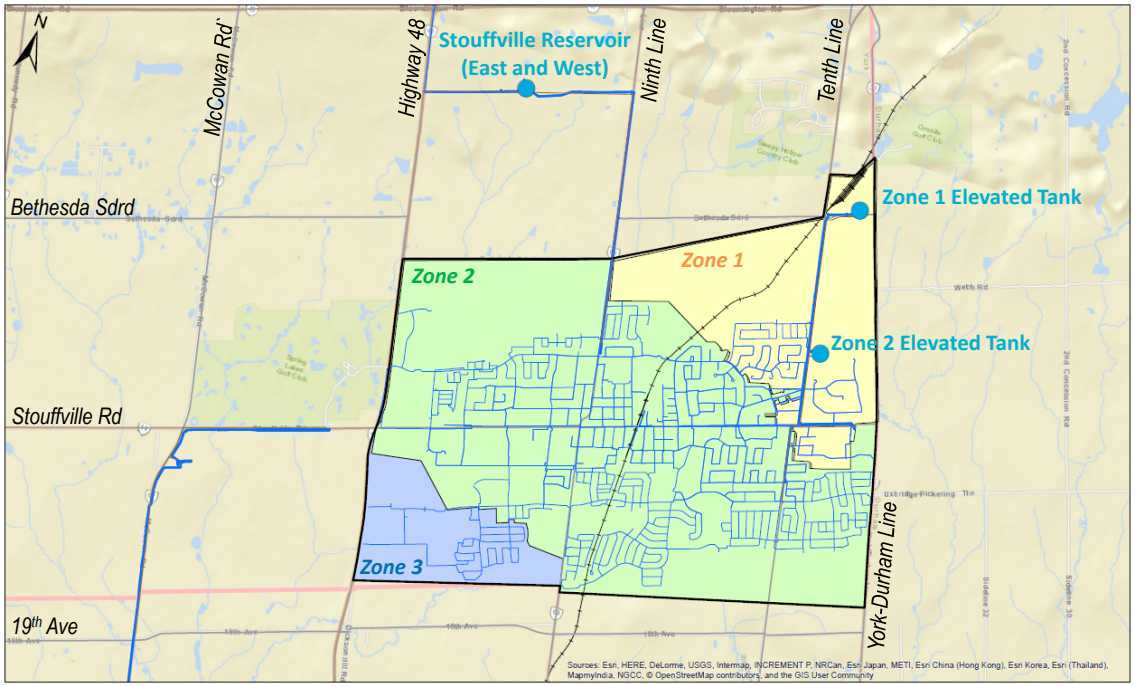


Source: Municipal Class EA (2017)

Extent of Present 'Schedule B' Study

Existing Water Storage Facilities

What water storage facilities currently exist?



Current Water Storage Capacity

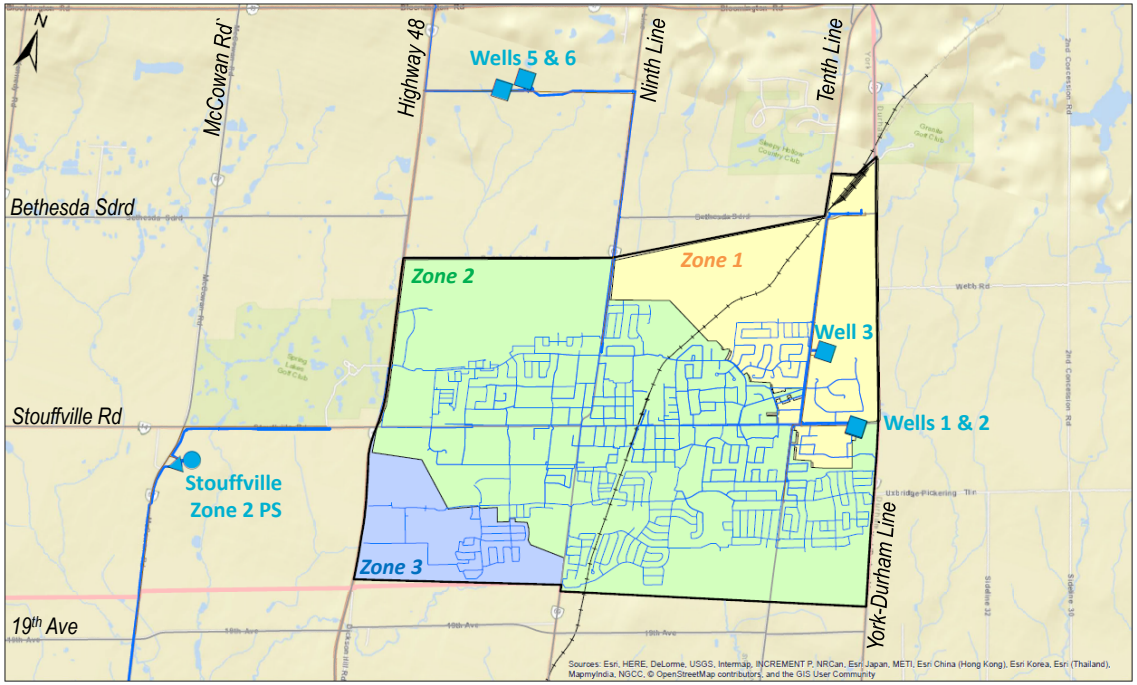
The Storage facilities are the responsibility of the Region, and currently consist of:

- Zone 1 Elevated Tank
- Zone 2 Elevated Tank
- Stouffville Reservoir (East and West Cells)

	Year Constructed	Volume (m^3)
Stouffville Reservoir (East Cell)	1967	2,136
Stouffville Reservoir (West Cell)	1967	2,996
Zone 1 Elevated Tank	2007	6,140
Zone 2 Elevated Tank	1983	3,400
TOTAL		**14,672**

Existing Water Supply Facilities

What water supply facilities currently exist?



Current Water Supply Capacity

The supply infrastructure is the responsibility of the Region, and currently consists of:

- Five groundwater supply wells
- Existing lake-based supply, from the McCowan Reservoir

	Year Constructed	Permitted Capacity (m^3/d)
Well No. 1	1999	2,946
Well No. 2	1999	2,946
Well No. 3	1983	2,946
Well No. 5	1967	3,110
Well No. 6	1967	2,290
Stouffville Zone 2 PS	2009	15,000
TOTAL		**29,238**
FIRM		**26,128**

Class EA Problem Statement

Environmental Assessments must have clear Problem Statements.

There is insufficient storage capacity to service the approved growth of Stouffville, and existing facilities are nearing the end of their service life.

The 2016 York Region Water and Wastewater Master Plan Update identified the need to construct additional water storage infrastructure in Zone 2 (elevated tank) and additional inter-zone water supply capacity (pumps and valves). The current water storage and supply infrastructure is reaching the end of their service life and new infrastructure is needed.

The Class EA process will assess the water supply and water storage alternatives.

The goal is to meet the long-term supply and storage needs for all three Stouffville water pressure zones while also considering what will best meet the needs of York Region and the community. Providing service to 2041 may require an increase in the storage volumes.

Future Water Storage Needs

What is the remaining service life?
What do we need for the future?

Zone 2 Storage Volumes are adequate until 2021.

- Stouffville Reservoirs service life to about 2028
- Zone 2 Elevated Tank service life to about 2034.

As facilities age, we need to maintain or replace the water storage capacity. As Stouffville grows, new facilities may be needed.

Water Storage Alternative Solutions:

1. **Do Nothing:** Maintain existing storage system, and reinvest in existing storage facilities as necessary.
2. **Limit Community Growth:** Limit growth so that additional storage facilities are not needed.
3. **Implement Water Conservation:** Defer capital investments in new storage facilities
4. **Build Additional Storage:** Construct a new elevated tank or in-ground reservoir.
5. **Facilitate Shared Fire Storage:** Provide pipes and pressure-reducing valves to make better use of existing storage across zones.

Future Water Supply Needs

What is the remaining service life?
What do we need for the future?

The existing water supply facilities are aging, and the Region needs to plan for the future.

- Wells 5 and 6 service life to about 2027
- Well 3 service life to about 2043

As facilities age, we need to maintain or replace the capacity of the water supply infrastructure.

Water Supply Alternative Solutions:

1. **Do Nothing:** Maintain existing supply system, and reinvest in existing wells as necessary.
2. **Limit Community Growth:** Limit growth to the capacity of the existing supply.
3. **Implement Water Conservation:** Defer capital investments in new supply facilities by reducing demand
4. **Increase Water Supply from Lake-Based System:** If wells are retired, compensate for lost supply through increases to the existing lake-based supply
5. **Increase Capacity of Existing Wells:** If wells are retired, compensate for lost supply through increases to the remaining existing wells
6. **Develop New Wells:** If wells are retired, compensate for lost supply through new well and treatment processes

Natural Environment

We have reviewed the significant natural features.

Greenbelt/Oak Ridges Moraine

The majority of the Study Area is within the Greenbelt and Oak Ridges Moraine areas. Infrastructure is permitted, with certain restrictions.

Wetlands and Waterbodies

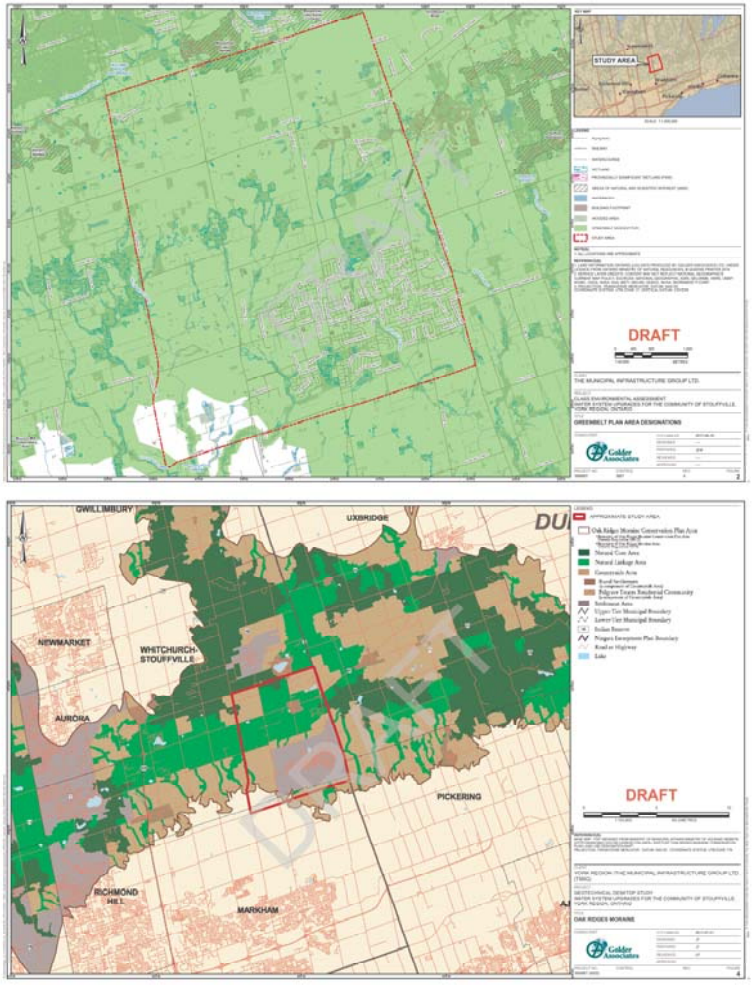
Several wetlands and significant aquatic features exist in the Study Area.

Wooded Areas

Isolated wooded areas are present.

Areas of Natural and Scientific Interest (ANSI)

Isolated ANSIs are present.



Archaeology

We have reviewed the archaeological considerations.

Areas of Archaeological Potential

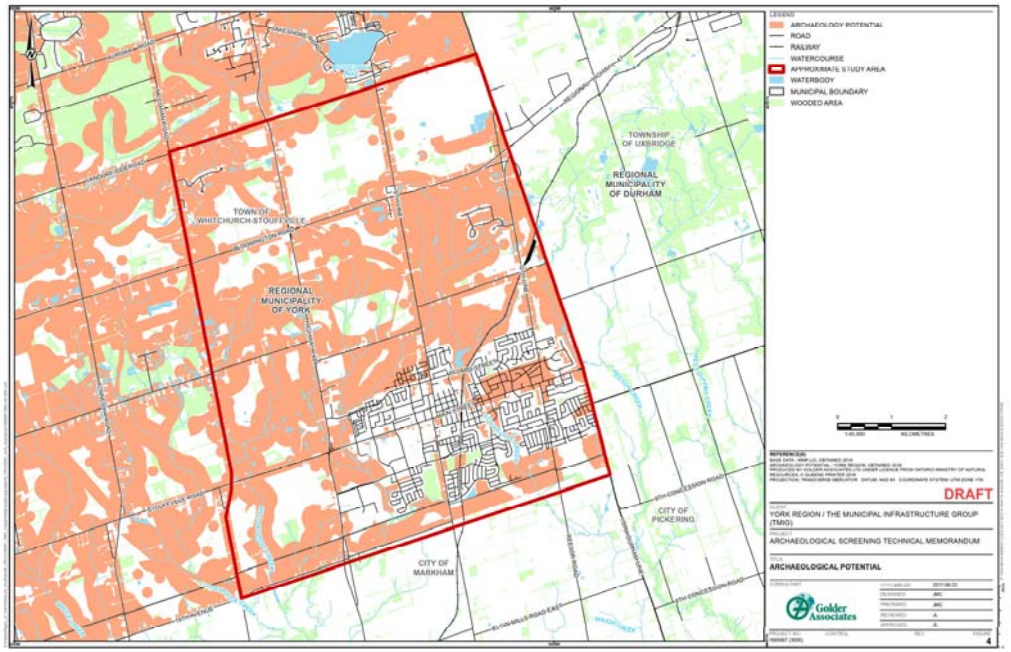
There are numerous creeks and rivers, which indicate a possibility of archaeological artifacts.

Known Archaeological Sites

There are 38 registered sites within the Study Area. These cannot be publicly identified, but these will be avoided to the extent possible when site options are being developed.

Mantle Site

An ancestral Huron (Wendat) village was discovered within the community in 2002.



Cultural Heritage

We have reviewed the socio-cultural considerations.

Heritage Properties / Heritage Area

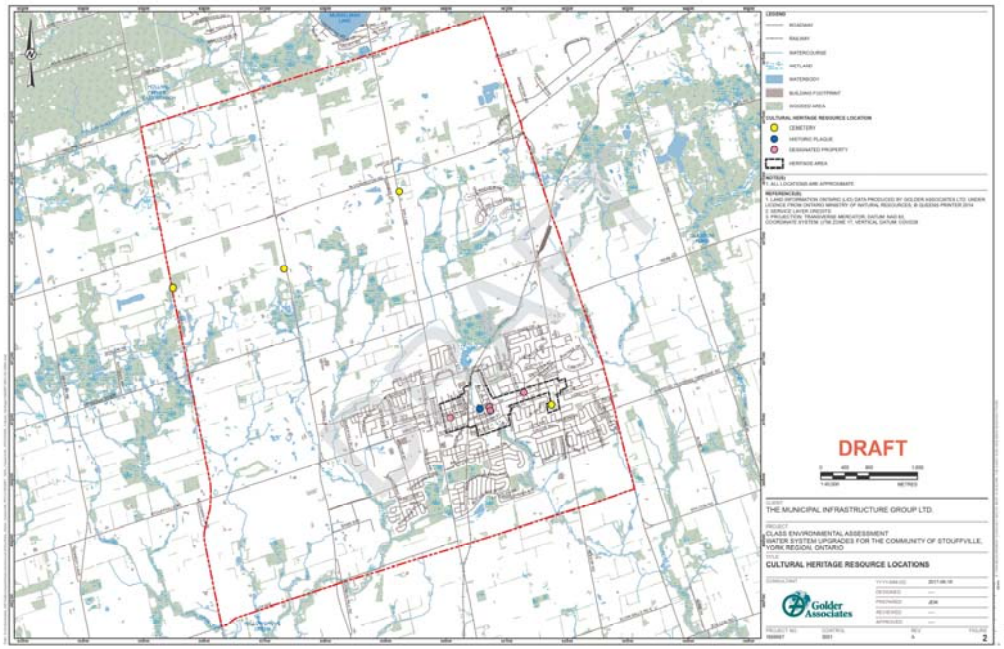
There are four designated ‘Heritage Properties in the Study Area, located within a Heritage Area in downtown Stouffville. It is not a designated Heritage Conservation District, however.

Cemeteries

There are four cemeteries within the Study Area.

Cultural Heritage Assessment

Additional investigation will be considered if additional land is required for potential new facilities.



Geotechnical

We have reviewed the Geology of the Study Area.

Surficial Geology

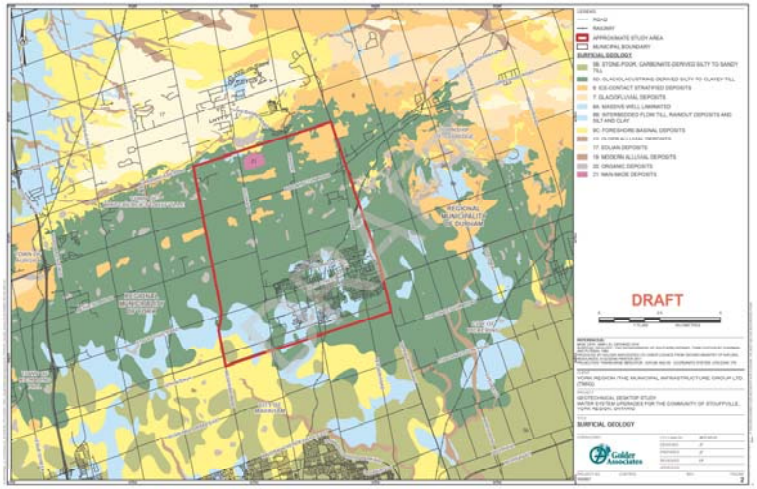
The surficial soils generally consist of silt and clays. These are glacially-derived, and could contain cobbles and boulders which could impact excavations.

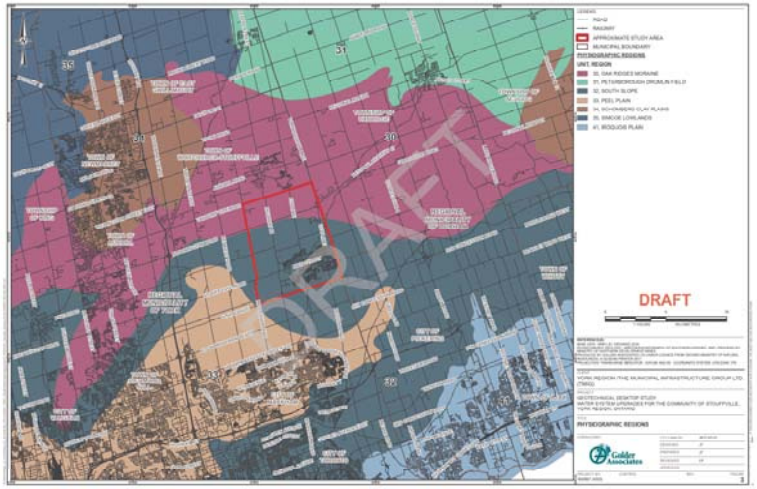
Bedrock

Bedrock is mapped at approximately 140 metres below surface within the Study Area.

Groundwater

Shallow groundwater is present in the southern portion of the Study Area. Artesian conditions are anticipated in some areas, and will be reviewed further.





Next Steps

What are the next steps in the Class EA Process?

Technical Review
Detailed review of the specific technical needs of each alternative solution.

Review of Environmental Impacts
Assess how each of the Alternative Solutions could impact the Environments.

Evaluate the Alternative Solutions
Qualitative analysis of the relative impacts of each of the Alternative Solutions.

Recommend the Preferred Alternatives
Following the evaluation, formal Supply and Storage recommendations will be provided.

Open House #2 (Spring 2018)
Present the evaluation and recommendation to the public and stakeholders. Request comment.

Project File Report
Document the process and confirm the Preferred Solution.

We Want to Hear from You!

Your feedback is very important.
Let us know what you think.

Speak with Us

If any of the information presented is not clear, please approach a member of the Project Team (we're wearing name tags).

Complete a Comment Form

Comment forms and pens are available on the tables in the room. All responses are reviewed and considered, and become part of the Project File. Personal identifying information will be kept confidential.

Follow the Process

Information will be updated on the Region's Website: **york.ca/ea**
You can also call Shivan Narine (Region PM) at 1-877-464-9675 (x75370) or e-mail StouffvilleWater@york.ca to request project status updates.