


Water and Wastewater Servicing in the Nobleton Community
Municipal Class Environmental Assessment Study



Online Open House No. 2

Wednesday, November 25th, 2020
Online Sessions: 10 to 11 a.m.; 2 to 3 p.m.; and 7 to 8 p.m.



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Welcome to York Region's Online Open House Number 2 for the Municipal Class Environmental Assessment Study of Water and Wastewater Servicing in the Nobleton Community. You can download slides for this open house, stay informed about the project and sign up for updates by visiting the project webpage at york.ca/nobleton.

We would like to start by acknowledging that we are on the traditional territories of the Wendat, the Haudenosaunee, and the Anishinaabe peoples, whose presence here continues to this day. We also would like to acknowledge this is the treaty lands of the Mississaugas of the Credit and thank them and other Indigenous peoples for sharing this land with us.

We acknowledge this land and the people as a first step towards reconciliation. A shared understanding of how our collective past brought us to where we are today will help us walk together into a better future.

Project Background

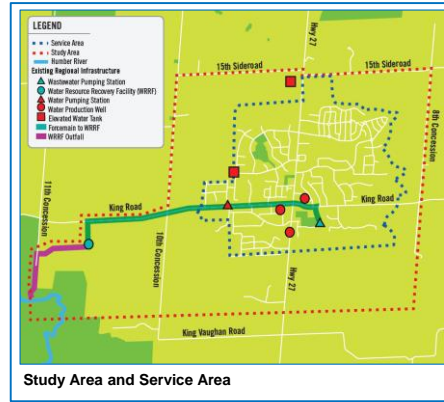
Problem/Opportunity Statement for this Municipal Class Environmental Assessment (Class EA) Study

- To identify **long-term water and wastewater servicing solutions** to support forecasted growth in Nobleton to 2041 while **optimizing the use of existing Regional infrastructure**.

Purpose of this Open House

- Present the **alternatives considered**
- Share the **evaluation of alternatives**
- Share the **recommended solutions**
- **Obtain your input**

We want to hear from you!



Study Area and Service Area

Service Area: Community of Nobleton boundary including current and planned service areas

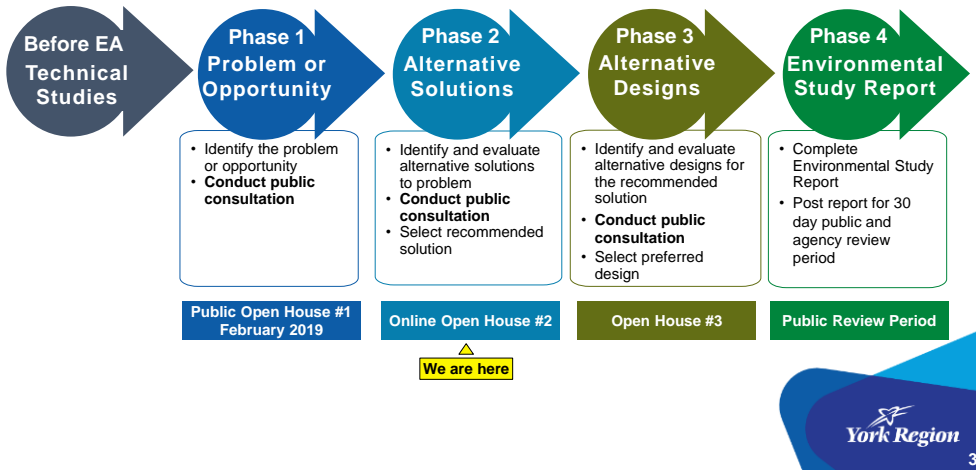
Study Area: All serviced area *plus* an assessment of potentially impacted lands due to new infrastructure requirements

York Region

The purpose of this Class Environmental Assessment is to identify long-term water and wastewater servicing solutions for the Community of Nobleton. These solutions will support growth to the year 2041 and focus on optimizing the use of existing regional infrastructure.

This Open House will present the alternatives considered, share our evaluation of these alternatives, present the recommended solutions and obtain your input. Your input is important to us and we want to hear from you!

Schedule C Municipal Class Environmental Assessment Study Process

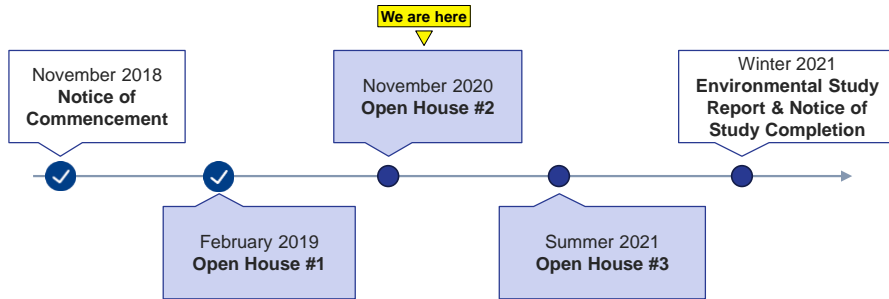


This study is following the process for Municipal Class Environmental Assessment studies, or EA for short. An environmental assessment study is a planning process for municipal infrastructure to assess the environmental impacts of proposed initiatives before they are carried out. We are in Phase 2 of the project: Identify and Evaluate Alternative Solutions to the Problem. Work completed to date has incorporated input received during Public Open House Number 1 in February 2019.

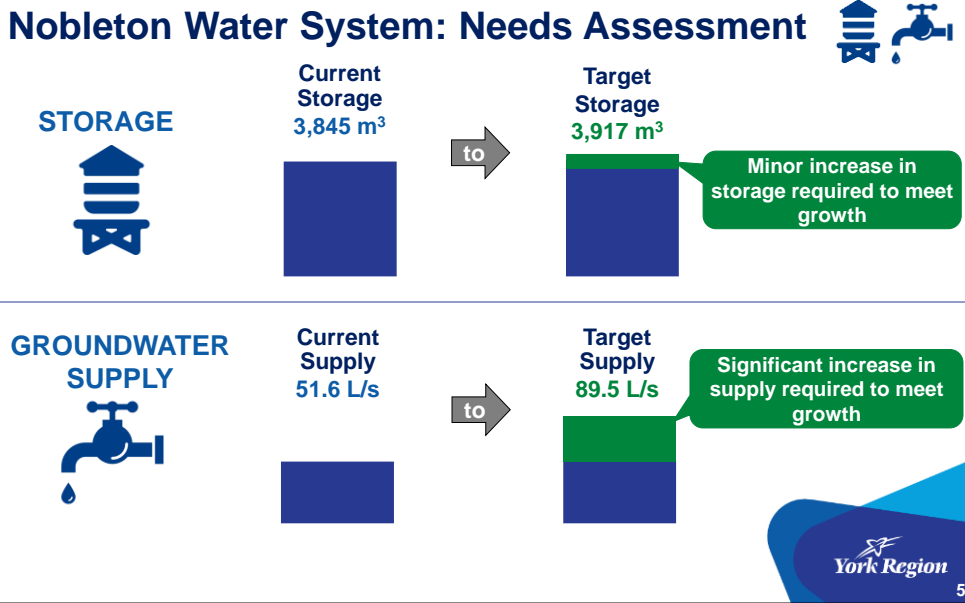
Project Timeline



Stay informed throughout the study process by visiting the York Region EA Website (york.ca/nobletonea).

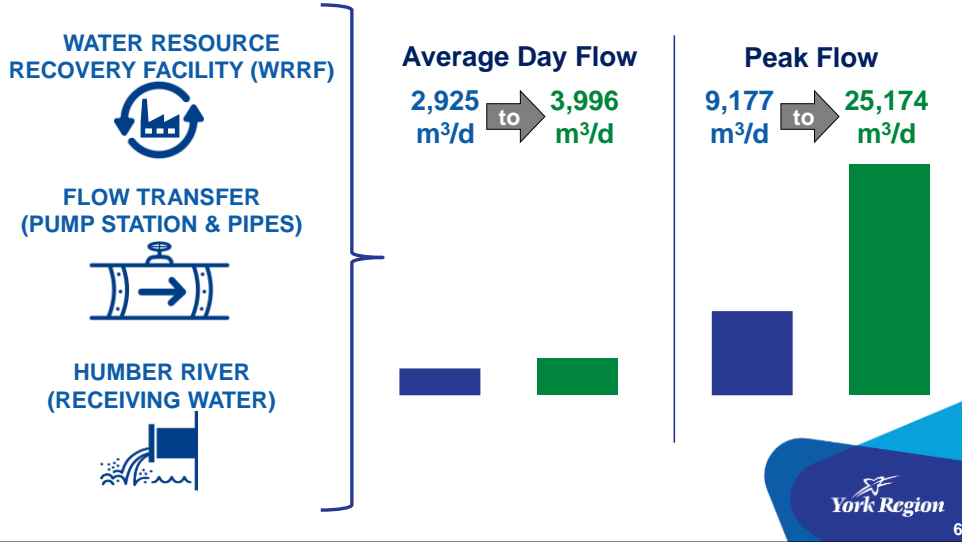


Stay informed throughout the study process by visiting York Region's Environmental Assessment Website at york.ca/nobletonea. This Open House will be followed by Phase 3 of the Class Environmental Assessment Process where Alternative Designs for the Recommended Solution are identified and evaluated. This will be followed by a third and final Open House in summer 2021.



In Phase 1 of this Environmental Assessment study, Nobleton’s Water System storage and supply needs were assessed. The results demonstrated that to meet the forecasted growth there is a need for a minor increase in storage capacity and a significant increase in water supply.

Nobleton Wastewater System: Needs Assessment



Similarly, Nobleton's Wastewater System needs were assessed, and it was identified the daily and peak wastewater system capacity both need to be increased.

Plans for Consideration

This Class EA must also consider input from various existing documents.



Places to Grow



York Region's 2016 Water and Wastewater Master Plan



Humber River Watershed Plan



King Township Official Plan (Draft)



Oak Ridges Moraine Conservation Plan



Clean Water Act / Source Protection Plan



York Region's 2010 Official Plan



Greenbelt Plan



Provincial Policy Statement



This Class Environmental Assessment considers input from various existing plans. This includes all existing and proposed regulations and policies laid out in the documents shown, such as the York Region Water and Wastewater Master Plan, the Greenbelt Plan and King Township's Official Plan.

Technical Studies



Natural Environment Impact Assessment

- Identification of natural features (wetlands, forests, species at risk, etc.)



Hydrogeological Assessment

- Review of groundwater conditions in the Study Area (existing wells, groundwater levels, etc.)



Cultural Heritage Resource Assessment

- Review of cultural heritage resources in the Study Area



Archaeological Assessment

- Review of potential archaeological resources in the Study Area

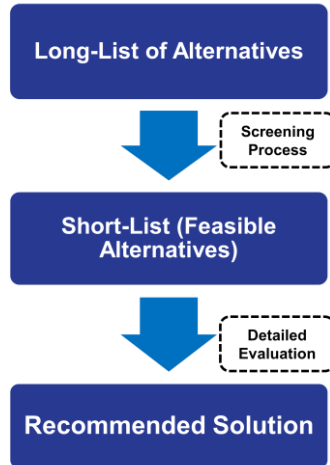


Geotechnical Assessment

- Assessment of subsurface soil conditions











To inform the evaluation of alternatives, several technical studies were undertaken to better understand the existing natural, social and built environments within the Study Area. These studies indicated how the natural environment, groundwater conditions, cultural heritage resources, potential archaeological resources and soil conditions may impact or be impacted by the various alternatives being considered.

Evaluation Process



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The evaluation process for water and wastewater servicing alternatives started with the development of a long-list of alternatives. Alternatives were screened based on whether they would be capable of providing enough supply, storage capacity or wastewater capacity to meet the forecasted growth and whether they would comply with all existing and/or proposed regulations, plans and policies. Alternatives which passed screening were included in a short-list of feasible alternatives. Following a detailed evaluation, recommended solutions were identified for water supply, water storage and wastewater servicing.

 Screening Long-List of Alternative Water Supply Solutions		Evaluation Process 
Solutions Considered to Address Water Supply Needs	Long-List of Alternative Water Supply Solutions Screening Summary	Screening Status
1. Do Nothing - Permit Growth Without Increasing Capacity	<ul style="list-style-type: none"> Unable to provide supply to meet forecasted growth Carried forward for comparative purposes only 	 Fail
2. Limit Growth Up To Existing Capacity	<ul style="list-style-type: none"> Unable to provide supply to meet forecasted growth 	 Fail
3. Encourage Water Conservation To Reduce Usage	<ul style="list-style-type: none"> Unable to provide supply to meet forecasted growth Recommended conservation be carried forward as separate ongoing program to help reduce water supply needs 	 Fail
4. Increase Capacity of Existing Wells (Well #2, #3 and/or #5)	<ul style="list-style-type: none"> Unable to increase capacity enough to provide enough supply to meet forecasted growth 	 Fail
5. Increase Capacity of Existing Well #2 and Add a New Production Well	<ul style="list-style-type: none"> Able to provide supply to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	 Pass
6. Increase Capacity with Two New Production Wells	<ul style="list-style-type: none"> Able to provide supply to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	 Pass
7. Develop a Blended System with the Addition of a Lake-Based Water Supply Connection to the Existing Wells	<ul style="list-style-type: none"> Able to provide supply to meet forecasted growth Carried forward conditionally. The province's long-term plan, A Place to Grow, only allows the addition of a lake-based supply connection if well supply cannot meet the necessary quality or quantity requirements. 	 Conditional Pass
8. New Water Supply Source from Humber River	<ul style="list-style-type: none"> Unable to provide sufficient supply from Humber River to meet forecasted growth 	 Fail

To address the previously identified water supply need, a long-list of water supply alternatives was developed. Alternatives were screened based on whether they would be capable of providing enough supply to meet the forecasted growth and whether they comply with all existing and/or proposed regulations, plans and policies. Three solutions passed screening and were included in the short-list of feasible supply alternatives.

Do Nothing did not pass the screening because it cannot provide enough supply to meet forecasted growth. It is carried forward for comparative purposes only.

Water Conservation did not pass the screening because it cannot provide enough supply on its own. However, it is recommended conservation be carried forward as an ongoing program in York Region, to help reduce water supply needs.

Developing a blended system was carried forward conditionally since the province's long-term plan, A Place to Grow: Growth Plan for the Greater Golden Horseshoe, only allows the addition of a lake-based supply connection if well supply cannot meet the necessary quality or quantity requirements.

Short-List of Alternative Water Supply Solutions

Three alternatives passed the screening process and were selected for detailed evaluation:

1) Supply Alternative A

- Increase Capacity of Existing Well #2 and Add a New Production Well

2) Supply Alternative B

- Increase Capacity with Two New Production Wells

3) Supply Alternative C

- Develop a Blended System with the Addition of a Lake-Based Water Supply Connection to the Existing Wells

Evaluation Process



Three alternatives passed the screening process and were included in the short-list. The short-listed water supply alternatives are:

Supply Alternative A - increase the capacity of an existing well #2 and add a new production well;

Supply Alternative B - increase capacity with two new wells; and

Supply Alternative C – develop a blended system with the addition of a lake-based water supply connection to the existing groundwater supply.

Water Supply Alternatives (Well Sites Considered)

Eight potential new well sites were narrowed down to two, Site F and Site H. Sites were narrowed down to those that would provide the best potential groundwater supply, make the most sense logistically, be simplest to implement and best meet all applicable policies and regulations. This led to the following water supply sub-alternatives:

1) Supply Alternative A1:

- Increase Capacity at Existing Well #2
- Add New Well at Site F

2) Supply Alternative A2:

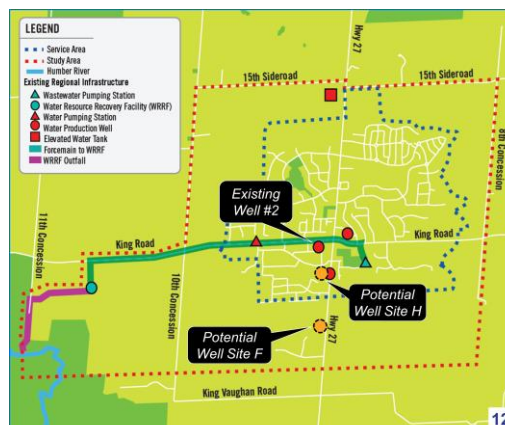
- Increase Capacity at Existing Well #2
- Add New Well at Site H

3) Supply Alternative B:

- Add New Well at Site F
- Add New Well at Site H

4) Supply Alternative C:

- No change to wells
- Add Lake-Based Supply



As part of the development of water supply alternatives, it was critical to establish potential sites for new wells. Eight potential sites were narrowed down to two preferred sites (referred to as Site H and Site F). Well sites were narrowed down to those that would provide the best potential groundwater supply, make the most sense logistically, be simplest to implement and best meet all applicable policies and regulations.

These two potential well sites are considered under Supply Alternatives A and B. This led to the following water supply sub-alternatives:

Alternative A1 considers this new well at Site F whilst Alternative A2 considers this new well at Site H.

Alternative B considers two new wells, one at Site F and one at Site H.

Alternative C involves the addition of a lake-based supply but does not involve any new wells.



Screening Long-List of Alternative Water Storage Solutions



Solutions Considered to Address Water Supply Needs	Long-List of Alternative Water Supply Solutions Screening Summary	Screening Status
1. Do Nothing - Permit Growth Without Increasing Capacity	<ul style="list-style-type: none"> Unable to provide storage capacity to meet forecasted growth Carried forward for comparative purposes only 	Fail
2. Limit Growth Up To Existing Capacity	<ul style="list-style-type: none"> Unable to provide storage capacity to meet forecasted growth 	Fail
3. Encourage Water Conservation To Reduce Usage	<ul style="list-style-type: none"> Unable to provide storage capacity to meet forecasted growth Recommended conservation be carried forward as part of overall servicing strategy 	Fail
4. Modify Existing Design Guidelines' Storage Requirements	<ul style="list-style-type: none"> Does not meet existing Design Guidelines and there is not enough evidence to support modification of Guidelines 	Fail
5. New Storage Facility (Replace Existing Nobleton South Elevated Tank Storage Facility With Bigger Storage Facility)	<ul style="list-style-type: none"> Able to provide storage capacity to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	Pass
6. Increase Overall Well Supply to Avoid New Storage	<ul style="list-style-type: none"> Able to provide storage capacity to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	Pass

To address the previously identified storage need, a long-list of water storage alternatives was also developed. Two solutions passed screening and were included in the short-list of feasible storage alternatives.

Do Nothing did not pass the screening because it cannot provide enough storage capacity to meet forecasted growth. It is carried forward for comparative purposes only.

Water Conservation did not pass the screening because it cannot provide enough storage capacity on its own. However, it is recommended conservation be carried forward as part of overall servicing in York Region.

Short-List of Alternative Water Storage Solutions

Two alternatives passed the screening process and were selected for detailed evaluation:

1) Storage Alternative A

- Add New Storage Facility (Replace Existing Nobleton South Elevated Tank Storage Facility With Bigger Storage Facility)

2) Storage Alternative B

- Increase Overall Well Supply to Avoid New Storage

Evaluation Process

Long-List of Alternatives

Screening Process

Short-List (Feasible Alternatives)

Detailed Evaluation

Recommended Solution










 York Region

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The short-listed water storage alternatives are:

Storage Alternative A – add a new storage facility, replacing existing Nobleton South Elevated Tank storage facility with a bigger storage facility and;

Storage Alternative B – increase overall well supply to avoid needing new storage.

 Screening Long-List of Alternative Wastewater Servicing Solutions		Evaluation Process Long-List of Alternatives Screening Process
Solutions Considered to Address Water Supply Needs	Long-List of Alternative Water Supply Solutions Screening Summary	Screening Status
1. Do Nothing - Permit Growth Without Increasing Capacity	<ul style="list-style-type: none"> Unable to provide wastewater capacity to meet forecasted growth Carried forward for comparative purposes only 	 Fail
2. Limit Growth Up To Existing Capacity	<ul style="list-style-type: none"> Unable to provide wastewater capacity to meet forecasted growth 	 Fail
3. Reduce Inflow and Infiltration	<ul style="list-style-type: none"> Unable to provide wastewater capacity to meet forecasted growth Recommended inflow/infiltration reduction be carried forward as part of overall servicing strategy to help reduce future infrastructure requirements 	 Fail
4. Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton Water Resource Recovery Facility (WRRF) and Outfall	<ul style="list-style-type: none"> Able to provide wastewater capacity to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	 Pass
5. Construct a New Pumping Station, Forcemain and New Water Resource Recovery Facility (WRRF) and Outfall	<ul style="list-style-type: none"> Able to provide wastewater capacity to meet forecasted growth while meeting existing and proposed regulations, plans and policies 	 Pass
6. Convey Additional Flows to Neighbouring Water Resource Recovery Facilities	<ul style="list-style-type: none"> Able to provide wastewater capacity to meet forecasted growth Does not meet requirements of Greenbelt Plan and inconsistent with recommendations of York Region Water and Wastewater Master Plan 	 Fail
7. Convey All Flows to Lake-based Treatment Systems	<ul style="list-style-type: none"> Able to provide wastewater capacity to meet forecasted growth Does not meet requirements of Greenbelt Plan and inconsistent with recommendations of York Region Water and Wastewater Master Plan 	 Fail
8. Maintain Existing and Convey Additional Flows to Lake-based Treatment Facilities	<ul style="list-style-type: none"> Able to provide wastewater capacity to meet forecasted growth Does not meet requirements of Greenbelt Plan and inconsistent with recommendations of York Region Water and Wastewater Master Plan 	 Fail

To address previously identified wastewater servicing needs, a long-list of wastewater servicing alternatives was developed. Two solutions passed screening and were included in the short-list of feasible wastewater alternatives.

Do Nothing did not pass the screening because it cannot provide enough wastewater capacity to meet forecasted growth. It is carried forward for comparative purposes only.

Reduce Inflow and Infiltration did not pass the screening because it cannot provide enough wastewater capacity on its own. However, it is recommended this alternative be carried forward as part of the overall servicing strategy in York Region to help reduce future infrastructure requirements.

Short-List of Alternative Wastewater Servicing Solutions

Two alternatives passed the screening process and were selected for detailed evaluation:

1) Wastewater Servicing Alternative A

- Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton Water Resource Recovery Facility (WRRF) and outfall

2) Wastewater Servicing Alternative B

- Construct a New Pumping Station, Forcemain and New Water Resource Recovery Facility (WRRF) and outfall

Evaluation Process

Long-List of Alternatives

Screening Process

Short-List (Feasible Alternatives)

Detailed Evaluation

Recommended Solution

York Region

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Two alternatives passed the screening process and were included in the short-list. The short-listed wastewater servicing alternatives are:

Wastewater Servicing Alternative A – Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton Water Resource Recovery Facility (WRRF) and outfall;

Wastewater Servicing Alternative B – Construct a New Pumping Station, Forcemain and New Water Resource Recovery Facility (WRRF) and outfall.

Alternative Solutions Evaluation Criteria

When evaluating possible water and wastewater servicing solutions, a broad range of criteria were considered. Criteria were refined based on feedback obtained during Open House #1.

Natural Environment	Social & Cultural	Jurisdictional / Regulatory	Technical	Economic
<ul style="list-style-type: none">• Aquatic Vegetation and Wildlife• Terrestrial Vegetation and Wildlife• Groundwater Resources• Surface Water Resources• Greenhouse Gas Emissions	<ul style="list-style-type: none">• Short-term Community Impacts• Long-term Community Impact• Archaeological Sites• Cultural/Heritage Features	<ul style="list-style-type: none">• Land Requirements• Ability to Accommodate Potential Future Regulatory Changes• Permits and Approval	<ul style="list-style-type: none">• Constructability• Redundancy of Supply/Service• Resilience to Climate Change• Operations and Maintenance Requirements• Adaptability to Existing Infrastructure• Maximizing Use of Existing Infrastructure	<ul style="list-style-type: none">• Capital Cost• Lifecycle Cost• Land Acquisition Cost
				

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When evaluating each alternative, a broad range of criteria was considered. Each criteria falls under one of the five evaluation categories, as presented at Open House #1.

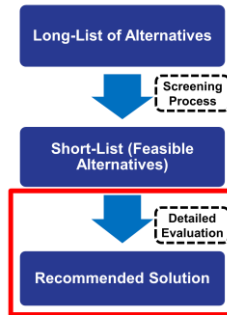
The five evaluation categories include: environmental, social and cultural, jurisdictional/regulatory, technical and economic.

Water Supply Alternatives Detailed Evaluation



Evaluation Category	Do Nothing	Supply A1: Increase Capacity of Existing Well #2 in Combination with New Production Well at Site F	Supply A2: Increase Capacity of Existing Well #2 in Combination with New Production Well at Site H	Supply B: Increase Capacity with Two New Production Wells	Supply C: Develop Blended System with Addition of Lake-Based Connection to Existing Wells
Natural Environment	●	●	●	●	●
Social & Cultural	●	●	●	●	●
Jurisdictional /Regulatory	●	●	●	●	●
Technical	●	●	●	●	●
Economic	●	●	●	●	●
Overall Rank	Not Applicable	2	1	3	4

Evaluation Process



Scoring Description

- Low Impact / Most Preferred
- Moderate Impact
- Most Impact / Least Preferred






As shown in the table, all of the short-listed water supply alternatives were scored under the five evaluation categories.

Of the four alternatives evaluated, Water Supply Alternative A2: Increase Capacity of Existing Well #2 in Combination with New Production Well at Site H ranked first overall.

The Do Nothing alternative did not pass screening and is shown here only for comparative purposes.

Water Supply Alternatives Detailed Evaluation: Summary of Evaluation








Evaluation Category	Summary of Evaluation
Natural Environment 	<ul style="list-style-type: none"> ▪ A1, A2 and B will have low/moderate impact to vegetation and wildlife and moderate greenhouse gas emissions ▪ C will have moderate to significant impact to vegetation and wildlife and high greenhouse gas emissions ▪ A1, A2 or B will have greater impact to groundwater resources than C, but not considered significantly greater
Social & Cultural 	<ul style="list-style-type: none"> ▪ All will have some short-term impacts during construction (increased traffic, noise, dust), C will have the greatest ▪ A1, B and C will have short-term impacts on traffic along Highway 27, C will have the most significant impacts ▪ A1, A2 and B have moderate long-term community impacts (water aesthetics, requires wellhead protection areas) ▪ A1, A2 and B have no impact on cultural or heritage features, C has some risk of impact
Jurisdictional /Regulatory 	<ul style="list-style-type: none"> ▪ All can accommodate potential future changes in drinking water quality requirements ▪ C crosses Greenbelt Plan's "Protected Countryside" making approvals difficult ▪ A1, B and C require land acquisition
Technical 	<ul style="list-style-type: none"> ▪ C provides best system redundancy (two sources) but requires the most construction and all new infrastructure ▪ A1, A2 and B will provide the required system redundancy ▪ A1 and A2 maximize use of existing Well Site #2, A2 also maximizes facility at Well Site #5 ▪ A1 and A2 require least operations and maintenance resources, B requires more (2 sites), C requires most (new water supply system)
Economic 	<ul style="list-style-type: none"> ▪ A2 has the lowest capital cost, A1 and B are moderate and C has the highest capital cost ▪ A1 and A2 have lowest overall total lifecycle cost, B is moderate and C is the highest ▪ A1, B and C all require land acquisition cost

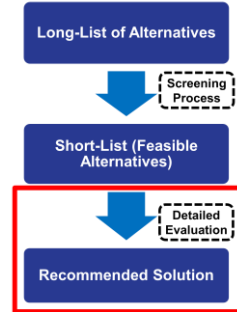
A summary of the detailed evaluation under each of the five evaluation categories is given here. This includes further details and information on each short-listed water supply alternative. The information included was used to score each alternative and determine the overall ranking of alternatives. The rationale behind scoring and ranking is provided here for reference. All open house materials, including this presentation, can be accessed at york.ca/nobleton.ca. This link will be provided again at the end of this presentation.

Water Supply Alternatives Detailed Evaluation: Highest Ranked Alternative - Alternative A2



Evaluation Category	Summary of Evaluation
Natural Environment 	A2 (along with A1 and B) ranked highest overall as they have least impact to aquatic/terrestrial vegetation and wildlife, surface water and groundwater resources and greenhouse gas emissions overall.
Social & Cultural 	A2 ranked highest overall as construction is confined to existing sites, minimizing short- and long-term impacts, and has no impact to cultural or heritage features.
Jurisdictional /Regulatory 	A2 ranked highest overall as it can accommodate potential future changes in drinking water quality requirements, is less challenging to approve than C and does not require land acquisition.
Technical 	A2 ranked highest overall as it requires the least amount of construction, maximizing use of existing sites and facilities, minimizes the additional operations and maintenance resources required and avoids traffic impacts to Highway 27 during construction.
Economic 	A2 ranked highest overall as it has no land acquisition cost, lowest capital cost and lowest overall lifecycle cost
Overall	A2 ranked highest overall, ranking 1st in 4 of the 5 evaluation categories and tied with A1 and B in the 5th category.

Evaluation Process



Alternative A2: Increase Capacity of Existing Well #2 in Combination with New Production Well at Site H ranked highest overall, ranking highest in four of the five evaluation categories. The primary reason that Alternative A2 ranked highest is that the work associated with upgrades would be confined to existing sites. This minimizes construction impact, additional operations and maintenance resources needed, and the need to purchase additional land, reduces costs and reduces the impact on the natural, cultural and social environment.

Water Storage Alternatives Detailed Evaluation



Evaluation Category	Do Nothing: Permit Growth Without Increasing Capacity	Storage A: New Storage Facility (Replace Existing Nobleton South Elevated Tank Storage Facility With Bigger Storage Facility)	Storage B: Increase Overall Well Supply to Avoid New Storage
Natural Environment	●	●	●
Social & Cultural	●	●	●
Jurisdictional /Regulatory	●	●	●
Technical	●	●	●
Economic	●	●	●
Overall Rank	Not Applicable	2	1

Evaluation Process

Long-List of Alternatives

↓ Screening Process

Short-List (Feasible Alternatives)

↓ Detailed Evaluation

Recommended Solution

Scoring Description

- Low Impact / Most Preferred
- Moderate Impact
- Most Impact / Least Preferred






As shown in the table, all of the short-listed water storage alternatives were scored under the five evaluation categories.

Of the two water storage alternatives evaluated, Water Storage Alternative B: Increase Overall Well Supply to Avoid New Storage ranked highest.

The Do Nothing alternative did not pass screening and is shown here only for comparative purposes.

Water Storage Alternatives Detailed Evaluation: Summary of Evaluation








Evaluation Category	Summary of Evaluation
Natural Environment 	<ul style="list-style-type: none"> ▪ A and B will have low or no significant impact to vegetation and wildlife, and surface water resources and greenhouse gas emissions ▪ B will require minimally greater use of groundwater resources than A (increase overall well supply versus new storage) but neither has significant impact on existing resources
Social & Cultural 	<ul style="list-style-type: none"> ▪ Both will have some short-term impacts during construction (increased traffic, noise, dust), A will have greater impact due to construction of new storage facility ▪ Neither will have significant long-term community impacts or impact to cultural or heritage features
Jurisdictional /Regulatory 	<ul style="list-style-type: none"> ▪ Both can accommodate potential future changes in drinking water quality requirements ▪ A requires more approvals than B ▪ A may require some land acquisition
Technical 	<ul style="list-style-type: none"> ▪ A requires the most construction ▪ Both provide redundancy, through greater storage (A) and greater supply (B) ▪ Neither has significant impact to operations and maintenance resources required ▪ B maximizes use of existing infrastructure whereas A replaces existing functional storage facility
Economic 	<ul style="list-style-type: none"> ▪ A has higher capital and lifecycle cost than B ▪ A may require some land acquisition costs

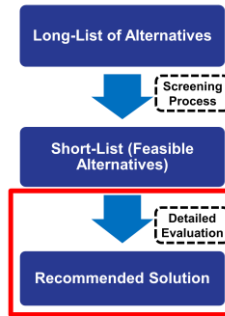
A summary of the detailed evaluation under each of the five evaluation categories is given here. This includes further details and information on each short-listed water storage alternative. The information included was used to score each alternative and determine the overall ranking of alternatives. The rationale behind scoring and ranking is provided here for reference.

Water Storage Alternatives Detailed Evaluation: Highest Ranked Alternative - Alternative B



Evaluation Category	Summary of Evaluation
Natural Environment 	B and A ranked equally, as neither has significant impact on aquatic/terrestrial vegetation and wildlife, surface water and groundwater resources, or greenhouse gas emissions.
Social & Cultural 	B and A ranked equally, with B being marginally better than A due to short-term impacts associated with construction of new tank. Overall, A and B have similarly minimal Social & Cultural impacts.
Jurisdictional /Regulatory 	B ranked highest overall with no additional land acquisition and fewer approval requirements.
Technical 	B ranked highest overall due to its ability to maximize the use of existing infrastructure while avoiding unnecessary new assets. This results in less construction, minimizing potential impacts.
Economic 	B ranked highest overall due to its lower capital, lifecycle and land acquisition costs. B maximizes investment in existing infrastructure (storage facility) while only marginally increasing cost of well supply.
Overall	B ranked highest overall, ranking 1st in 3 of the 5 evaluation categories and ranking equally to A in the two other categories.

Evaluation Process



Water Storage Alternative B: Increase Overall Well Supply to Avoid New Storage ranked highest overall, ranking first in three of the five evaluation categories and ranking equally to Water Storage Alternative A: New Storage Facility (Replace Existing Nobleton South Elevated Tank Storage Facility With Bigger Storage Facility) in the two other categories. Alternative B ranked highest because it maximizes the use of existing infrastructure, minimizes construction, and is the lower-cost alternative overall.

Recommended Water Servicing Solutions



Evaluation has identified the recommended water supply and storage solutions



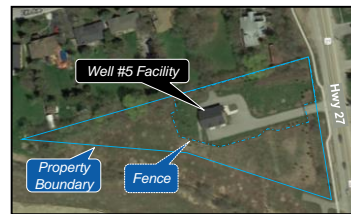
Water Supply Alternative A2

- Increase Capacity at Existing Well #2
 - Upgrades to facility to be confined to existing site
- Add New Well Supply at Site H
 - Located on same site as Existing Well #5



Water Storage Alternative B

- Increase Overall Well Supply to Avoid New Storage



The recommended water servicing solution involves increasing capacity at the existing Well #2 and adding a new well at Site H. The capacity of these well facilities is further increased in order to avoid the need for new storage.

Wastewater Alternatives Detailed Evaluation



Evaluation Category	Do Nothing: Permit Growth Without Increasing Capacity	Wastewater A: Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton WRRF and Outfall	Wastewater B: Construct a New Pumping Station, Forcemain and WRRF and Outfall
Natural Environment	●	●	●
Social & Cultural	●	●	●
Jurisdictional /Regulatory	●	●	●
Technical	●	●	●
Economic	●	●	●
Overall Rank	Not Applicable	1	2

Evaluation Process

Long-List of Alternatives

↓ Screening Process

Short-List (Feasible Alternatives)

↓ Detailed Evaluation

Recommended Solution

Scoring Description

- Low Impact / Most Preferred
- Moderate Impact
- Most Impact / Least Preferred






As shown in the table, all of the short-listed wastewater alternatives were scored under the five evaluation categories.

Of the two wastewater alternatives evaluated, Wastewater Servicing Alternative A: Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton Water Resource Recovery Facility (WRRF) and Outfall ranked first overall.

The Do Nothing alternative did not pass screening and is shown here only for comparative purposes.

Wastewater Alternatives Detailed Evaluation: Summary of Evaluation



Evaluation Category	Summary of Evaluation
Natural Environment 	<ul style="list-style-type: none"> ▪ A is expected to have least impact to vegetation and wildlife as expansion is limited to existing sites and facilities ▪ Neither A or B is expected to impact groundwater resources ▪ A and B could impact surface water resources (discharge to Humber River) but design will mitigate impacts ▪ B will have greater impact on greenhouse gas emissions (operating two new facilities) than A (upgraded facilities)
Social & Cultural 	<ul style="list-style-type: none"> ▪ A will have moderate short-term impacts during construction (increased traffic, noise, dust), B will have greater impact ▪ A will have some long-term community impacts (e.g. increase in local traffic for sludge haulage), B will have greater impact (two new facilities) ▪ B requires further investigation on impact to archeological sites and cultural/heritage features
Jurisdictional /Regulatory 	<ul style="list-style-type: none"> ▪ Both can accommodate potential future changes in drinking water quality requirements ▪ B requires land acquisition for new facilities, A may require limited additional land ▪ B requires extensive new permits/approvals, A requires some amended and additional permits/approval
Technical 	<ul style="list-style-type: none"> ▪ A requires moderate amounts of construction to upgrade/expand, B requires more to build new infrastructure ▪ B provides greater redundancy than A (new facilities and infrastructure vs expanded) ▪ B requires greater additional operations and maintenance resources (expanded facilities require less additional operations and maintenance) ▪ A maximizes use of existing Water Resource Recovery Facility (WRRF) and Pumping Station, B does not
Economic 	<ul style="list-style-type: none"> ▪ A has moderate capital, operations and maintenance, lifecycle and land acquisition costs overall ▪ B has high capital, operations and maintenance, lifecycle and land acquisition costs overall

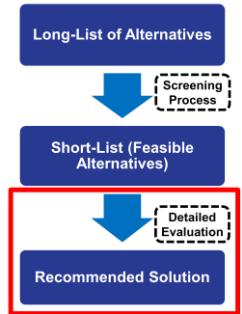
A summary of the detailed evaluation under each of the five evaluation categories is given here. This includes further details and information on each short-listed wastewater alternative. The information included was used to score each alternative and determine the overall ranking of alternatives. The rationale behind scoring and ranking is provided here for reference.

Wastewater Alternatives Detailed Evaluation: Highest Ranked Alternative - Alternative A



Evaluation Category	Summary of Evaluation
Natural Environment	A ranked highest overall as impacts are limited to upgraded existing sites, mitigating impacts to aquatic/terrestrial vegetation and wildlife, as well as greenhouse gas emissions.
Social & Cultural	A ranked highest overall as impacts are limited to upgraded existing sites. This mitigates short-term construction impacts and minimizes potential impacts to archeological sites and cultural/heritage features. No significant long-term impacts expected.
Jurisdictional /Regulatory	A ranked highest as it requires limited land acquisition and fewer permits/approvals.
Technical	A ranked highest overall due to its ability to maximize the use of existing infrastructure and limit additional operations and maintenance resource requirements.
Economic	A ranked highest overall due to its lower capital, lifecycle and land acquisition costs.
Overall	A ranked highest overall, ranking 1 st in 5 of the 5 evaluation categories.

Evaluation Process



Wastewater Servicing Alternative A: Expand and Upgrade the Existing Janet Avenue Pumping Station, Forcemain and Nobleton Water Resource Recovery Facility (WRRF) and Outfall ranked highest overall, ranking first in five of the five evaluation categories. By limiting expansion to the existing facilities, Wastewater Servicing Alternative A minimizes impacts to the natural environment, to the community and potential archaeological and cultural/heritage sites, while maximizing the capacity of existing infrastructure. Alternative A is also the lowest cost alternative overall.

Recommended Wastewater Servicing Solution



Evaluation has identified the recommended wastewater servicing solution

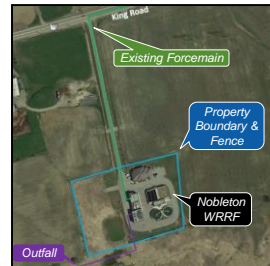
Wastewater Servicing Alternative A



- Expand and Upgrade the Existing Nobleton Water Resource Recovery Facility (WRRF) and outfall
 - Facility upgrades to be confined to existing site



- Expand and Upgrade the Existing Janet Avenue Pumping Station and forcemain
 - Located on same site as existing Janet Avenue Pumping Station
 - Forcemain to be twinned or replaced from Janet Pumping Station to Nobleton WRRF

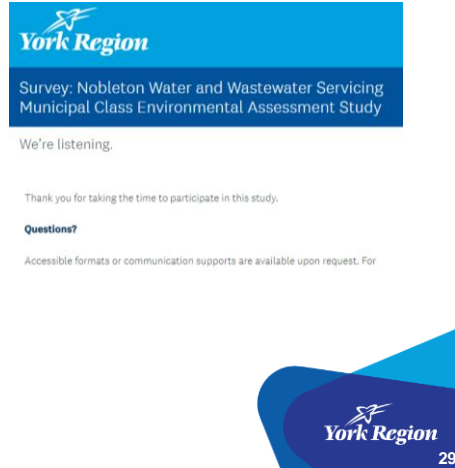


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The recommended wastewater servicing solution involves expanding and upgrading the existing Nobleton Water Resource Recovery Facility and outfall, expanding and upgrading the existing Janet Avenue Pumping Station and twinning or replacing the forcemain that connects these facilities.

What's Next? Share your thoughts – we're listening.

- To provide your feedback, complete the survey. Survey can be accessed at **york.ca/nobletonea**.
- Stay informed and sign up for project updates by visiting our project webpage **york.ca/nobletonea**.
- Please complete the survey by **Friday December 11th, 2020**.



We want to hear from you! To provide your feedback, please complete the survey online by **Friday December 11th, 2020**. The survey can be accessed at york.ca/nobletonea.

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Please contact us if you are unable to access the online survey.



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If you are unable to access the online survey or if you have any other questions or comments, please let us know by contacting the Region's Project Manager.