



Baden and New Hamburg Water and Wastewater System Servicing Review

Public Consultation Centre #2 Presentation Transcript

Slide 1 – Title Slide

Hello and thank you for joining us for Baden and New Hamburg Water and Wastewater System Servicing Review Virtual Public Consultation Centre number 2 (or PCC).

Slide 2 – Goals of PCC #2

The purpose of this PCC is to provide an overview of the project, provide an update on the Study since the first Public Consultation Centre, and, present the preliminary water and wastewater servicing alternatives under consideration for the communities of Baden, New Hamburg, and Foxboro Green. This Virtual Public Consultation Centre provides you with an opportunity to learn about and get involved in the project and aims to answer any questions you may have.

A PDF of this presentation including this transcript and additional information on the project is available on the Region of Waterloo's website if you would like to review it in more detail. A link to the website is provided in the video description below.

We encourage you to review the information and contact a member of the project team by phone or email or through the project comment sheet available on the Region's website if you have any questions or would like to provide your thoughts to the project team. Contact information is provided at the end of this presentation and on the Region of Waterloo's website.

Comments received during this study will be used to identify a recommended approach for current and future water and wastewater infrastructure needs of the communities of Baden, New Hamburg, and Foxboro Green.

Slide 3 – Project Overview

To better understand the project, we ask the following three questions:

1. what are we doing,
2. why are we doing it, and
3. what does it mean to you?

To answer the first question, we are assessing the current water supply and wastewater treatment systems that serve the communities of Baden and New Hamburg. This study will look to assess infrastructure needs for future growth approved under the Region's Official Plan (ROP) and consider any outcomes from the new ROP review currently underway. This study excludes the local watermain and sewer extensions which are the responsibility of Wilmot Township.



Baden and New Hamburg Water and Wastewater System Servicing Review

Why are we doing it? We are taking steps now to ensure we are ready to meet the future needs of Baden and New Hamburg through examination of the Region's infrastructure. We will also explore any opportunities for the Foxboro Green community.

What does it mean to you? Current and future needs may require the construction of new water supply and wastewater infrastructure, or upgrades to existing facilities, which may also need land acquisition. This is your opportunity to get involved with the planning process.

Slide 4 - The Municipal Class Environmental Assessment Process

The Municipal Class Environmental Assessment, or EA process, is a five-phase planning process that is approved under the Ontario Environmental Assessment Act. All Municipalities in Ontario are required to complete a Municipal Class EA when planning infrastructure projects. This Municipal Servicing review will be completed to satisfy the first two phases of the Municipal Class EA process for projects which will be identified through the study.

These steps include:

- identifying the problem or opportunity;
- developing and evaluating alternative solutions; and,
- identifying and presenting the preferred solution and potential environmental impacts and proposed mitigation measures.

We are currently in Phase 2A of the study. Following the confirmation of the preferred solution (after the third Public Consultation Centre) and the presentation of potential environmental impacts and proposed mitigation measures, a Project File Report will be prepared to summarize the decision-making process for the public and stakeholders. A 30-day review period will be provided for the public and stakeholders to review and comment on the Report.

Slide 5 – Goals of Public Consultation Centre #2

The study area for Baden and New Hamburg Water and Wastewater System Servicing Review includes the communities of New Hamburg, Baden, and Foxboro Green, as illustrated by the map on the slide. The communities of Baden and New Hamburg are currently serviced by a two-tier water and wastewater system by Wilmot Township and the Region.

This System Servicing Review will assess the Region's portion of the current water and wastewater systems that serve the study area. The review of the current and future infrastructure needs within the community will be based on:

- The Region's 2011 Master Plan Update

- The 2015 Region Official Plan and consider any outcomes from the new official plan review currently underway
- The Township of Wilmot's 2019 Official Plan
- The recommendations from the Region's 2018 Wastewater Treatment Master Plan; and,
- Current development applications

This study considers alternatives for the Region's assets under three main categories: 1) Water supply, 2) Wastewater, 3) Foxboro Green. The Region is working with the Township to develop alternatives.

Slide 6 – Existing Water Supply System

The following map provides an overview of the Existing Water System that serves the communities of Baden, New Hamburg, and Foxboro Green. The Region's water infrastructure is shown in blue and yellow. Existing conditions of the water supply system are as follows.

The New Hamburg and the K50 wells provide sufficient water supply capacity under existing and future conditions, however, reliance on the K50 wells is an issue if they are off-line for any reason as they supply a majority of the future water supply needs.

Water storage is sufficient for existing conditions but under future conditions, additional storage is required of approximately 4,000 cubic meters.

As for the community of Foxboro Green, it is currently supplied by a water treatment plant, however, the plant's assets are aging which demonstrates high operation and maintenance costs.

Taking these existing conditions into consideration, the intent of this EA with regard to water supply is to address the following key issues:

- Water Supply Redundancy
- Water Storage

Slide 7 – Alternative Solutions – Water Supply (WS)

The following Alternative Solutions have been developed to address the key issues identified for water supply:

With regard to Water Supply Redundancy, there are two identified alternatives:

- Alternative WR1 - Do nothing
- Alternative WR2 - Actuated Valve at Shingletown (allows water to reverse flow under emergency conditions)*

* Alternative WR2 is being examined under another study

With regard to Future Water Storage, there are five identified alternatives:

- Alternative WS1 - Do nothing
- Alternative WS2 - Provide increased storage at the New Hamburg Water Treatment Plant
- Alternative WS3 – Provide new storage at the Baden Wells site
- Alternative WS4 - Provide new storage at the Shingleton/K50 Wells site
- Alternative WS5 - Combination of any of the above

Slide 8 – Alternative Water Storage Solution 1: Do Nothing (WS1)

The first alternative water storage solution involves doing nothing. This alternative does not include any upgrades and would not meet the overall intent of the study but is used for comparison purposes.

Slide 9 – Alternative Water Storage Solution 2: Increased Storage at New Hamburg Water Treatment Plant (WS2)

The second alternative water storage solution involves increasing the existing underground concrete storage at the New Hamburg Water Treatment Plant. Considerations for this solution are as follows. This increase in storage would help to accommodate future demand peaks. This solution would, however, require increased flow from Baden to allow refill of the New Hamburg Water Treatment Plant reservoir during high demand periods. There are possible site/land limitations related to this solution.

Slide 10 – Alternative Water Storage Solution 3: New Storage at Baden Well (WS3)

The third alternative water storage solution includes creating a new underground concrete reservoir and pump station at the former Baden well site to be fed by the K50 Wells. Considerations for this solution are as follows. This option presents an opportunity to re-use the Baden well property. This solution also provides ability to supplement water supply from the Baden Elevated Tank during periods of high demand. This solution would, however, require re-pumping of water with a new pumping station and would not be energy efficient. There are possible site/land limitations related to this solution.

Slide 11 – Alternative Water Storage Solution 4: New Storage at Shingleton/K50 Wells (WS4)

The fourth alternative water storage solution includes a new underground concrete reservoir at the Shingleton/ K50 Wells site. Considerations for this solution are as follows. This solution would supplement the Baden Elevated Tank during periods of high

demand and allows for possible alignment with future manganese treatment and storage requirements. A new Pumping Station would be required as part of this solution. There are possible site/land limitations related to this solution and additional area is required to accommodate the new underground concrete reservoir.

This solution does, however, provide potential for linkage with the Mannheim well supply.

Slide 12 – Existing Wastewater System

The following map provides an overview of the Existing Wastewater System that serves the communities of Baden, New Hamburg, and Foxboro Green. The Region's wastewater infrastructure is shown in blue, purple, and yellow. Existing conditions of the wastewater supply system are as follows.

The New Hamburg Wastewater Treatment Plant has sufficient capacity for the study area. The Morningside Pumping Station is also sufficient for existing conditions. As for the Baden Pumping Station and associated forcemains, these assets are under capacity for future growth demands within the study area. The Foxboro wastewater treatment plant has sufficient capacity, but it requires optimization.

Taking these existing conditions into consideration, the intent of this EA is to address the following key issues:

- Future Pumping Station; and,
- Forcemain Capacity.

Slide 13 – Alternative Solutions – Wastewater (WW)

The following Alternative Solutions have been developed to address the key issues identified for wastewater collection.

Regarding future pumping station and forcemain capacity solutions, four alternatives have been identified:

- Alternative WW1 - Do nothing
- Alternative WW2 - Upgrade system and maintain existing configuration
- Alternative WW3 - Upgrade system and convey directly to the Morningside Pump Station
- Alternative WW4 - Upgrade system and convey directly to New Hamburg Wastewater Treatment Plant

Slide 14 – Alternative Wastewater Solution 1: Do Nothing

The first alternative wastewater solution involves doing nothing. This alternative does not include any upgrades and would not meet the overall intent of the study but is used for comparison purposes.

Slide 15 – Alternative Wastewater Solution 2: Upgrade System and Maintain Existing Configuration

The second alternative wastewater solution involves upgrading the system and maintaining the existing configuration. This alternative includes:

- Upgrades to the Baden Pumping Station
- A New forcemain from Baden Pumping Station connecting to Morningside Trunk Sewer
- Upgrades to the Morningside Trunk Sewer
- Upgrades to the Morningside Pumping Station
- Upgrades to the forcemain from the Morningside Pumping Station to the New Hamburg Wastewater Treatment Plant

The area for potential Forcemain routing on this slide is shown shaded in yellow. The forcemains would be placed in an existing road allowance or easement, however, there are multiple potential paths that the forcemains could follow. Shown on the slide is one possible example of the connection.

Slide 16 – Alternative Wastewater Solution 3: Upgrade System and Convey Directly to Morningside Pump Station

The third alternative wastewater solution involves upgrading the system and conveying directly to the Morningside pump station. This alternative includes:

- Upgrades to the Baden Pumping Station
- New forcemain bypassing the Morningside Trunk Sewer and connecting directly to the Morningside Pumping Station
- Upgrades to the Morningside Pumping Station
- Upgrades to the forcemain from Morningside Pumping Station to the New Hamburg Wastewater Treatment Plant

The area for potential forcemain routing is shown shaded in yellow on this slide. Similar to the previous alternative, the forcemain would be constructed within the yellow shaded area within existing municipal road allowances, rights-of-ways, or easements. Shown is just one possible example of the future connection.

Slide 17 – Alternative Wastewater Solution 4: Upgrade System and Convey Directly to New Hamburg Wastewater Treatment Plant

The fourth alternative wastewater solution involves upgrading the system and conveying directly to the New Hamburg Wastewater Treatment Plant. This alternative includes:

- Upgrades to the Baden Pumping Station
- New forcemain bypassing the Morningside Pumping Station and connecting directly to the New Hamburg Wastewater Treatment Plant

The area for potential forcemain routing on this slide is shown shaded in yellow. Similar to previous alternatives, the forcemain would be constructed within the yellow shaded area within existing municipal road allowances, rights-of-ways, or easements. Shown on the slide is just one possible example of the future connection.

Slide 18 – Foxboro Green - Water Supply & Wastewater Servicing Needs

The Foxboro Green community is supplied by a system of wells and a treatment plant, while wastewater services is provided by a wastewater treatment plant. The capacity is adequate, but the Region has identified major infrastructure upgrades/replacements in the near future due to asset age and improvement needs. Therefore, now is a good opportunity to review the future servicing for Foxboro Green.

The following Alternative Solutions have been developed to address the key issues identified for water supply and wastewater servicing needs:

- Alternative F1 - Do nothing and carry out necessary upgrades
- Alternative F2 - Provide connection to the existing Baden sewer and water supply system using existing road allowances.
- Alternative F3 - Provide connection to the existing Baden sewer and water supply system using a direct route.
- Alternative F4 - Provide connection to the existing New Hamburg sewer and water supply system using existing road allowances.

Slide 19 – Alternative F1 – Do Nothing

The first alternative involves doing nothing. Under this alternative, Foxboro Green would continue to utilize their existing wastewater and water treatment systems.

In the immediate future, the Region has identified the need for extensive asset upgrades and/or replacements to the supply wells, water treatment plant, as well as optimization improvements to the wastewater treatment plant.

Slide 20 – Alternative F2 – Connect Foxboro to Baden using Existing Road Allowances

Under the second alternative, Foxboro Green would be connected to the Baden sewer and water supply system. The routing of the sewer and watermain connections would follow existing road allowances. The area for potential routing is shaded in yellow and shown is one possible example of the connection.

Slide 21 – Alternative F3 – Connect Foxboro to Baden using a Direct Route

Under the third alternative, Foxboro Green would be connected to the Baden sewer and water supply system by a more direct route. The routing of the sewer and watermain

connections could be within the corridors across new developments lands, under future roads. Alternatively, a separate route using easements is a consideration.

The area for potential routing is shaded in yellow. Shown is one possible example of the connection.

Slide 22 – Alternative Foxboro Solutions F4 – Connect Foxboro to New Hamburg on Existing Road Allowances

Under the fourth alternative, Foxboro Green would be connected to the New Hamburg sewer and water supply system. The routing of the sewer and watermain connection would follow existing road allowances. The area for potential routing is shaded in yellow and shown is one possible example of the future connection.

Slide 23 – Next Steps

Following this PCC, the Project Team will review input on the information presented. We will continue with our environmental investigations and assessment of alternative solutions for water and wastewater servicing, including potential new facility and forcemain locations. The project team will identify preferred alternatives and will develop and evaluate the design of the preferred alternatives. This evaluation and the preferred alternatives will be presented at our third PCC for public and stakeholder review and comment.

Feedback received as part of PCC #3 will be used to prepare the servicing report, otherwise known as the Project File Report. The report will be published for 30 days to allow for public review before going before Regional Council.

Slide 24 – Questions

We thank you for your participation in the Baden and New Hamburg Water and Wastewater System Servicing Review Virtual Public Consultation Centre #2. We are midway through the project and look forward to hearing from you.

Do you have questions, feedback, comments, or want to stay up to date on what's being evaluated as part of this project?

There are many ways to get in touch with the project team:

- You can fill out a comment sheet available on the Region's website, and return via mail or email to a member of the project team; or
- You can contact a project team member directly by email, telephone, or mail at the addresses listed.

As a reminder, more information, including copies of project notices and Public Consultation Centre materials like a transcript of this virtual presentation can be found at www.regionofwaterloo.ca/waterprojects.