

Niagara Region

Beaverdams Sewage Pumping Station Upgrades & Forcemain Replacement

Virtual Public Information Centre

Slide 1: Niagara Region Beaverdams Road Sewage Pumping Station Upgrades & Forcemain Replacement

Hello, and welcome to our virtual Public Information Centre for the Schedule B Environmental Assessment for the Beaverdams Road Sewage Pumping Station Upgrades and Forcemain Replacement project. My name is Danielle Anders and I am the Project Manager for this project for GM BluePlan Engineering and I will be narrating this slide show.

Slide 2: Welcome!

Welcome to our virtual Public Information Centre. There is lots to learn throughout this slide show about the Beaverdams project. Please take the time to review all materials posted on the project webpage. We welcome all your feedback. Please fill out a comment form or feel free to contact the project team by email or telephone. Contact information is provided at the end of this slide show and on the project webpage. All feedback is welcome and is very important to the completion of this study.

Slide 3: Environmental Assessment Process & Timeline

This project is following a Class Environmental Assessment process, which is a decision-making process that all Ontario municipalities follow for infrastructure projects. This project was originally initiated in January 2020 via a Notice of commencement. GM BluePlan Engineering worked throughout the Winter 2020 on identifying and evaluating alternative solutions to provide a Public Information Centre in Summer 2020. The Environmental Assessment process is intended to conclude in Fall 2020 with a detailed design preceding Spring 2021 and construction in Summer 2021.

Slide 4: Project Background

Some project background information. The Beaverdams Sewage Pumping Station is located at 1678 Beaverdams Road in the City of Thorold, within the service area for the Port Dalhousie Wastewater Treatment Plant. There is an existing forcemain and that route is approximately 1.4 km long. This existing forcemain is partially constrained by residential properties and highway embankments. The existing pumping station was commissioned in 1993 and has been in continuous operations with no upgrades during this time. It has been identified in the 2017 Master Servicing Plan that the Region completed as an area expected to experience growth over the next 25 years. The purpose of the project is to evaluate design options for the Beaverdams Sewage Pumping Station; forcemain capacity to meet anticipated residential growth within the area; and potential alternative routes for the replacement of the existing forcemain.

Slide 5: Beaverdams SPS Station Scope of Work

Let's talk about the scope of work for the pumping station upgrade portion of this project. The schematic shown on this slide shows the existing pump station property as well as additional land that has been purchased by the Region of Niagara to accommodate this project. The plan is to repurpose the existing generator building as a new enclosure for new station MCC and electrical equipment. To accommodate the upgrades required, a new wet well structure will be built on the new expanded property as well as a new valve chamber structure. A generator will be placed on the new adjacent property in a new outside generator enclosure. The sewage coming into the station will outlet to the forcemain on Beaverdams Road.

Slide 6: Project Location & Forcemain Alternative Routes

One of the main components of this Environmental Assessment is examining the existing forcemain and whether a new forcemain will be required and what those routes may look like. Preliminary calculations looked at flows, existing and future flows coming to the Beaverdams Pump Station and evaluated the existing forcemain to determine whether those flows can be accommodated within the existing infrastructure. It was determined that the existing forcemain is not going to be sufficient to meet the future flows at the Beaverdams Pump Station. Therefore, a new forcemain alignment will be required. Forcemain alternative routes are presented on this schematic; there are 3 routes presented. The Confederation Avenue route (shown in green), the Decew Road route (shown in purple), and Collier Road South (shown in red). As you can see the Confederation Avenue route starts on Beaverdams Road and follows the green along Confederation Avenue to where it ties in existing infrastructure on Richmond Street. The Decew Road route leaves the Beaverdams Pump Station, follows Beaverdams Road, Decew Road and then circles back on Richmond Street and as well ties into existing infrastructure on Richmond Street. The third alternative, the Collier Road South route, leaves the Beaverdams Pump Station, follows Collier Road, across Highway 58 and loops back around to tie into existing infrastructure on the other side of Highway 58. All three of these routes were considered in this Environmental Assessment.

Slide 7: Evaluation Criteria

In order to evaluate the forcemain alternative routes the project team developed evaluation criteria to evaluate the proposed alternatives. Four key categories of evaluation criteria were examined:

1. Environmental impacts: proximity to environmentally sensitive features
2. Financial impacts: construction costs
3. Social and cultural impacts: impacts on adjacent residents and traffic, public safety concerns and compatibility with current and planned land use and infrastructure
4. Constructability impacts: constructability issues as well as approvals required

Each criteria has a 25% weighting in the evaluation of the different alternatives.

Slide 8: Alternative 1 – Keep Existing Route (Do Nothing)

Let's look further at each alternative. Alternative 1: keep the existing route, therefore do nothing. This route has limited roadside access and provides additional challenges for maintenance personnel. The existing forcemain is not able to meet future capacity needs and current alignment required easements as it is located in private properties including the connection manhole within the trunk sewer.

Slide 9: Alternative 2 – Confederation Ave. Route

This route provides the opportunity to implement a preferable connection manhole within the trunk sewer and the corridor along this route is already fully developed and has a large right of way.

Slide 10: Alternative 3 – Decew Road

This is the longest route under consideration. It crosses along sensitive environmental features that will require additional considerations during construction to avoid disturbance. It further has a challenging profile due to elevation changes.

Slide 11: Alternative 4 – Collier Road South

This route has a highway crossing which requires additional coordination and approvals with the ministry of transportation. In addition, upcoming works are scheduled for this area. Further, there is an active groundwater monitoring well on the site that highlights concerns on potential effects to local groundwater.

Slide 12: Alternatives Evaluation

Taking into consideration the alternative routes and the evaluation criteria, an alternatives evaluation was completed. All four of the routes were evaluated against environmental, social, constructability and financial to come up with a summary score. The legend on the bottom of the slide shows that a green circle has a major positive impact, a yellow a minor positive, a grey neutral, a red a minor negative. A full grey circle is a major negative. Based on the evaluation criteria and the routes examined, the Confederation Avenue route, or Alternative #2, scores highest and comes out as a preferred preliminary alternative for this project.

Slide 13: Preferred Alternative – Confederation Ave. Route

Let's examine the preferred alternative Confederation Avenue route further. This route provides safe and easy access to Regional maintenance staff and allows the Region to meet future capacity requirements at the station. It reduces the impacts by avoiding highway crossings. It provides an optimal route in terms of constructability (not many changes in elevation or long segments). It eliminates the need for easements in private property and mitigates the risks as the corridor is already developed. It further provides additional benefits to the area.

Slide 14: We Want to Hear from You!

Thank you for attending the virtual Public Information Centre for the Beaverdams Road Pump Station Upgrade and Forcemain Replacement project. Following this Public Information Centre, the project team will review and consider stakeholder input received, complete the project file and post that profile file for 45-day public review. We thank you for participating and please fill out a comment form as your feedback will be reviewed and considered. If you'd like to contact anyone on the project team, key contacts are provided on this slide. Gino Giancola is the Project Manager representing Niagara Region and myself, Danielle Anders is the project manager representing GM BluePlan. Please feel free to reach out and contact us with any questions or concerns. Thank you.