

Transcript of Virtual Public Consultation Centre #3

Slide 1 – Title slide

Hi everyone, and welcome to the New Dundee Water Supply – Iron and Manganese Treatment Upgrades Virtual Public Consultation Centre, or PCC, #3. This PCC is hosted by the Region of Waterloo as part of a Schedule C Municipal Class Environmental Assessment, or Class EA. My name is Jonathan Rudyk, and I work for R.V. Anderson, a company that will be assisting the Region in conducting the Class EA. I will be narrating the presentation today.

Before we begin, some housekeeping notes. This video is available on the Region of Waterloo website as of **February 8, 2022** and has been uploaded to YouTube. The Region website also includes a transcript of my narration for this presentation and a PDF copy of the slides, as well as the contact information for Kaoru Yajima and Kirk Worounig of the project team. If you have any questions or comments on the presentation, please email it to them, or fill out a Comments Form provided on the Region website and submit it to the project team. This presentation is the third of three PCCs, with the first PCC happening in June of 2020 and the second happening in May 2021. With that, let's get started with virtual PCC #3!

Slide 2 – Welcome!

The goals of this virtual PCC are as follows: share how we are improving service to the community, review the information shared and stakeholder feedback from PCCs #1 and #2, present treatment facility location requirements and potential locations, evaluate these locations for the new iron and manganese facility, select a preferred location alternative, answer any questions you may have, and provide you with an opportunity to get involved in the project. Please note that comments received during this study will be used to help confirm the recommended approach for the New Dundee water supply iron and manganese treatment.

Slide 3 – New Dundee water supply system iron and manganese treatment upgrades project overview

The New Dundee water supply system treatment upgrades for iron and manganese follows the Municipal Class Environmental Assessment process, or Class EA.

To better understand the project, we ask the following two questions.

- 1, why are we doing a Class EA, and
- 2, what does it mean for you?

To answer the first, the Region is taking a proactive approach to ensure that we can improve service to the community for the present and future, because lower aesthetic drinking water objectives for manganese are expected in the near future.

To answer the second, these upgrades will require a new building for the treatment equipment. To accommodate the building, it is expected additional property at the Region's existing water supply site or a new site will be required. There is no change in the amount of water being taken from the New Dundee water supply wells.

Slide 4 – Overview of the Municipal Class Environmental planning process

Before proceeding further, it may be helpful to define the Class EA process.

This study is being completed as a Schedule C Municipal Class Environmental Assessment. A Class Environmental Assessment, or Class EA, is a decision-making process that all municipalities in Ontario follow for building new infrastructure. The process will allow you as the public to follow what is planned and provide opportunities for you to ask questions and provide input. The above diagram gives a step by step process of the Class EA.

Phase 1 is to identify the problem and/or opportunity. After Phase 1 is complete, the first Virtual Public Consultation Centre, or virtual PCC, is held. This first PCC was completed in June 2020.

Phase 2 is to develop and evaluate solutions and identify the preferred solution. A second PCC is scheduled after this phase is completed. This second PCC was completed in May of 2021.

Phase 3 is to develop and evaluate design concepts for the preferred solution and identify the preferred design. This is where we are in the process currently, and it includes this third PCC.

Phase 4 is the submission of the Environmental Study Report (ESR) and a 30-day public review period. Phase 4 is the final step of the Class EA.

Phase 5 is the implementation of the Class EA findings, in this case design and construction of the facility.

Slide 5 – PCC #1 Review

As mentioned previously, PCC #1 was uploaded for public review on June 18, 2020. The project team shared the following:

- We introduced the New Dundee water supply system,
- Described iron and manganese, and its presence in the New Dundee water supply, as well its effect on drinking water systems.
- Summarized the Class Environmental Assessment (Class EA) process.
- Discussed background studies to be completed for this project.
- And finally, we presented the project timeline and next steps.

From this PCC, what did we learn from our stakeholders?

- We received comments about the possible future building and keeping its size to a minimum.
- We also received additional questions about the effects of iron and manganese on drinking water systems.

For anyone wanting to know more, a video of PCC #1 can be found in the link below:
https://www.youtube.com/watch?v=JNp-FT7g5i0&t=1s&ab_channel=RegionofWaterloo

Slide 6 – PCC #2 Review

PCC #2 was uploaded for public review on May 11, 2021. The project team shared the following:

- We introduced treatment and residual management technologies for iron and manganese removal at municipal well facilities.
- Provided evaluation criteria to compare the different technologies.
- Selected conventional oxidation and filtration as the preferred treatment, with a backwash equalization tank and supernatant recycle as the preferred residual management.
- And finally, we presented five possible locations for the new facility.

From this PCC, what did we learn from our stakeholders?

- There was a desire to minimize truck hauling activity and reduce impacts such as noise.
- Opinions varied on which of the five locations was preferred for the new location.
- The building should positively reflect the aesthetic appeal of the neighbourhood and should not diminish views of the existing farm features.
- And, there was a desire to minimize the footprint of the building.

For anyone wanting to know more, a video of PCC #2 can be found in the link below:
https://www.youtube.com/watch?v=UUcMmFqYpDg&t=18s&ab_channel=RegionofWaterloo

Slide 7 – Potential building location alternatives

Now, let's move on the five proposed location alternatives for the new treatment facility. They are shown on the map on this slide, along with the GRCA regulatory floodplain elevation contour. This slide was presented in PCC #2 as well.

Slide 8 – Preliminary facility sizing

Based on the preferred treatment and residual management approach, an approximate building layout was determined. The new site should have space for adequate property set-backs, parking, and landscaping. Based on PCC #1 and #2 feedback, a water needs assessment was conducted to minimize the facility footprint, resulting in a 32% building size reduction.

The proposed facility will contain the following:

- A room that will house the filters, pumps, and process piping,
- An electrical room,
- A chemical room, and
- Underground tankage for the treatment and residual process.

The facility footprint is also shown on this slide as being 15 by 12 m. The facility is shown overlaid in each of the five locations on the next slide.

Slide 9 – Potential Facility Layouts

Given the facility sizing from the previous slide, the location alternatives were developed, and are shown on this slide. It should be noted that Location Alternatives 4 and 5 have standby generators included in the facility layout, as they are remote sites that will require their own standby power.

Slide 10 – Pre-screening of location alternatives

Two alternatives from the previous slide will not proceed to detailed evaluation because they do not meet project objectives, come with a prohibitive cost, provide construction challenges and operational difficulties, and would increase traffic along Alderview Drive. These are location alternatives 4 and 5.

Specifically, location alternatives 4 and 5 are:

- Over 200 m from the existing well site,
- Result in a remote treatment site, adding operational and maintenance complexities, and is not supported by the Region,
- Would result in excessive linear construction along Alderview Drive for new watermain and other utility construction, and
- Require new emergency standby power, hydro power, telecommunication connections, and storm sewer connections.

As a result, location alternatives 4 and 5 will not be considered for detailed evaluation.

Slide 11 – Archaeological Assessments

Before proceeding into the detailed evaluation, the project team would like to provide more information that will assist in the evaluation, namely the archaeological and natural heritage assessments and studies that were conducted as part of this Class EA. First is the archaeological assessment, following the guidelines developed by the Ministry of Heritage, Sport, Tourism, and Culture Industries.

Based on a Stage 1 Archaeological assessment, the general area including each of the short-listed alternatives contains equal archaeological potential. While there is potential, it is not believed it will impact the facility layout. Field investigations as part of a Stage 2 Archaeological Assessment (AA) will be completed during the design phase for the preferred location to confirm.

The figure below shows archaeological potential, and where additional investigations are required.

Slide 12 – Natural Heritage Studies

The second set of studies completed were the natural heritage studies.

Based on these studies and investigations, barn swallows were observed flying in and out of the neighbouring barn which may contain a nest, placing each of the short-listed alternatives in a Category 3 barn swallow habitat. Additional work, including consultation with the Ministry of the Environment, Conservation, and Parks (MECP) and completing a species at risk survey may be required, but this is not expected to limit construction in this area.

Slide 13 – Evaluation Criteria

After reviewing the two background studies conducted to date, we can move into summarizing the other evaluation criteria.

The short-listed iron and manganese treatment location alternatives will be evaluated according to the criteria shown below, with each of the four categories being considered equally.

The technical criteria category means the alternatives will be evaluated against:

- Providing reliable service,
- Meeting current and future needs,
- Aligning with existing and planned infrastructure,
- Aligning with existing and future land uses,
- Aligning with approval and permitting processes,
- Managing and minimizing construction risks,
- And is able to adapt to climate change.

The social criteria category means the alternatives will be evaluated against:

- Protecting health and safety,
- Minimizing impacts to residents and businesses related to noise, odour, traffic, and aesthetics,
- Minimizing impacts to businesses,
- Managing and minimizing construction impacts,
- Protecting cultural heritage features, and
- Protecting archaeological features.

The natural heritage criteria category means the alternatives will be evaluated against:

- Protecting environmental features,
- Protecting wildlife and species at risk,

- Protecting groundwater, streams, and rivers, and
- Minimizing climate change impacts.

The financial criteria category means the alternatives will be evaluated against:

- Providing low lifecycle costs

Slide 14 – Location Alternative 1

Location alternative 1 is to the north and is adjacent to the existing supply system site. The features of this alternative are:

- The existing properties consist of a manicured lawn and some agricultural paddock,
- This alternative would require the least amount of land acquisition,
- More complex construction techniques would be required to build this facility due to the proximity to the existing wells, and
- The 50-year lifecycle cost of this alternative is \$8.2 million dollars.

A preliminary site layout is provided on this page, showing access driveway, building orientation, and property line.

Slide 15 – Location Alternative 2

Location alternative 2 is to the northwest and is adjacent to the existing supply system site. The features of this alternative are:

- The existing properties consist of manicured lawn and some agricultural paddock,
- This alternative may allow some interconnection to the existing facility.
- Greater open-field space provides some ease of construction, and
- The 50-year lifecycle cost of this alternative is \$8.2 million dollars.

Slide 16 – Location Alternative 3

Location alternative 3 is to the south and is adjacent to the existing supply system site. The features of this alternative include:

- The existing properties consist mostly of agricultural paddock,
- This location results in the greatest utility and yard piping requirements,
- The site would greatly hinder the view of the farmscape from the Alderview Drive and Main Street intersection, and
- The 50-year lifecycle cost of this alternative \$8.3 million dollars.

Slide 17 – Evaluation of location alternatives

The location alternatives were scored, and a summary of the scoring is given on this slide.

For the technical category, location alternative 1, North Site, is well aligned with criteria, location alternative 2, Northwest Site, is very well aligned with criteria, and location alternative 3, South site, is somewhat well aligned with criteria.

For the social and cultural category, alternative 1 is somewhat aligned with criteria, alternative 2 is well aligned with criteria, and alternative 3 has very low alignment with the criteria.

For the natural environment category, alternative 1 is somewhat aligned with criteria, alternative 2 is somewhat aligned with criteria, and alternative 3 is somewhat aligned with criteria.

For the financial and lifecycle category, alternative 1 is somewhat well aligned with criteria, alternative 2 is somewhat aligned with criteria, and alternative 3 is somewhat aligned with criteria.

Overall, alternative 1 is somewhat well aligned with the evaluation criteria, alternative 2 is well aligned with the evaluation criteria, while alternative 3 is not well aligned with the evaluation criteria.

Therefore, location alternative 2 is the preliminary recommended location alternative.

Slide 18 – Highest Scoring Location Alternative

The preliminary scoring indicates Location Alternative 2 as the highest scoring at this time. Location alternative 2 is recommended as the preferred site with the size and configuration of the new facility further optimized within the area to minimize impacts. A sample rendering of the facility is shown on the next slide.

We now would like to ask a few questions for our stakeholders:

Are there any other aesthetic features you would like us to consider? and

Do you have any comments or suggestions for the next stage?

To help visualize what the building could look like, an architectural rendering is shown on the next slide.

Slide 19 – Conceptual Architectural Rendering Sample

This slide shows a street view from Alderview Drive of Location Alternative 2 next to the existing supply facility, looking towards the west. The appearance of the building is just one example and we invite you to provide your feedback.

Slide 20 – Next steps in the Class EA Process...

The next steps for the project are as follows. Comments from PCC #3 will be collected and addressed by the project team. The Environmental Study Report will then be drafted to document the project information and decision-making process. As part of the

reporting, there is a 30-day public review, in which we invite the public to comment on the Environmental Study Report, before proceeding to the Conceptual Design, which is discussed on the next slide.

Slide 21 – New iron and manganese facility

Upon completion of the Class EA there are several stages for this project that will need to be completed before the new facility is built. The following is an estimate of the project timeline. This timeline may change as the project progresses.

Conceptual Design, occurring in 2022.

- The Region will work on acquiring the land based on the preferred location alternative.
- A preliminary geotechnical and hydrogeological investigation will be completed on site to look at the property's soil and groundwater conditions.

Detailed Design, occurring in 2027 to 2029.

- Several additional investigations will be conducted to support the detailed design, including a site survey and Stage 2 archaeological assessment.
- The exterior of the facility will also be finalized in Detailed Design

Construction, occurring in 2029 to 2031.

- The facility will be constructed as a one-storey building.
- The site will include a paved driveway and landscaping to match the surrounding area.

Slide 22 – Thank you for your participation!

Finally, we would like to ask you all to get engaged! We are nearing the end of the New Dundee water supply system iron and manganese treatment upgrades Class EA. Do you have any questions, comments, or want to stay up to date? Please contact or fill out a Comment form for either Kaoru Yajima from the Region of Waterloo or Kirk Worounig from R.V. Anderson. Again, the contact information is available on this slide and on the Region website, and more information, including copies of project notices, previous PCCs, and current PCC materials like a transcript of this virtual presentation can be found at the Region of Waterloo's website. Thank you very much for your participation in the virtual PCC, the project team really appreciates it.

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