Brantford Ice Jam Mitigation Feasibility Study – PIC #1 Transcript

Slide 1 – Welcome

Welcome to the Public Information Centre (PIC) for the Brantford Ice Jam Mitigation Feasibility Study.

Slide 2 – Purpose of this Public Information Centre

The purpose of this PIC is to:

- Provide information on the study purpose and background;
- Describe the process that will be followed for the study;
- Indicate work in progress
- Provide an opportunity for your input

Slide 3 – Study Purpose

Ecosystem Recovery has been retained by the Grand River Conservation Authority (GRCA), in partnership with the City of Brantford, to undertake a feasibility study for the development and refinement of alternative mitigation measures to reduce ice jam potential in Brantford. The intent of this feasibility study is to lay the groundwork for future Environmental Assessment studies to further evaluate alternatives and select a preferred management strategy.

Slide 4 – Why Now?

So why is this study being initiated now?

A significant and damaging ice jam event occurred in 2018.

In 2019, KGS Group Consulting Engineers completed a Brantford Ice Jam Study for the GRCA, which included a history of ice jams in Brantford, meteorological conditions contributing to the 2018 ice jam, a description of the 2017 – 2018 winter ice jam, a river ice analysis. The study also provided potential ice jam mitigation options.

The GRCA has funding to develop concepts, estimate costs for potential mitigation measures and damages prevented, and suggest implementation strategies.

Slide 5 – Study Area

This slide shows an outline of the general study area, which includes the Grand River and surrounding area as it flows through the City of Brantford. The primary study area is centred on the Gilkison Flats reach, around Two Fish Island, and around the bend at Tutela Heights, which is the southwest corner of the broader study area shown here. Ice jams occur in this area almost every winter and sometimes several times during a winter season.

Slide 6 – 2018 Ice Jam – Evacuation and Flooded Areas

During the 2017 – 2018 winter, a breakup ice jam formed in Brantford, extending from upstream of Two Fish Island to approximately Brant Park. An upstream ice jam in Cambridge released due to intense rainfall and warm temperatures, sending a surge of water and ice downstream into the Brantford area. Major flooding occurred in Brantford with ice and water overtopping parts of the flood walls. This map shows the evacuation area in yellow and the area that was flooded outlined in red. The grey squares indicate flooded properties.

Slide 7 – 2018 Ice Jam – Breaking the Banks

This slide shows some images of the flooding and damage caused by the 2018 ice jam.

Slide 8 – 2018 Ice Jam – Cleanup

This slide shows some photos of the aftermath and cleanup from the 2018 ice jam.

Slide 9 – Recently Completed and Ongoing Projects

There are several studies that have been completed within the vicinity of the study area. This slide provides a brief summary of the ones most relevant to the Brantford Ice Jam Mitigation Study, including floodwall assessments and repairs at River Road and the Ballantyne Floodwall, dike gap completion at the Civic Centre gap and the Grand River Avenue gap, dike slabs remediation and sediment bar removal at Eagle Street and Gladstone Street, and the Three Bridges Class Environmental Assessment (EA) that is currently ongoing for the Lorne Avenue Bridge, CN Railway pedestrian bridge, and the TH&B Crossing.

Slide 10 – Planned Work

There are four main tasks planned for study: hydraulic analysis, a fluvial geomorphological assessment, a flood damages assessment, and to develop and evaluate mitigation options.

The hydraulic analysis will involve developing a 2D model and modelling a variety of scenarios, including a scenario with no dikes, existing conditions, and the various mitigation options.

The fluvial geomorphological assessment will involve establishing an understanding of the existing conditions, investigating the implications of each alternative on the river, and considering erosion hazards.

A flood damages assessment will be completed in order to estimate the flood damages that would result from a variety of scenarios, including the 2018 ice jam event, the theoretical damages for the no dikes scenario, and the flood damages under the various mitigation options.

Mitigation options will be developed and evaluated. These options may include overbank relief, flow regime modification, dike or floodwall protection, flood forecasting or monitoring improvements, pre-emptive weakening of the component ice, ice breaking, excavation of ice, ice control structures, or channel modifications.

Slide 11 – Potential Future Work

Potential future work may include assessments for Natural Heritage, Cultural Heritage, Archaeology, or a Class Environmental Assessment.

A Natural Heritage Assessment would include reviewing any background information and conditions, including sources such as the Ministry of Natural Resources and Forestry (MNRF), Fisheries and Oceans Canada (DFO), the Natural Heritage Information Centre (NHIC), Biodiversity Explorer, Grand River Conservation Authority reports and mapping, wildlife database records, and natural feature mapping. Field surveys would consist of an Ecological Land Classification (ELC), a vegetation inventory, an aquatic habitat assessment, breeding bird surveys, a tree inventory, a bat cavity tree assessment, a Species at Risk survey, and verification of Significant Wildlife Habitat.

A Cultural Heritage Assessment would involve completing a Cultural Heritage Evaluation Report for all locations, which includes review of background information, a site visit, a historical overview and description of the property, the current heritage status of the subject property, and an evaluation of the heritage value of the property.

A Stage 1 Archaeological Assessment would be completed to analyze the archaeological potential of the site.

A Class Environmental Assessment would involve consultation with stakeholders, an evaluation of alternatives, and the selection of a preferred management strategy.

Slide 12 – Next Steps

Next steps for this project include the following:

- Complete the characterization of existing conditions;
- Develop alternative solutions;
- Finalize the evaluation criteria; and
- Conduct an evaluation of each alternative.

A second Public Information Centre will be held in winter 2021, at which time we will summarize the characterization of existing conditions, present alternative solutions and the evaluation, present the draft preferred solution, and receive public input on the alternative solutions.

Slide 13 – Consultation

Thank you for watching our online Public Information Centre video for the Brantford Ice Jam Mitigation Feasibility Study. You can find the comment sheets on the webpage where you found this presentation. Please complete a comment form and submit it via email to BrantfordIceStudy@grandriver.ca by January 8, 2021 to be considered.

Should you have any questions or concerns at any time during the project, please contact either of the following people:

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