



Information Memo

To: Mayor and Council

From: Mike King Director Engineering

Date: April 12, 2022

Regarding: Gilbert Road Culvert – Additional Information

Recommendation(s):

THAT the Information Memo regarding Gilbert Road Culvert - Additional Information be received as information.

Background

On November 9, 2021, Report EIS 21-06 – Gilbert Road Culvert – Budget Amendment was presented to Council-in-Committee. At that time, Council-in-Committee requested additional information which could affect the decision of the Gilbert Road Culvert replacement.

Council-in-Committee requested information as to the future of the dam and if there is an option to remove/decommission the dam, which would therefore eliminate the requirement for Norfolk County to increase the size of the culvert on Gilbert Road.

Discussion:

In early March of 2022, staff from Norfolk County met with senior staff from Long Point Regional Conservation Authority (LPRCA) to discuss the Hay Creek Dam and future capital budgets and plans to determine the best path forward. Timing estimates of LPRCA projects noted below are based on discussions in the March 2022.

There are several projects related to the Hay Creek Dam and Gilbert Road Structure including: Gilbert Road Culvert, Embankment Stability Project, Environmental Assessment, and the Hay Creek Bridge rehabilitation. Information relating to each project is provided, including the impact of the potential decommissioning of the dam on each project.

Gilbert Road Culvert

Full details on the Gilbert Road Culvert project were provided in report EIS 21-06, which has been attached to this memo. Engineering would continue in 2022 and the project is planned to be tendered in 2023.

Staff proposed the size increase of the Culvert based on information in the 2018 Dam Safety Review completed by LPRCA, which will remove the downstream dwelling from the floodplain, therefore reducing the risk from high to low.

LPRCA staff advised that even if the dam is decommissioned that the existing culvert on Gilbert Road will have to be upsized to reduce the hazard risk to from "high" to "low" for the downstream dwelling. Installation of the larger culvert may also help support the potential option for future dam decommissioning

Embankment Stability Project

As an attachment to Report EIS 21-06, the Long Point Regional Conservation Authority (LPRCA) provided a letter of advice for the Gilbert Road Culvert Replacement and it's impact on the Hay Creek Dam. In this letter, LPRCA noted that regardless of what size the Gilbert Road Culvert was replaced with, if the dam was to remain in operation, there would be required work to improve the embankment stability.

In our meeting with LPRCA it was confirmed that this work would also have to be done even if the dam was removed/decommissioned as the embankment and wingwalls also support the road and bridge structure on Port Ryerse Road.

The work has been included in LPRCA's budget to Norfolk County as a special levy of \$60,000 (Engineering) in year 2023 and \$300,000 (Construction) in year 2024. Those costs could rise to \$500,000 as more detailed estimates are conducted by LPRCA. During the meeting in March, LPRCA staff noted that this project timeline is desired to be completed as soon as possible and noted staff have moved up the estimated completion date of this project to proceed after the culvert size is addressed.

LPRCA confirmed that if the existing culvert on Gilbert Road is not upsized or removed then an additional \$700,000 would be required to construct an emergency spillway at the Hay Creek Dam. This has not been forecast in LPRCA draft budget, however would be required as part of the embankment stability project.

Environmental Assessment

If removing the Hay Creek dam is an option to be considered, then an Environmental Assessment (EA) under the "Class Environmental Assessment for Remedial Flood and Erosion Control Projects" would have to be completed to establish the preferred option.

As both the Gilbert Road Culvert and Embankment Stability projects are required to be completed regardless of the future of the Hay Creek Dam, staff are recommending that the EA be completed after this required maintenance work. It is also recommended that

the EA study be completed prior to major bridge rehabilitation, to verify if decommissioning of the dam is the preferred option. The decommissioning could be planned in conjunction with the bridge work, as the dam is located beneath the bridge structure. The dam embankment and control structures carry Norfolk County's Port Ryerse Road and Bridge Structure.

The cost to complete the EA is estimated to be \$125,000, this cost is estimated by the LPRCA, and that this work could be completed in 2028.

Hay Creek Dam/Bridge Rehabilitation

The Hay Creek Dam/Bridge rehabilitation is currently in the Norfolk Capital Forecast in 2031 at \$418,000. Therefore prior to 2031 staff is recommending that LPRCA complete an EA be on the Hay Creek Dam to ensure that the bridge rehabilitation aligns with the long term future of the dam structure.

If it is determined the preferred option would be to decommission the dam structure, this could be planned in conjunction with the bridge rehabilitation work, which would also likely result in changes to the bridge rehabilitation project.

At this time, the cost to decommission the dam, should an EA recommend it as the preferred option, has not been estimated by LPRCA, however the LPRCA speculated that the work would likely cost well over \$500,000.

Attachment(s):

- Report EIS 21-06 Gilbert Road Culvert

Conclusion:

Given all the additional information provided in this memo, Staff recommend that the recommendations in Report EIS 21-06 be approved by Council.