



Staff Report PW2022-052

Title of Report: PW2022-052 Holstein Dam Safety Review
Department: Public Works
Branch: Transportation & Public Safety
Council Date: November 29, 2022

Recommendation:

Be it resolved that Council receive Staff Report PW2022-052 for information.

Background:

At the August 3, 2022, Southgate Council Meeting, Council received Staff Report PW2022-042 for information, and staff requested that Council provide feedback on an option to further explore for the long-term future of the Holstein Dam and pond.

The following resolution was passed:

9.5.3PW2022-042 Holstein Dam Works

Moved By Deputy Mayor Milne; **Seconded By** Councillor Shipston;

Be it resolved that Council receive Staff Report PW2022-042 for information; and

That Council provide feedback on an option to further explore for the long-term future of the Holstein Dam and pond.

Councillor Sherson moved the following amendment to the main motion.

Amendment:

No. 2022-507

Moved By Councillor Sherson; **Seconded By** Councillor Dobreen;

Be it resolved that Council amend the second clause to state;

"**That** Council direct staff to obtain a Dam Safety Report to assess the structural integrity of the Dam and continue to explore options to remedy the situation and report back to Council with findings."

Carried

Motion as Amended:

No. 2022-508

Moved By Deputy Mayor Milne; **Seconded By** Councillor Shipston;

Be it resolved that Council receive Staff Report PW2022-042 for information; and

That Council direct staff to obtain a Dam Safety Report to assess the structural

integrity of the Dam and continue to explore options to remedy the situation and report back to Council with findings.

Carried

Staff Comments:

The Dam Safety Review (DSR) was conducted by BM Ross Engineering and concludes the Holstein Dam itself is in generally in good condition requiring some minor concrete repairs where spalling in areas, as well some trees and vegetation removal for mill pond bank stability. The footings of the wingwalls and dam spillway apron show some signs of undermining and a recommendation of concrete grouting to fill the voids under the foundation would rectify the situation. (Attachment # 1).

The DSR assessed the Hazard Potential Classification from the Ontario Dam Safety Guidelines table and the Holstein Dam ranked High for potential Loss of Life, Property Losses and Environmental Losses, and a Low ranking for Cultural-Built Heritage Losses.

There is potential for 5 buildings that could be wiped out with possible people in them with the head pressure and volume of water if the dam let go. The DSR estimates the loss of property to a dam failure could be in the range of 3 million to 30 million dollars. Environmental impacts are the release of sediments downstream from flows if the dam breaks. Aquatic wildlife, possible Species-at-Risk and habitat would be of concern. There does not appear to be any sites that are designated under the Ontario Heritage Act.

The Dam Safety Review will be used to accompany the next steps and recommendations that will be submitted to the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR) for a Lakes and Rivers Improvement Act (LIRA) application with two options.

Option 1 – Complete decommissioning of the sluiceway infrastructure; or

Option 2 – Partial decommissioning of the sluiceway with installing a 6" diameter pipe in sluiceway with a gate valve before grouting the rest of the 4-foot pipe solid, to maintain baseflow in the tailrace if required by DFO or SVCA.

If neither of these options satisfy the agencies, a second LIRA application will be submitted that recommends installing a new control structure for the sluiceway.

Financial Implications:

The DSR was quoted at costing \$4,800 plus HST, being funded by the Tax Stabilization Reserve.

The costs estimated for the Dam repairs in the DSR are \$172,000.00, which could be implemented in the next couple of years.

The decommissioning of the sluiceway or Option 2 for partial decommissioning or installing a new control structure has not been assessed for cost at this time, pending on the outcome of the MNRFLIRA application submission. These options are not included in the 2023 Capital Budget currently.

Communications & Community Action Plan Impact:

Goal 5 - Upgrading our "Hard Services"

Action 5:

The residents and businesses of Southgate recognize our linear services - roads, bridges, water and sewer works, for example - to be a fundamental purpose of municipal government. This infrastructure needs to be serviceable and sustainable so that our businesses and communities can thrive and grow.

5-B - The Township will have adopted a long-term asset management plan for the timely repair, replacement, and expansion of the Township's infrastructure, facilities, and other assets

Concluding Comments:

Staff recommends that Council receive Staff Report PW2022-052 for information.

Respectfully Submitted,

Dept. Head: Original Signed By
Jim Ellis, Public Works Manager

Treasurer Approval: Original Signed By
William Gott, CPA, CA Treasurer

CAO Approval: Original Signed By
Dave Milliner, CAO

Attachments:

Attachment # 1 – Holstein Dam Safety Review