Alternative formats and communication supports available upon request. Please contact accessibility@brantford.ca or 519-759-4150 for assistance.

Date July 5, 2022 **Report No.** 2022-327

To Chair and Members
Committee of the Whole – Operations

From Inderjit Hans, P. Eng., PMP
General Manager, Public Works Commission

1.0 **Type of Report**

Consent Item [ ]
Item For Consideration [X]

2.0 Topic Proposed New Elevated Water Storage Tank for Brantford Pressure District 2/3 - Preferred Site Selection [Financial Impact None]

3.0 Recommendation

A. THAT Report No. 2022-327 titled “Proposed New Elevated Water Storage Tank for Brantford Pressure District 2/3 - Preferred Site Selection” BE RECEIVED; and

B. THAT Staff BE DIRECTED to proceed with negotiations for the acquisition of 460-466 King George Road as the preferred site location; and

C. THAT Staff BE DIRECTED to present the negotiated Agreement of Purchase and Sale to Council for final approval.

4.0 Executive Summary

The purpose of this report is to inform Council about the selection of a preferred site for a new elevated water storage tank in Brantford Pressure District 2/3 to serve northern lands, update on the outcome of the public consultation carried out for the proposed project and receive direction from Council to proceed with negotiations to acquire the preferred site from the landowner.

Significant growth is expected in the City of Brantford (the City) which includes the recent northerly urban expansion area, as well as lands within the current City's northern urban boundary. City staff are already in the process of working with several developers in the north expansion lands through the initial stages of the Block Planning process, so it is important that the timing of water servicing aligns with planned growth in this area. These lands are part of Water Pressure District 2/3. In order to service existing and future residents in the City's Pressure District (PD) 2/3, the City's recent Water, Wastewater and Stormwater Master Servicing Plan (MSP) 2051 Amendment identified the need for additional water storage. This requires siting a new water storage tank along with associated watermains and determining pump station upgrade requirements to facilitate the additional storage tank. In addition, the existing King George Elevated Tank is reaching the end of its useful life and requires substantial capital investment to maintain its operation beyond around 2029. The MSP recommended that the King George Elevated Tank be decommissioned after the new storage tank is operational. Prior to decommissioning, staff will evaluate the pros and cons of keeping the King George Elevated Tank as a Brantford Landmark.

To establish the preferred site for the water storage tank, initially 14 potential sites were evaluated. From the potential sites, 3 sites were short-listed. These 3 sites were evaluated further for technical, environmental, social, and economic factors and then the preferred site was recommended. The preferred site is a 4 acre parcel located along King George Road (460 and 466 King George Rd.), north of Powerline Road. Initial discussions with the current land owner to purchase the preferred site are underway. Upon Council direction, staff will negotiate the purchase of the land and present the negotiated Agreement of Purchase and Sale to Council for final approval.

The preferred site was presented to the public and key stakeholders during the Public Information Centre held on May 18, 2022 at the Walter Gretzky Golf Course. The deadline to submit comments on the proposed project was June 6, 2022. One comment was received expressing appreciation for the information provided; no objections to the preferred concept and site were received.

The construction of the elevated water tank with a storage capacity of 8 million litres is estimated to cost approximately $13.23 million dollars. It is estimated to be built and operational between 2026-2028, pending land negotiations, detailed design, and approval to construct. This project will be funded from the Water And Related and Development Charges reserves.

5.0 Purpose and Overview

The purpose of this report is to inform Council about the selection of a preferred site for a new elevated water storage tank in Brantford Pressure District 2/3 to serve northern lands, update on the outcome of the public consultation carried out for the proposed project and get direction to proceed with negotiations to purchase the preferred site from the landowner.

460 – 466 King George Rd. (Site 3) has been selected as the preferred site following public consultation.

6.0 Background

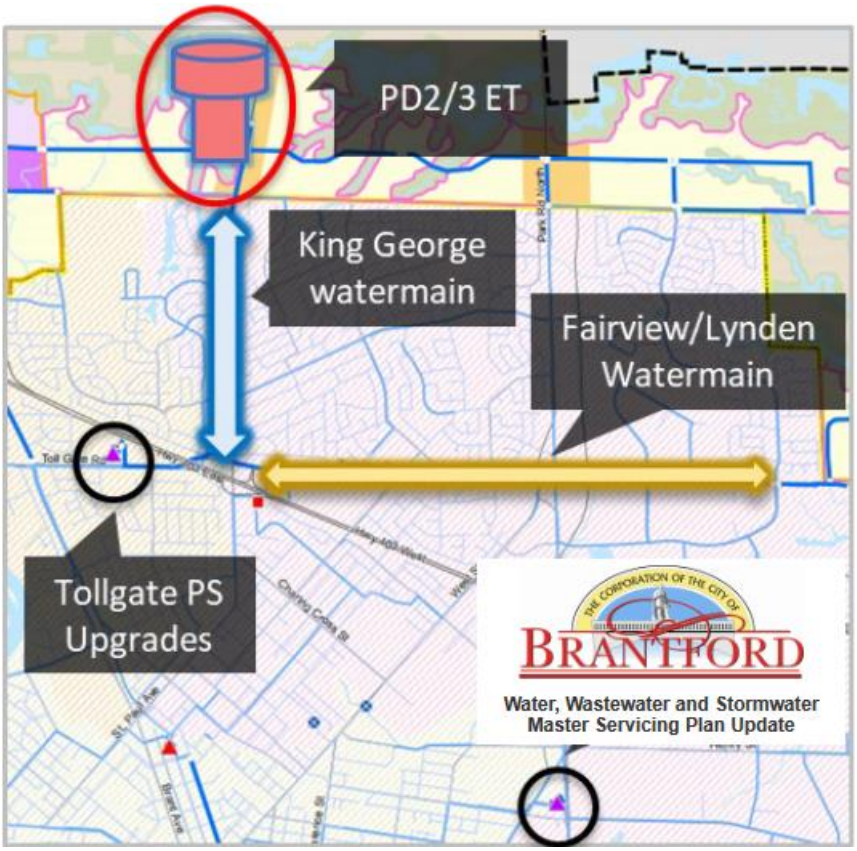
6.1 Recommendations of the Master Servicing Plan

In order to service existing and future residents in the City's Pressure District (PD) 2/3, the City's recent Water, Wastewater and Stormwater MSP, 2051 Amendment identifies the need for additional storage. The MSP recommended siting a new water storage tank along with associated watermains and determining upgrade of existing pump stations to facilitate the additional storage tank. Completion of a Schedule B Municipal Class Environmental Assessment (MCEA) planning process is required, in consultation with key stakeholders, review agencies, and Indigenous Communities in order to provide a viable solution that can be logically phased to address the need for storage in the City's PD 2/3, taking into account that the existing King George Elevated Tank is reaching the end of its useful life. The study assignment was awarded to AECOM Canada Ltd.in March 2021.

6.2 Water Servicing Strategy for Growth

The MSP reviewed possible modifications to existing pressure district boundaries and the preferred strategy was to maintain the current servicing strategy including current boundaries. The following servicing strategy was established—See Figure 1: Water will be supplied to the north residential lands in PD 2/3 through a primary trunk connection at King George Road with additional watermain connections to the existing system in PD 2/3. The north employment lands will be serviced by PD 4. The east residential lands north of Lynden Road will be serviced via a direct connection to the existing PD 2/3 system on Lynden Road. In addition, a new sub-pressure district will be developed with a connection to PD 2/3 to service employment lands east of Garden Avenue.

Figure 1: Pressure District 2/3 Expansion for North Residential Lands



6.3 Sizing of Proposed Water Storage Tank

The preferred solution identified in the MSP was a new elevated tank with a storage capacity of approximately 11.8 million litres (ML) in PD 2/3. The current Class EA Feasibility Study (Study) has reviewed the servicing concept for PD 2/3 and has put forward a recommendation to build an 8 ML elevated storage tank now with enough land around the proposed tank to accommodate either another elevated tank or an in-ground water storage reservoir for the ultimate water storage requirement of 11.8 ML. The water storage tank of 11.8 ML in capacity is not common in the industry and an oversized tank may lead to water quality issues if there is not enough water demand. Through modelling and conceptual review of water demand projections, it is anticipated that an 8 ML elevated water storage tank will be sufficient to provide water storage in PD 2/3 until 2045.

7.0 Corporate Policy Context

This project is in line with Council Priorities #5 “growth is successfully accommodated in expansion lands” and #7 “the City is mitigating its environmental footprint and adapting to climate change”.

8.0 Input From Other Sources

Various comments from the public, external stakeholder agencies, Six Nations of the Grand River, Mississaugas of the New Credit, and City Departments including Engineering, Finance, Planning, and Real Estate were received regarding the preferred site for the new water storage tank in Pressure District 2/3.

9.0 Analysis

9.1 Preferred Site Selection Process

A feasibility study was completed that identified fourteen (14) potential sites for a new water storage tank for Pressure District 2/3. Key site identification criteria included location within Pressure District 2/3 or within reasonable distance to existing or planned large diameter watermains, property ownership (preference for City owned, undeveloped lands and/or parks and open space), site attributes (e.g., preference for high elevation, minimum site size), infrastructure requirements, as well as land use, natural environment and archaeological considerations.

From the fourteen (14) sites, a total of three (3) were short-listed to be further investigated through this current Municipal Class Environmental Assessment (MCEA) planning process (see Appendix A, Slide 5 for visual representations of the three locations). The short list of sites evolved through this study’s evaluation process includes:

- Site 1: North side of Powerline Road;
- Site 2: West side of King George Road; and
- Site 3: East side of King George Road (460 – 466 King George Rd.).

Site 3 at 460-466 King George Rd was selected as the preliminary preferred site. The rationale for selecting Site 3 as the preliminary preferred site is based on a combination of the following key factors:

- Elevation of the site (228-232m) is suitable for construction of an elevated tank;

- Proximity to Pressure District 2/3 being serviced by the new water storage tank and the Powerline Block Plan areas;
- Site is near 400mm diameter watermains, as well as future proposed watermains north of Powerline Road;
- Property owner is a willing host for a new water storage tank based on preliminary discussions with the City;
- Based on a desktop review, no aquatic Species at Risk records have been identified for this site;
- The siting area largely avoids existing residential areas (no displacement to residential property on the existing site as the property has been sold) with minimal disruption to surrounding land uses (residential and businesses) anticipated during construction;
- No known direct or indirect impact to built heritage resources or cultural heritage landscapes;
- Fastest in-service date anticipated compared to other siting options; and
- Has sufficient acreage required to achieve planning setbacks, stormwater, water quality requirements, and flexibility for additional storage to accommodate future growth.

9.2 Public Information Centre

The public and City Council were notified of the May 18, 2021 PIC by Notice of PIC dated May 5, 2022. Notice of PIC was posted on social media and on City website and also published on the Civic News and two local First Nations papers. The PIC was held on May 18, 2022 at the Walter Gretzky Golf Course in Brantford. A total of 10 persons signed the sign-in sheet. One comment sheet was filled out by a local resident expressing appreciation for the information provided. No other comments have been received by mail or via the project webpage.

9.3 Next Steps

The next steps of the project are:

Finalize Preferred Site:

- Complete the natural environment field investigations.

MCEA Project File Report – Summer/Fall 2022:

- Prepare and circulate the draft Project File to key review agencies;
- Issue the notice of study completion and commence the 30-day public review period for the Project File; and

- Address comments received and finalize the Project File.

Preliminary and Detailed Design – 2023:

- If no objections are raised during the Municipal Class Environmental Assessment phase, the City intends to proceed to the preliminary design and detailed design phases starting in 2023, including securing permits and approvals.

Construction:

- Construction of the elevated water storage tank is anticipated to commence within 2-5 years (between 2024 and 2027);
- The elevated water storage tank will be in-service after construction is complete (between 2026 and 2028); and
- Construction of additional water storage on site post 2041, as needed.

10.0 Financial Implications

Council approved funding of $625,000 to complete the Feasibility Study for the water storage facility and the completion of the Class EA approval as part of the 2021 budget process. The Study will be completed within the approved budget.

In the 2022 budget, $4.18 million was approved for the design of the elevated water storage tank. Preliminary estimated cost for constructing a new elevated tank and related infrastructure is $13.23 million which includes the cost for construction of the tank and watermain connection. Approximately 68% of the total project cost will be funded from Development Charges Reserves with the remainder funded from Water And Related Reserves.

Negotiations with the land owner will be conditional on the results of the geotechnical studies, archeological assessments, and environmental site assessments (ESA). If approved by Council, the negotiations are expected to be finalized by the end of 2022 with the land purchasing cost paid from Water And Related and Development Charges reserves.

In the 2024 budget, capital project funding needs for the construction of the tank, watermain, valves and related infrastructure will be presented to Estimates Committee for consideration.

There are two capital projects that are identified as prerequisites to commissioning of the new elevated tank between 2026 to 2028: Tollgate pump upgrades (Capital Program ID: W-P-003) and King George Road Watermain (Capital Project ID: W-M-001). The total estimated cost of these two projects, as presented in the Master Servicing Plan Upgrade to 2051, is $7.43 million and

$17.42 million, respectively. Both of these projects were included in the 2022-2031 capital budget. The design and construction of King George Road Watermain will be in 2022-2023 and the design and construction for Tollgate pump upgrades will be in 2024-2025.

11.0 Climate and Environmental Implications

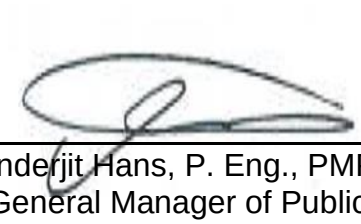
The new elevated water storage tank will replace the existing King George elevated water storage tank, as such the incremental increase in environmental impact of the new storage tank is negligible in comparison, and is related to the upgraded pumps required at Tollgate Pumping Station and Reservoir. Other environmental impact is related to the removal of up to fifty (50) trees on the preliminary preferred site (Site 3). However, new trees will be planted in coordination with Parks and Planning Departments and in accordance with Chapter 322 of the Municipal Code.

12.0 Conclusion

A preliminary potential preferred site selection of a new Water Storage Tank in Brantford Pressure District 2/3 to serve northern lands was conducted and is presented herein. Site 3, located at 460-466 King George Rd north of Powerline Rd., was selected as the preliminary preferred site.

After presentation of the Study findings to Council, the project file report will be completed and made available for public review for a 30-day comment period in late 2022. If there are no objections from the public, following an additional 30-day period as per MECP requirements, the report will be filed after which the Study will be deemed complete. Upon Council direction, staff will negotiate the purchase of the land and present the negotiated Agreement of Purchase and Sale to Council for final approval.

Upon completion of the Study, the City will start the preliminary design of the Elevated Water Storage Tank and supporting infrastructure in early 2023. Detailed design will be completed by early 2024 and construction will be completed in 2026-2028.



Inderjit Hans, P. Eng., PMP
General Manager of Public Works Commission

Prepared By:

Selvi Kongara, P. Eng., Director of Environmental Services
Andrew Rodriguez, C.E.T., Manager of Capital and Development
Shahab Shafai, P. Eng., Senior Project Manager

Attachment:

Public Information Centre Presentation Slides

In adopting this report, is a by-law or agreement required? If so, it should be referenced in the recommendation section.

By-law required	[ ] yes	[x] no
Agreement(s) or other documents to be signed by Mayor and/or City Clerk	[ ] yes	[x] no
Is the necessary by-law or agreement being sent concurrently to Council?	[ ] yes	[x] no