

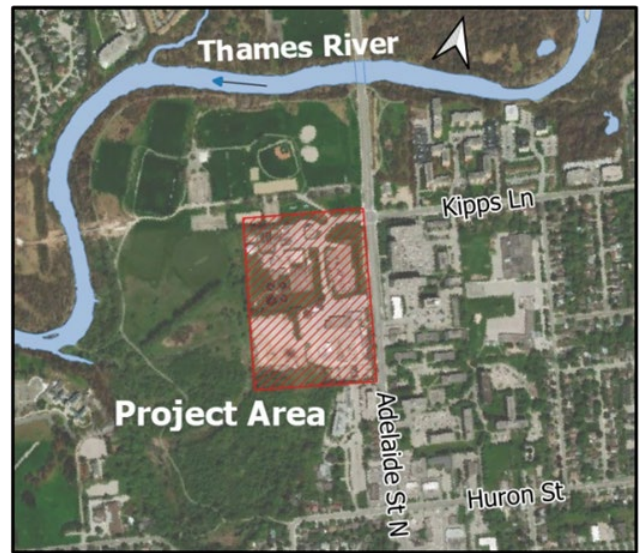
## **Adelaide Wastewater Treatment Plant Climate Change Resiliency Class Environmental Assessment**

**PUBLIC NOTICE**

**May 2022**

### **Project**

The City of London is concluding the Adelaide Wastewater Treatment Plant Climate Change Resiliency Class Environmental Assessment (EA). In April 2019, the City of London declared a climate emergency to deepen its commitment to protecting its economy, ecosystems, and communities from climate change. The purpose of this Class EA is to evaluate potential flood mitigation alternatives for improved climate change resiliency at the existing Adelaide Wastewater Treatment Plant, located at 1201 Adelaide Street North.



### **Process**

The Class EA study was undertaken in accordance with the Ontario *Environmental Assessment Act* and has covered all necessary phases of Schedule 'B' of the Municipal Class EA Process. The Schedule 'B' process includes the definition of a problem or opportunity as well as the identification and evaluation of potential alternative solutions. At this time, a Project File Report has been completed to conclude the Schedule 'B' Municipal Class EA process to recommend the preferred solution for the Adelaide Wastewater Treatment Plant. The Project File Report will be available online for review at <https://getinvolved.london.ca/adelaide-climate-change>.

Interested persons may provide written comments to our project team by June 29, 2022. All comments and concerns should be sent directly to Kirby Oudekerk at the City of London or to Stephen Braun at Matrix Solutions Inc.

In addition, a request may be made to the Ontario Ministry of the Environment, Conservation and Parks for an order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed) or that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name.

Requests should specify what kind of order is being requested (request for conditions or a request for an individual/comprehensive EA); how an order may prevent, mitigate, or remedy potential adverse impacts on Aboriginal and treaty rights; and any information in support of the statements in the request. This will ensure that the Ministry is able to efficiently begin reviewing the request.

The request should be sent in writing or by email to:

Minister of the Environment, Conservation and Parks  
777 Bay Street, 5th Floor  
Toronto ON M7A 2J3  
[minister.mecp@ontario.ca](mailto:minister.mecp@ontario.ca)

and

Director, Environmental Assessment Branch  
Ministry of Environment, Conservation and Parks  
135 St. Clair Ave. W, 1st Floor  
Toronto ON M4V 1P5  
[EABDirector@ontario.ca](mailto:EABDirector@ontario.ca)

Requests should also be copied to Marcy McKillop and/or Stephen Braun by mail or by e-mail. Please visit the Ministry's website for more information on requests for orders under section 16 of the *Environmental Assessment Act* at <https://www.ontario.ca/page/class-environmentalassessments-part-ii-order>.

All personal information included in your request – such as name, address, telephone number, and property location – is collected under the authority of section 30 of the *Environmental Assessment Act* and is collected and maintained for the purpose of creating a record that is available to the general public. As this information is collected for the purpose of a public record, the protection of personal information provided in the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA) does not apply (s.37). Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential.

## Your feedback is important to us

To provide comments, obtain alternate formats, request additional information, or if you have any issues accessing the document for review, please contact a member of the project team below:

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Under the *Municipal Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number, and property location included in a submission will become part of the public record files for this matter and may be released, if requested, to any person.

## EXECUTIVE SUMMARY – CLASS ENVIRONMENTAL ASSESSMENT FOR THE ADELAIDE WASTEWATER TREATMENT PLANT CLIMATE CHANGE RESILIENCY

The City of London, consistent with its declaration of a climate emergency in 2019 and subsequent *Climate Emergency Action Plan* (London 2022), initiated a Municipal Class Environmental Assessment (EA) to assess and identify optimum flood mitigation strategies at the Adelaide Wastewater Treatment Plant (WWTP). The EA was completed to identify a preferred solution for increasing resilience to flooding at the WWTP. A previous climate change risk analysis completed for the WWTP indicated increased resilience to flooding was a top priority in addressing the effects of climate change. The EA was also undertaken with regard given to the *Climate Change Adaptation for Wastewater Treatment Plants* standard published by CSA Group (2018).

Significant portions of the Adelaide WWTP, located at 1201 Adelaide Street North, are within the regulatory floodplain of the nearby Thames River. Floodplain mapping completed by the Upper Thames Conservation Authority (UTRCA) indicates predicted flooding resulting from a 1 in 250-year regulatory flow event. Under these conditions large portions of the WWTP would be inundated, potentially resulting in substantial flood damage to existing infrastructure.

Early in the EA process, a long-list of potential flood mitigation options was developed and analyzed to determine a suitable mitigation strategy for the WWTP. Long-list options included conveyance improvements, site-level flood protection, diversion of flows, online storage, and WWTP operational measures. A hydraulic study examined the feasibility of each long-list option, and it was determined that site-level flood protection (berm/floodwall) offered the optimal balance of flood protection, construction effort, cost, and minimized disturbance. The results of the hydraulic study of long-list items were presented in a Public Information Centre (PIC) held online on October 6th, 2021, which also included an overview of the project, alternative site-level flood protection solutions, alternative effluent pump station options, and an invitation for public comment.

Following the first PIC, three different configurations of site-level flood protection solutions were analysed to determine the solution which best addressed the evaluation criteria. These criteria included the degree of flood protection provided, economic impact, environmental impact, and social impact. To predict the effects of different available solutions, several studies were completed including a hydraulic study, an environmental impact study (EIS), archaeological phase 1 study, and comprehensive analysis of flood-protection compatibility with existing infrastructure.

Each of the different site-level flood protection solutions examined at the Adelaide WWTP requires an effluent pump station to lift water from the plant into the Thames River when river levels are too high for gravity drainage. Since treated water, stormwater and emergency bypasses all leave the plant at different locations, it was important to evaluate options for effluent pumping. An opportunity was also identified to use the additional capacity of the existing raw pump station to convey bypasses directly to the receiving

water or into an equalization tank. Various effluent pump station options were evaluated according to criteria of technical, economic impact, environmental impact, and social impact.

The preferred new effluent pump option was determined to be a new equalization storage tank to the north, to capture wastewater when peak flow is higher than treatment capacity, and a new effluent pump station to lift treated water. This option was found to provide improved resiliency and protection for the environment and public from bypass events. It also uses the existing infrastructure at site to convey flow into the equalization tank and is compatible with future WWTP expansion needs.

A preferred integrated solution based on the preferred site-level protection and effluent pump station options will protect critical WWTP infrastructure and ensure treated effluent from the WWTP is lifted to the flooded Thames River during periods when the river is too high for gravity drainage. The new equalization tank to the north will reduce the likelihood of a bypass and allow the captured wastewater to be treated after a high flow event.

An evaluation of available site-level flood protection solutions and pump station solutions was presented at a second PIC held on March 9th, 2022. The PIC presented an overview of technical studies supporting the evaluation of alternative solutions, with a preliminary preferred solution of “Berm with Raised Entranceway” presented. This solution will also include the preferred new effluent pumping station option previously described. In summary, a berm is proposed within the existing fence-line of the plant, although some minor encroachments beyond the fence will be required in some places, including at the north of the site. A raised entrance roadway will be required to ensure continued flood protection, with it also providing safe access to the south during times of river flooding.

Resilience for potential climate change effects has been incorporated into the preferred solution in accordance with UTRCA recommendations regarding Thames River flood levels. Flood mitigation works will be implemented to protect against the 1 in 250-year flood level plus a freeboard allowance of 0.6 m. This additional height is intended to account for potential future effects of climate change and increased flood flows in the river.

From an ecological perspective, the EIS identified a number of natural heritage features adjacent to the WWTP, but no direct impact to natural features is predicted by implementation of the preferred solution. Indirect impacts can be reduced through mitigation strategies. The archaeological study identified no areas of archaeological potential within area required for implementing the integrated preferred solution for the Adelaide WWTP.