

# Public Information Centre No. 2



Class Environmental Assessment for the Adelaide  
Wastewater Treatment Plant Climate Change Resiliency

Schedule B Municipal Class Environmental Assessment



# Contact Information

If you would like to provide comment or complete the project questionnaire, please see the Get Involved Page

<https://getinvolved.london.ca/adelaide-climate-change>

Project contacts:

**[mmckillop@london.ca](mailto:mmckillop@london.ca)**

or

**[sbraun@matrix-solutions.com](mailto:sbraun@matrix-solutions.com)**

**Thank you for participating!**

## Contact information:

**Marcy McKillop, P.Eng.**

Project Manager

City of London

[mmckillop@london.ca](mailto:mmckillop@london.ca)

Phone: 519.661.CITY(2489) x 4976

**Stephen Braun, P.Eng.**

Consultant Project Manager

Matrix Solutions Inc.

[sbraun@matrix-solutions.com](mailto:sbraun@matrix-solutions.com)

Phone: 289.323.0975



# Land Acknowledgement

We acknowledge that we are gathered today on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak, and Attawandaron.

We acknowledge all the treaties that are specific to this area: the Two Row Wampum Belt Treaty of the Haudenosaunee Confederacy/Silver Covenant Chain; the Beaver Hunting Grounds of the Haudenosaunee NANFAN Treaty of 1701; the McKee Treaty of 1790, the London Township Treaty of 1796, the Huron Tract Treaty of 1827 with the Anishinaabeg, and the Dish with One Spoon Covenant Wampum of the Anishnaabek and Haudenosaunee.

This land continues to be home to diverse Indigenous peoples (First Nations, Metis, and Inuit) whom we recognize as contemporary stewards of the land and vital contributors to society. We hold all that is in the natural world in our highest esteem and give honour to the wonderment of all things within Creation. We bring our minds together as one to share good words, thoughts, feelings, and sincerely send them out to each other and to all parts of creation. We are grateful for the natural gifts in our world and we encourage everyone to be faithful to the natural laws of Creation.

The three Indigenous Nations that are neighbours to London are the Chippewas of the Thames First Nation; Oneida Nation of the Thames; and the Munsee-Delaware Nation who all continue to live as sovereign Nations with individual and unique languages, cultures, and customs.

This land acknowledgment is a first step towards reconciliation. It is the work of all citizens to take steps towards decolonizing practices and bringing our awareness into action. We encourage everyone to be informed about the traditional lands, Treaties, history, and cultures of the Indigenous people local to their region.

# Overview

## Agenda

1. Project Overview
2. Public Information Centre No. 1 Summary
3. Alternative Solutions
4. Impact Assessment
5. Evaluation of Alternative Solutions
6. Next Steps
7. Questions

## Public Information Centre No. 1 (late 2021)

- Introduced the public to the project.
- Presented alternative solutions and evaluation criteria for input.
- Provided opportunity for interested parties to identify any concerns or information that will support the Municipal Class Environmental Assessment process.

## Public Information Centre No. 2

- Present alternative solutions and a detailed evaluation of them.
- Provide opportunity for interested parties to identify any concerns or information that will support the Municipal Class Environmental Assessment process.



# Project Overview



# Study Area

## Adelaide Wastewater Treatment Plant

*1201 Adelaide Street North*

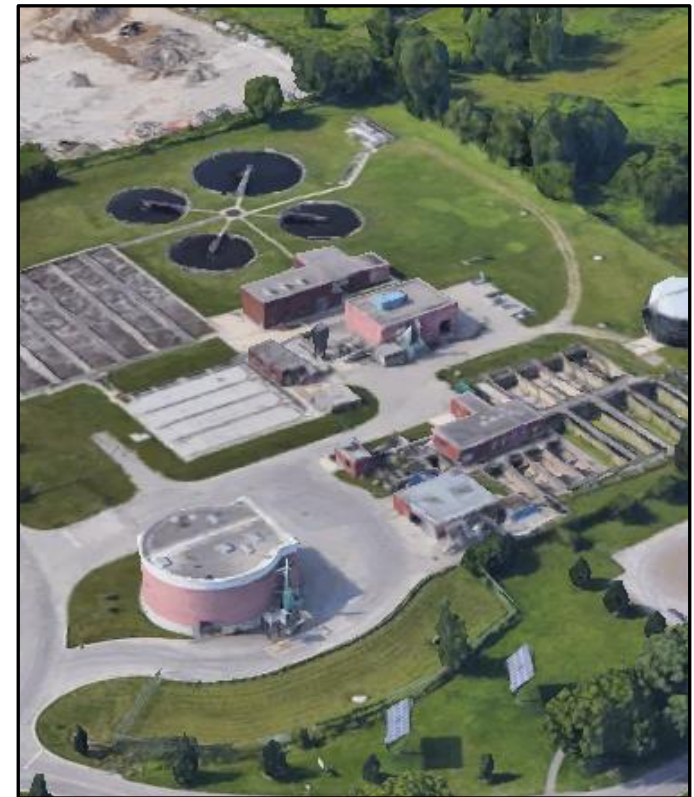


Image Source: Google Earth

# Climate Change Resiliency

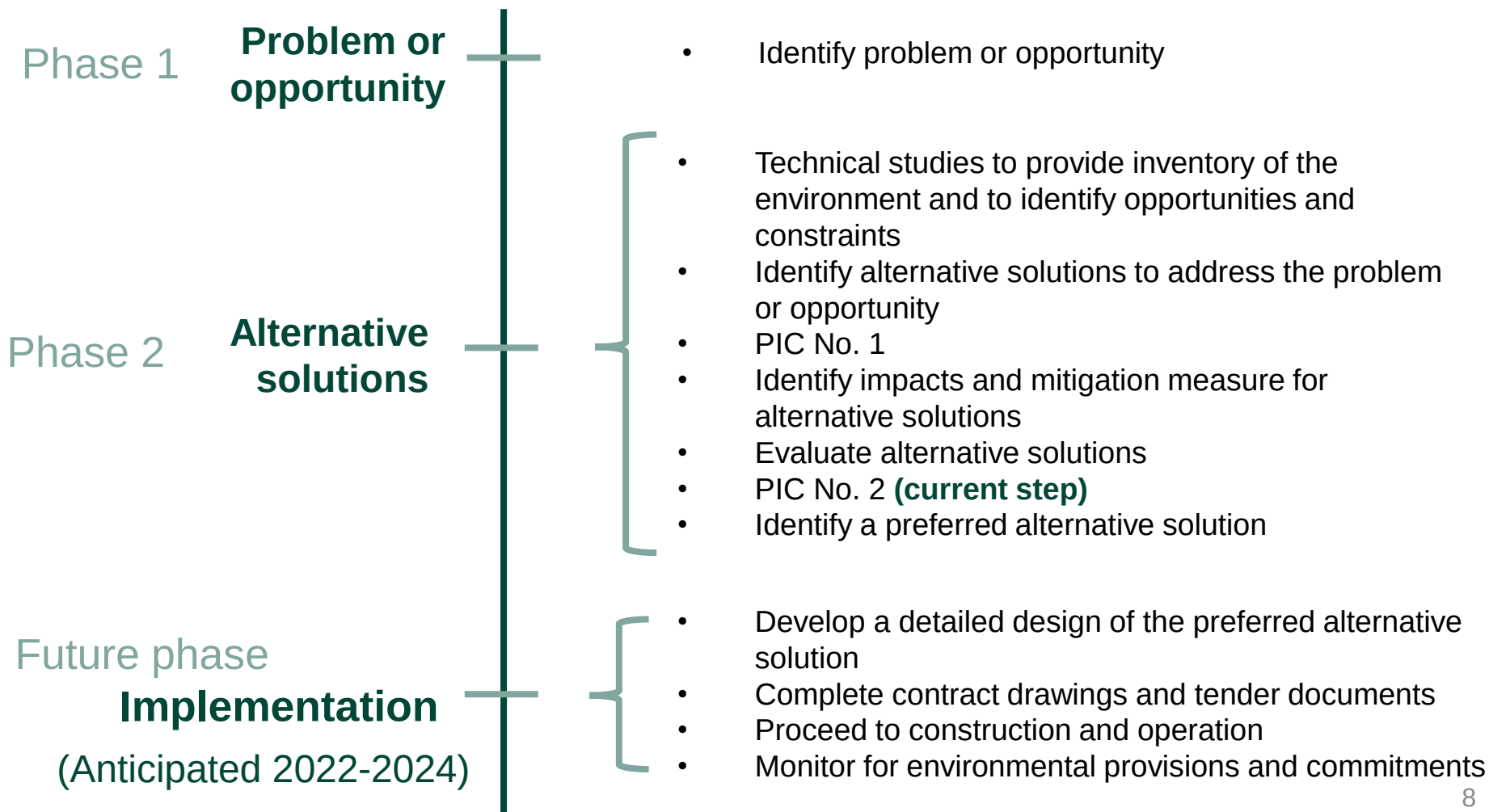
- In April 2019, the City of London declared a climate emergency to deepen its commitment to protecting its economy, ecosystems, and communities from climate change through adaptation and mitigation initiatives.
- The City of London, like other communities, is experiencing more frequent and intense flooding as a result of climate change.
- This environmental assessment will seek to identify a preliminary preferred flood protection approach to improve plant asset resilience, enhance treatment capabilities, and improve plant safety.



Image Source: City of London

# Municipal Class Environmental Assessment

## Schedule B



# Consultation

- Consultation is an essential part of the Municipal Environmental Assessment process. We want to ensure that anyone with an interest in the study has the opportunity to provide input as the study proceeds.
- We are engaging the following stakeholders to provide the opportunity to express concerns and preferences:
  - Indigenous community
  - Residents and businesses
  - Government agencies and regulators
- Engagement will provide an opportunity to gather input for consideration in the assessment of preliminary alternative solutions.

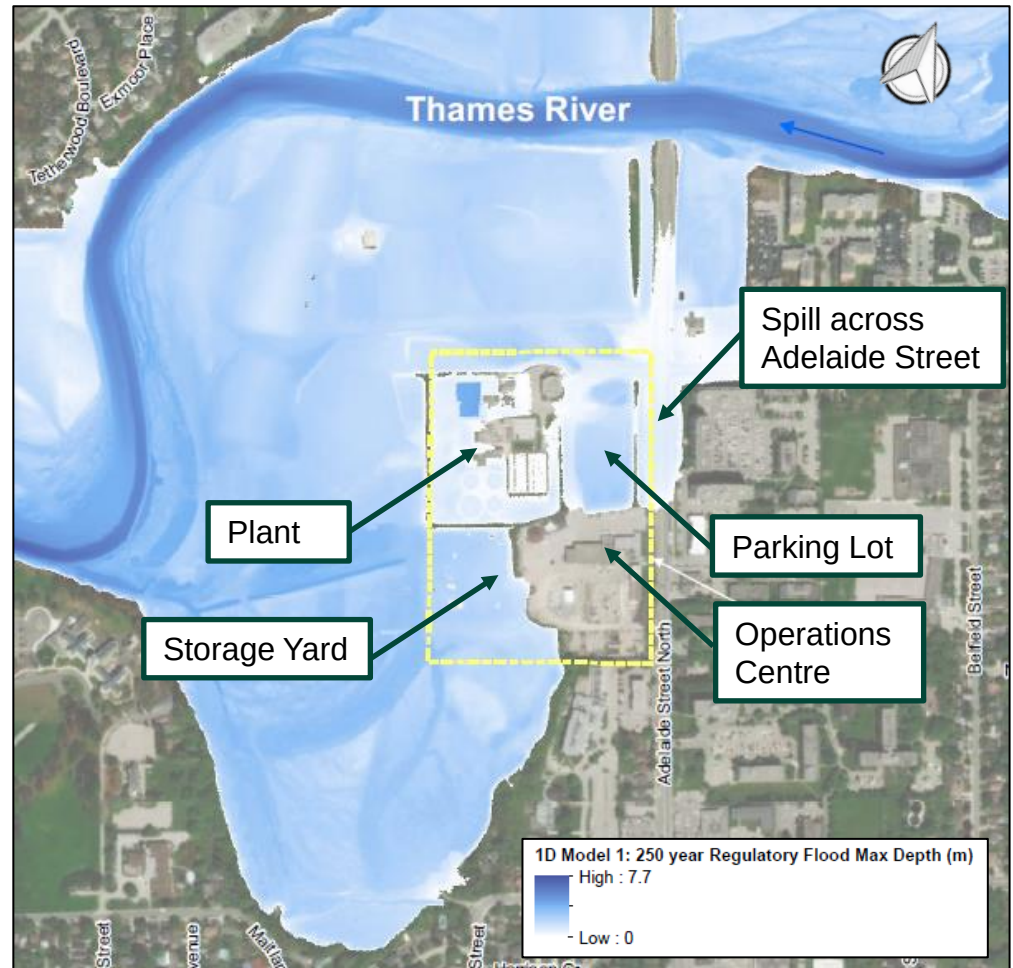


# Public Information Centre No. 1 Summary



# Existing Flood Risk

- Flooding spills across Adelaide Street
- 1:250-year regulatory event of 1,000 m<sup>3</sup>/s
- Typical flood depths are between 0.2 m and 0.8 m at the plant



# Summary

| Long-list of flood mitigation approaches       | Screening outcome |
|------------------------------------------------|-------------------|
| Site-level flood protection                    |                   |
| Floodwall/berm/dyke                            | recommended       |
| Channel conveyance                             |                   |
| Channel widening                               | not recommended   |
| Channel lowering                               | not recommended   |
| Floodplain improvement                         | not recommended   |
| Bridge replacement                             | not recommended   |
| Diversions                                     |                   |
| Local flow diversion                           | not recommended   |
| Storage                                        |                   |
| Online storage                                 | not recommended   |
| Operational measures                           |                   |
| Process upgrades and operational modifications | not recommended   |

# Examples of Site-Level Flood Protection



Earthen berm/barrier at the Vauxhall Wastewater Treatment Plant (City of London)



Floodwall at the Vauxhall Wastewater Treatment Plant (City of London)



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# Alternative Solutions



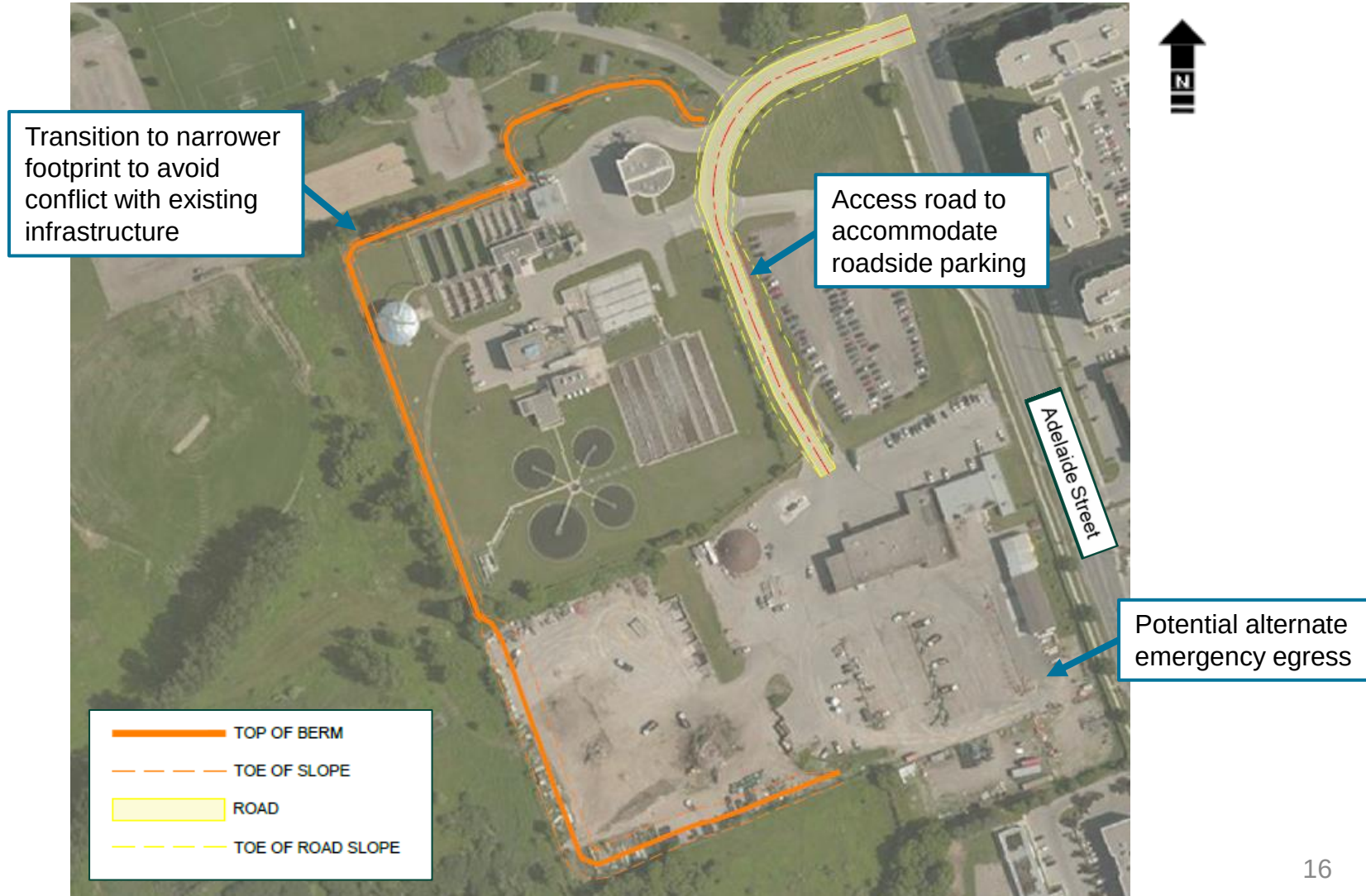
# Alternative Solutions – Site-Level Flood Protection

- Option 1**    berm with raised entrance way
- Option 2**    berm with a temporary measure at entrance way in response to flood forecasts
- Option 3**    berm extended to provide protection at the parking lot
- Option 4**    do nothing

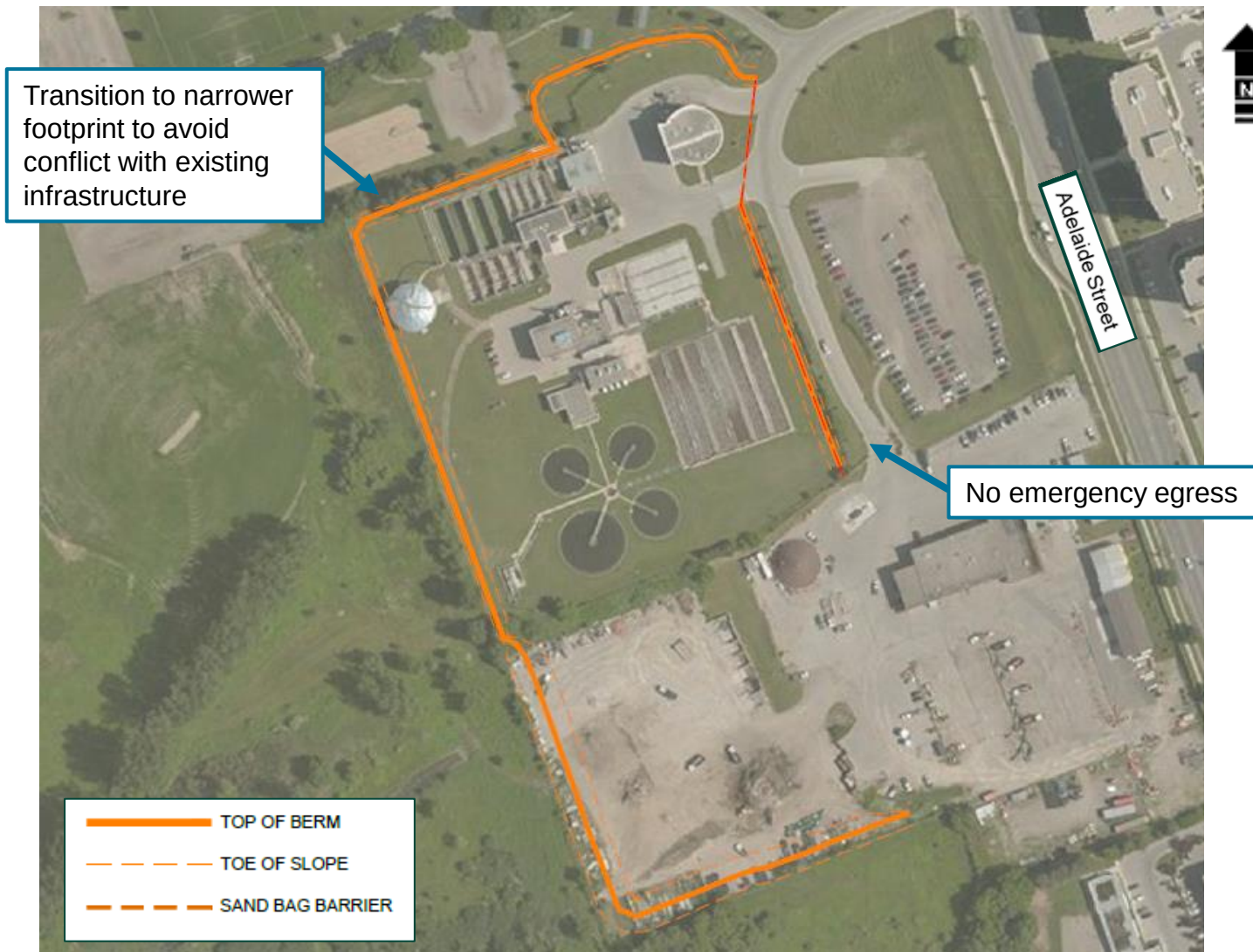
Note: A pumping station is incorporated into all three of these alternative solutions (Options 1 to 3). A new effluent pump station is needed to lift treated water into the Thames River when river levels are too high for gravity drainage. This allows the treatment process to continue during rare flooding events, thereby reducing environmental impacts.

The pumping station itself also has alternative solutions for implementation at the site.

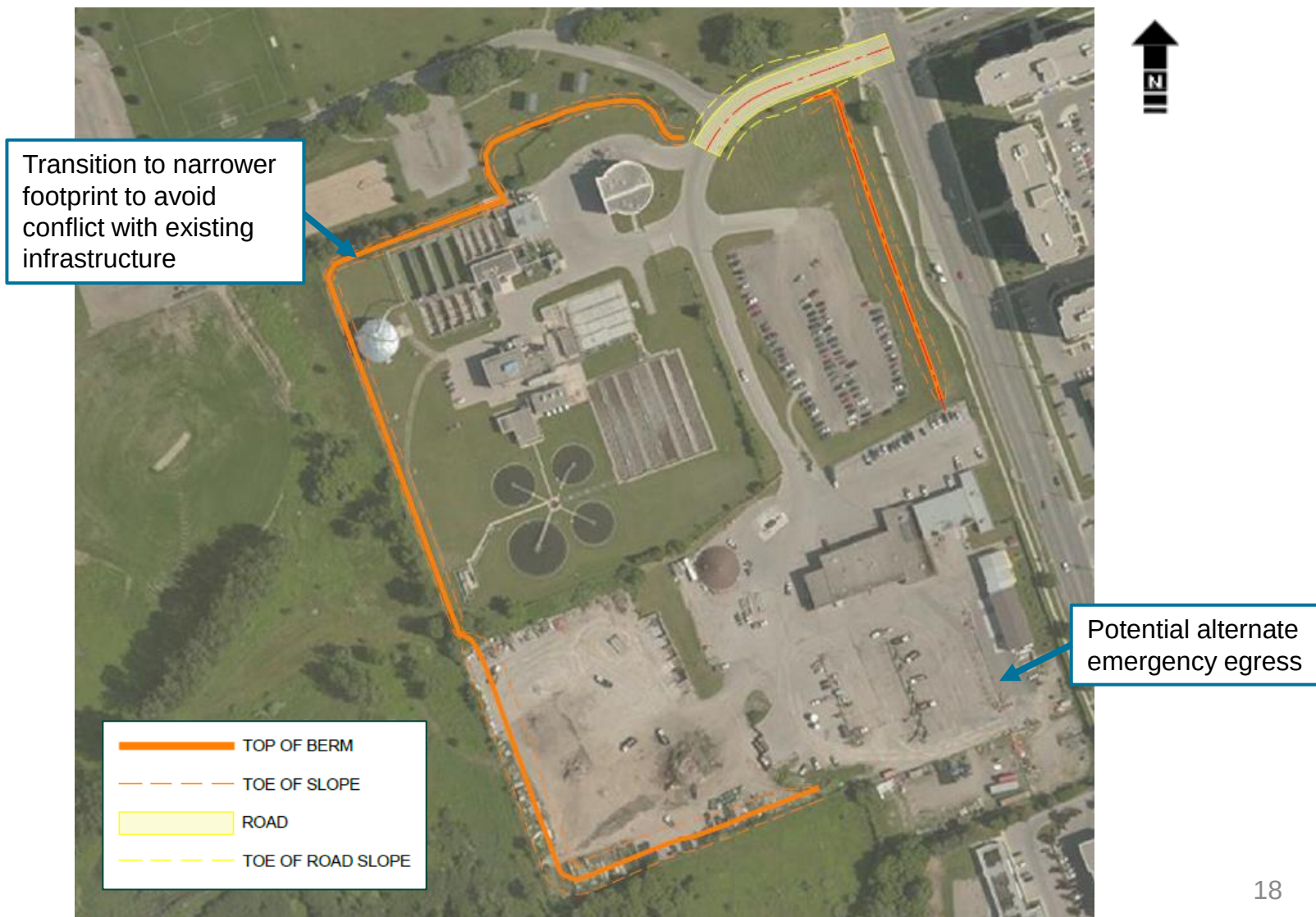
# Option 1: Berm with Raised Entrance Way



# Option 2: Berm with a Temporary Measure at Entrance Way in Response to Flood Forecasts



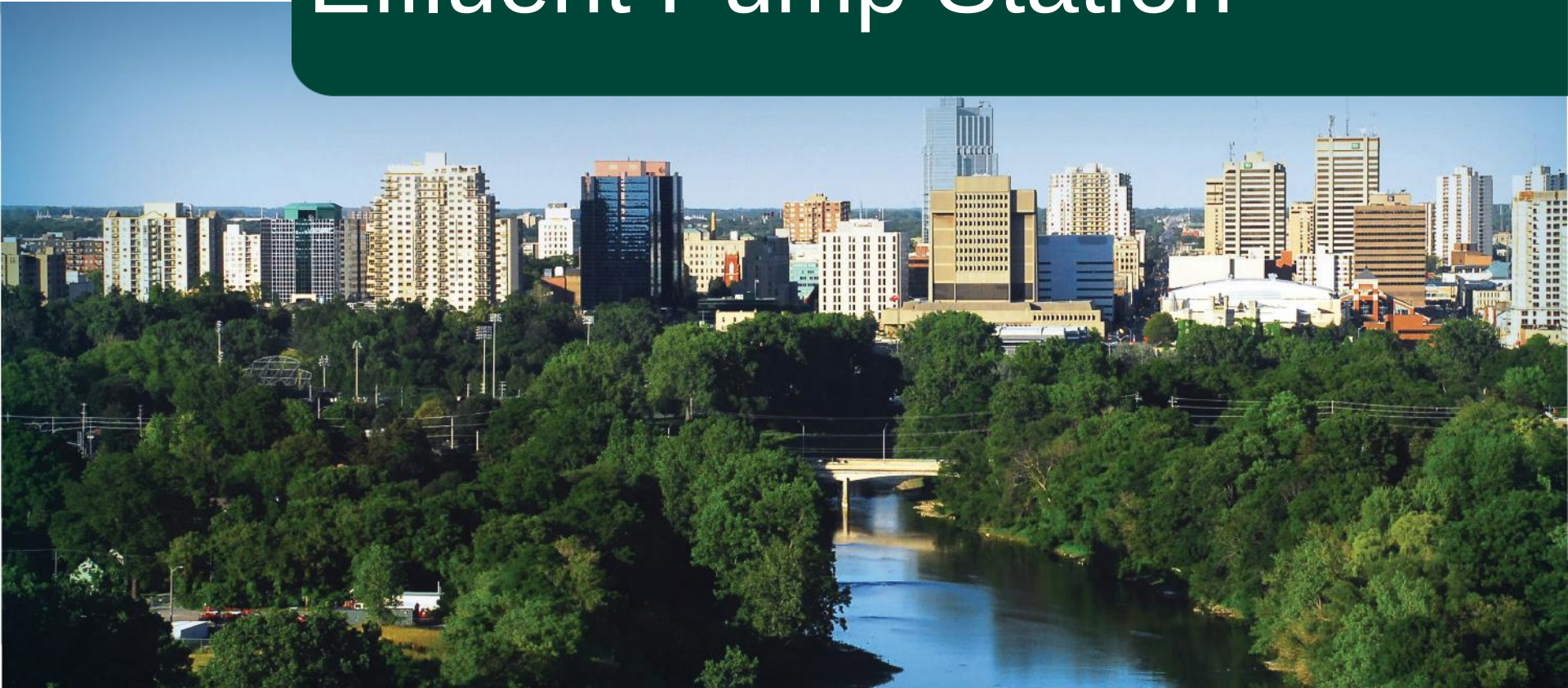
# Option 3: Berm Extended to Provide Protection at the Parking Lot





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# Effluent Pump Station



# Effluent Pump Station

- All flood protection options require an effluent pump station.
- At this WWTP, treated water, stormwater, and emergency bypasses leave the site at different locations.
- The existing raw sewage pump station has a peak capacity of 204 MLD, whereas the existing WWTP peak treatment capacity is 105 MLD.
- Effluent pump station size, location, and the potential use of equalization storage to minimize emergency bypass will be evaluated.



Source Image: Google Earth



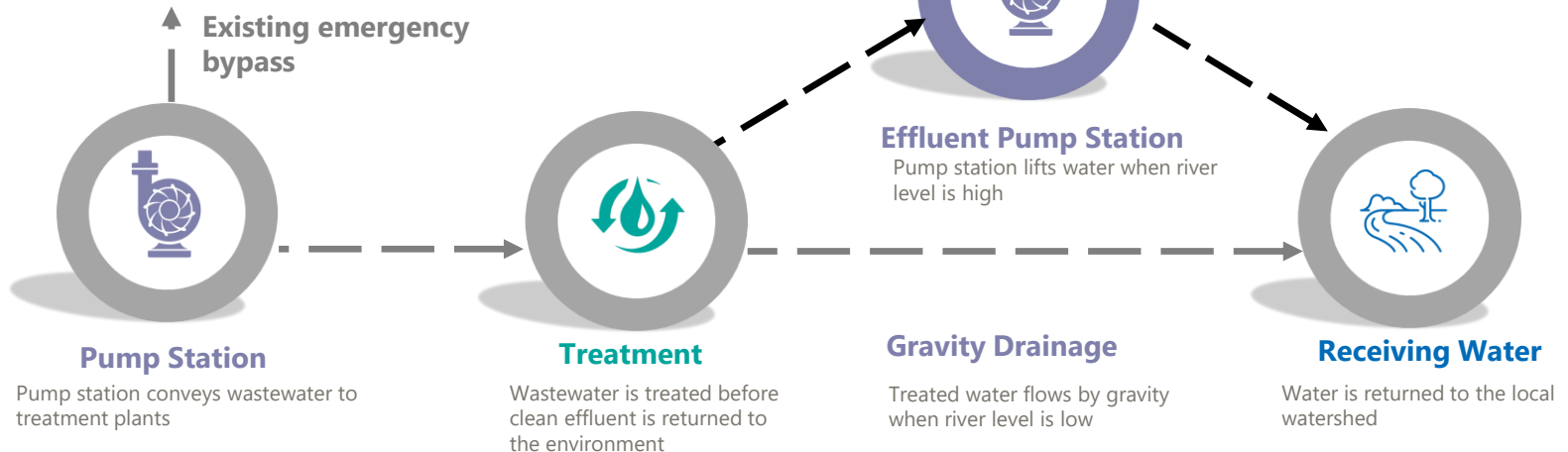
# Alternative Solutions – Effluent Pump Station

All alternative solutions include an effluent pump station with a minimum capacity of 105 MLD, and compatibility with future plant expansion.

- Option P1**      maintain existing emergency bypass
- Option P2**      build pipeline directly from existing pump station to river
- Option P3**      build pipeline directly from pump station to larger effluent pump station
- Option P4a**    build equalization storage tank to the north
- Option P4b**    build equalization storage tank to the south

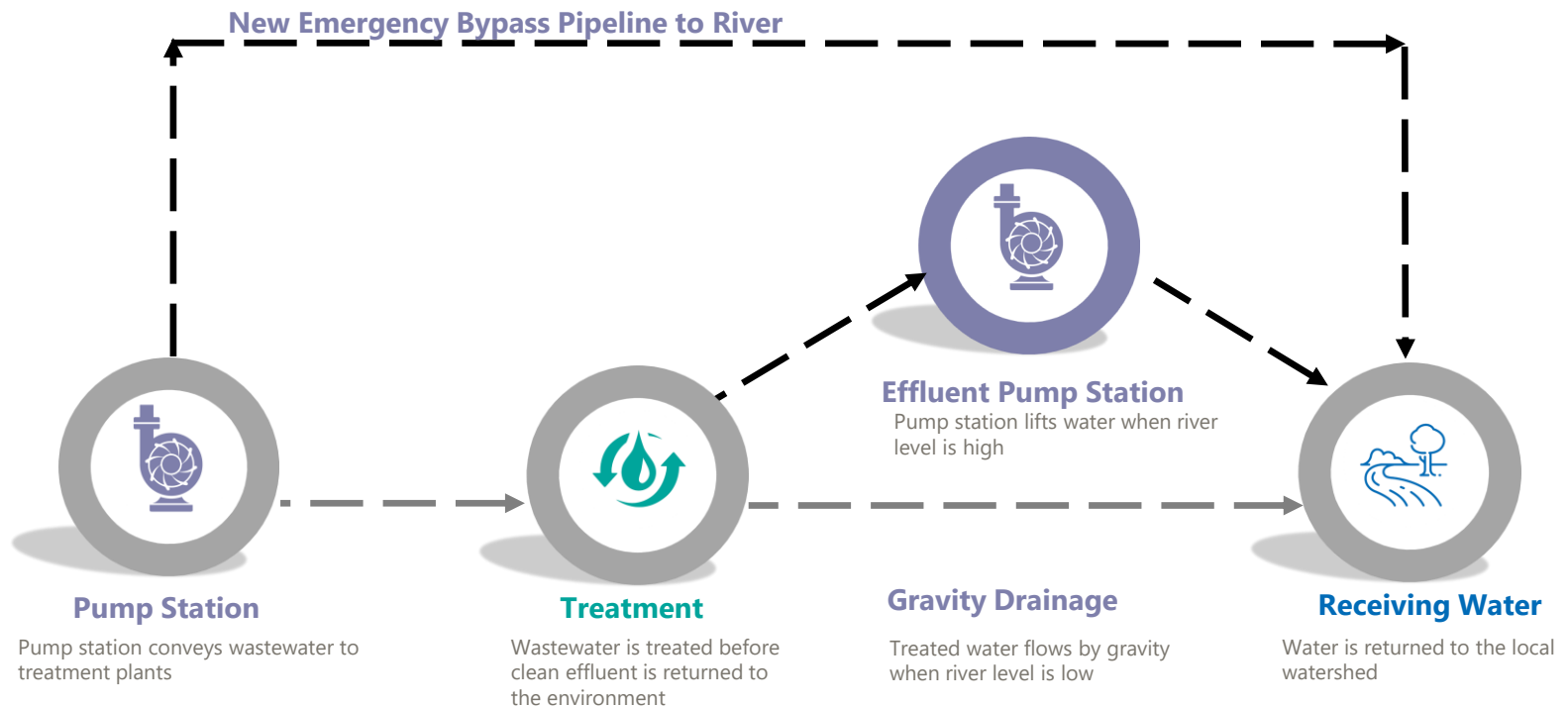
# Option P1 – Maintain Existing Emergency Bypass

- Maintain existing emergency bypass
- New effluent pump station is needed to direct treated water into the Thames River when river levels are too high for gravity drainage
- Excess flows are bypassed to surface drainage system toward the river



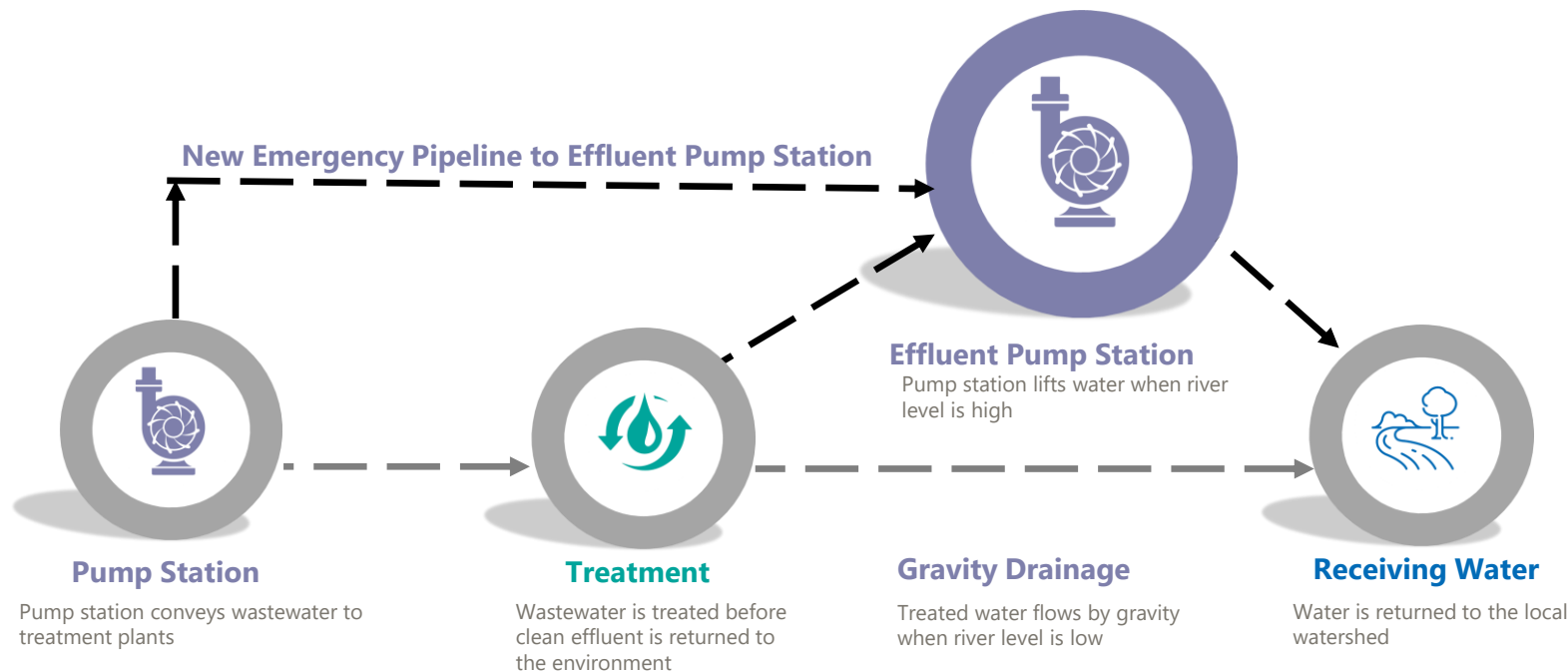
# Option P2 – Build Pipeline Directly from Pump Station to River

- Build new pipe for emergency bypass to river using exiting outfall
- New effluent pump station is needed to direct treated water into the Thames River when river levels are too high for gravity drainage



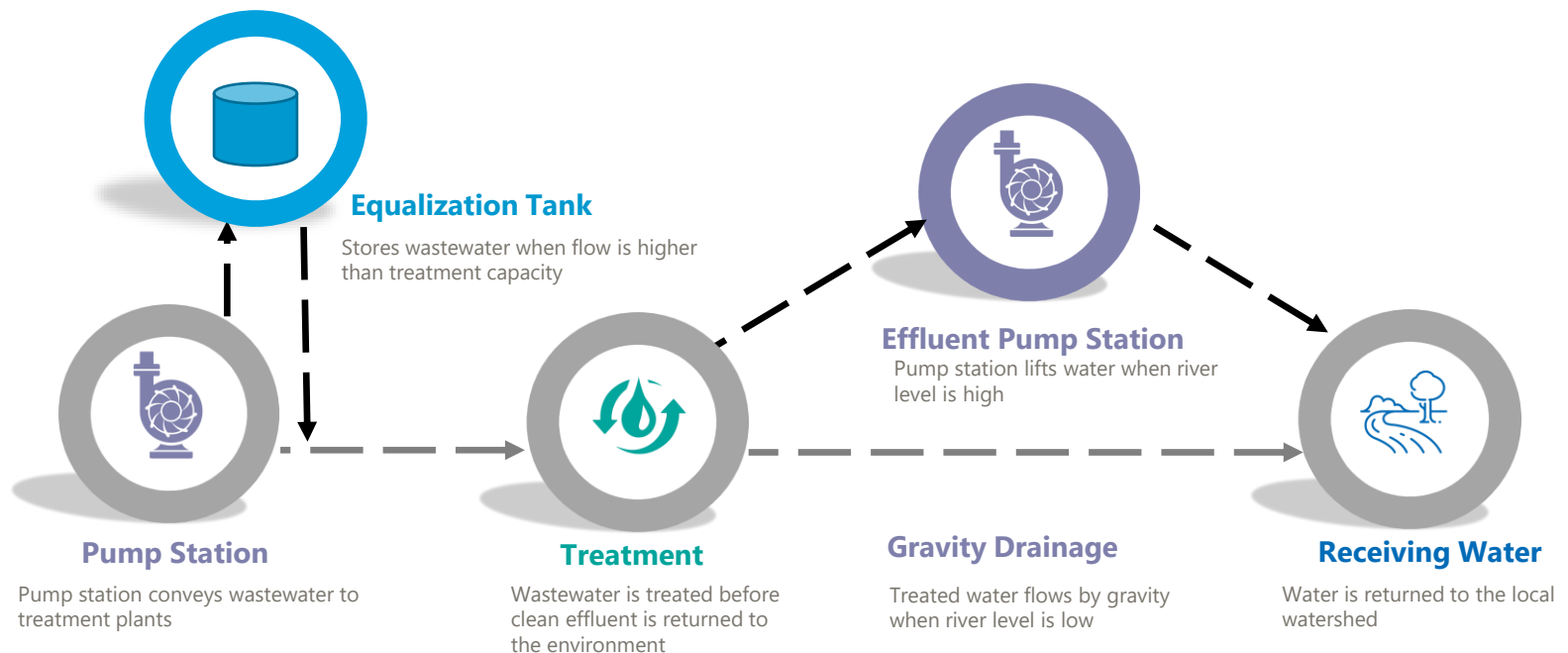
# Option P3 – Build Pipeline Directly from Pump Station to Larger Effluent Pump Station

- Build new pipeline for emergency bypass to larger effluent pump station which in turn uses the existing outfall
- New larger pump station is needed to direct treated water into the Thames River when river levels are too high for gravity drainage



# Option P4 – Build Equalization Storage

- Equalization storage to capture wastewater when peak flow is higher than treatment capacity
- New pump station is needed to direct treated water into the Thames River when river levels are too high for gravity drainage



# Option P4 – Build Equalization Storage Tank

- Locations of equalization storage must be close to the existing inlet pump station
- Hatched lines show potential areas to be considered for each option with final location determined during detailed design
- Options to allow for approximately 6000 m<sup>3</sup> of storage





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# Impact Assessment



# Floodplain Impact Assessment

- Previous hydraulic work presented in PIC No. 1 indicates that protection of the WWTP from river flooding (e.g., with berms) will not raise upstream flood levels.
- Any flood storage volume displaced due to proposed flood protection improvements should ideally be minimized to reduce impacts. The potential for downstream flow impacts is not, however, likely significant for any of the alternative solutions assessed. Flood storage is preserved as a general rule to ensure cumulative impacts are not experienced when they add up at a larger scale.

# Environmental Impact Study

## **Key Natural Heritage Features**

- Significant Woodlands (southern forest area)
- Wetlands (patches to the west and south)
- Fish and Fish Habitat (Western Drainage Outfall Channel)
- Candidate Significant Wildlife Habitat
- Potential Species at Risk

This study was completed in accordance with the City's guidelines for the preparation and review of Environmental Impact Studies.



# Environmental Impact Study

## Impacts

- Direct Habitat Impacts  
Direct impact limited to meadow marsh drainage feature north of existing entryway – all other works within fence line of treatment plant
- Potential indirect impacts
  - Construction impacts offsite
  - Spills, erosion, and sedimentation
  - Damages to edge trees
  - Changes to moisture regime
  - Changes to structure and composition of vegetation communities (introduction of invasive species)
  - Habitat disturbance
  - Injury or incidental loss of wildlife



Grounds near the WWTP (ARA 2021)

# Environmental Impact Study

## Mitigation Strategies

- Respecting vegetation removal timing windows
- Following Construction Best Management Practices
- Isolating construction areas and inputting strategies to avoid incidental take
- Preventing terrestrial disturbances through identifying setbacks and restricting construction activity areas
- Developing an erosion and sediment control plan
- Preparing invasive species management strategy, where required

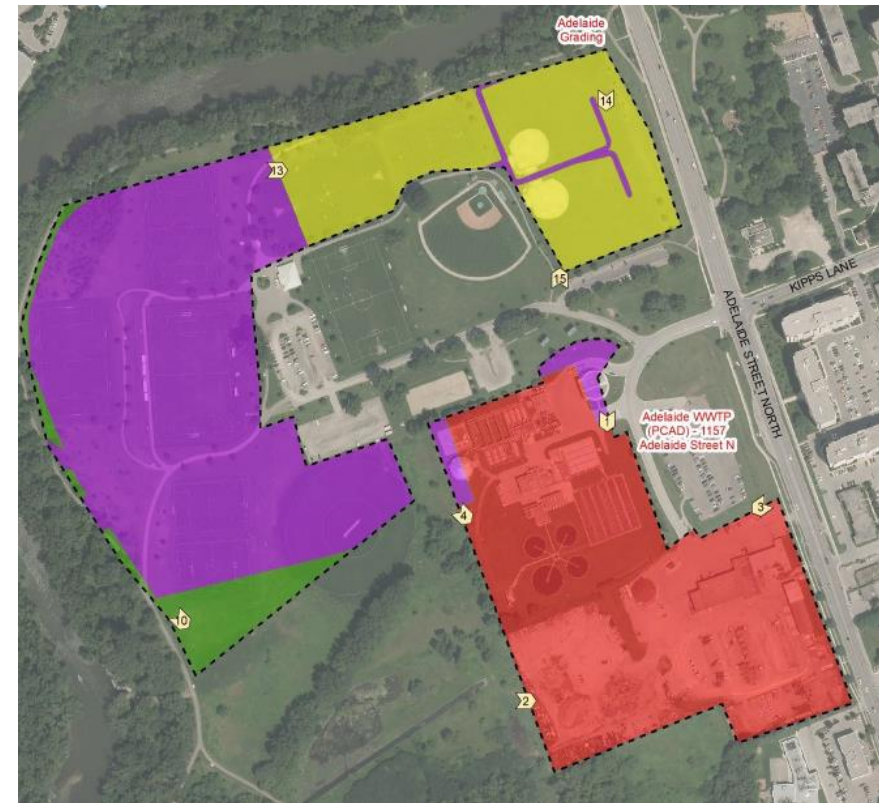


Grounds near the WWTP (ARA 2021)

# Stage 1 Archaeology Assessment

- A few areas of archaeological potential in the surrounding fields (e.g., a fluvial terrace and three historical roadways).
- Lands within the WWTP either offer no archaeological potential due to disturbance or have been previously assessed.
- In future phases, additional studies will be necessary if disturbance is required in areas of “archaeological potential” or outside areas.

(Archaeological Research Associates 2021)



Area of Archaeological Potential near the plant (ARA 2021)

# Evaluation of Site-Level Alternative Solutions



# Evaluation Criteria – Site-Level Flood Control Measures\*

| Technical                                                                                                                                                                                              | Economic                                                                                                                   | Environment                                                                        | Social                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Level of flood protection</li> <li>• Construction approaches</li> <li>• Climate change resiliency</li> <li>• Wastewater treatment plant operations</li> </ul> | <ul style="list-style-type: none"> <li>• Capital costs</li> <li>• Pump station costs were considered separately</li> </ul> | <ul style="list-style-type: none"> <li>• Ecology</li> <li>• Archaeology</li> </ul> | <ul style="list-style-type: none"> <li>• Policy considerations</li> <li>• Public input</li> <li>• Public land-use the (e.g., recreational)</li> <li>• Public safety</li> </ul> |

\* Site-level flood control measures are distinct from pump station alternatives being evaluated (see later slides in this presentation). All site-level measures have also been determined to be compatible with the pump station alternatives evaluated.

# Option 1: Berm with Raised Entrance Way

| Technical                                                                                                                                                                                       | Economic                                                                                                                       | Environment                                                                                                                                                                              | Social                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Robust, passive flood protection</li> <li>• Minor conflicts with existing infrastructure</li> <li>• 52,000 m<sup>3</sup> flood storage loss</li> </ul> | <ul style="list-style-type: none"> <li>• \$3.1M</li> <li>• 650 m of earthen berm</li> <li>• 280 m raised entry road</li> </ul> | <ul style="list-style-type: none"> <li>• Minimal direct impacts</li> <li>• Moderate indirect impact potential without mitigation</li> <li>• No archaeology conflicts expected</li> </ul> | <ul style="list-style-type: none"> <li>• Natural berm maintains park aesthetic</li> <li>• Passive protection of critical infrastructure</li> <li>• Emergency ingress/egress maintained</li> </ul> |



# Option 2: Berm with a Temporary Measure at Entrance Way in Response to Flood Forecasts

| Technical                                                                                                                                                                                                          | Economic                                                                                                                                                                   | Environment                                                                                                                                                                              | Social                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Reliance on temporary measures for flood protection</li> <li>• Minor conflicts with existing infrastructure</li> <li>• 52,000 m<sup>3</sup> flood storage loss</li> </ul> | <ul style="list-style-type: none"> <li>• \$2.3M</li> <li>• 775 m of earthen berm</li> <li>• Does not account for temporary measures (materials, training, etc.)</li> </ul> | <ul style="list-style-type: none"> <li>• Minimal direct impacts</li> <li>• Moderate indirect impact potential without mitigation</li> <li>• No archaeology conflicts expected</li> </ul> | <ul style="list-style-type: none"> <li>• Natural berm maintains park aesthetic</li> <li>• Temporary measures increase flood risk to critical infrastructure</li> <li>• Emergency ingress/egress not maintained</li> </ul> |



# Option 3: Berm Extended to Provide Protection at the Parking Lot

| Technical                                                                                                                                                                                       | Economic                                                                                                                       | Environment                                                                                                                                                                              | Social                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Robust, passive flood protection</li> <li>• Minor conflicts with existing infrastructure</li> <li>• 74,000 m<sup>3</sup> flood storage loss</li> </ul> | <ul style="list-style-type: none"> <li>• \$2.9M</li> <li>• 826 m of earthen berm</li> <li>• 106 m raised entry road</li> </ul> | <ul style="list-style-type: none"> <li>• Minimal direct impacts</li> <li>• Moderate indirect impact potential without mitigation</li> <li>• No archaeology conflicts expected</li> </ul> | <ul style="list-style-type: none"> <li>• Natural berm maintains park aesthetic</li> <li>• Passive protection of critical infrastructure</li> <li>• Emergency ingress/egress maintained</li> </ul> |



# Impact Evaluation – Site-Level Flood Protection

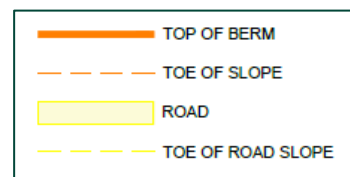
| Berm Options                                                                 | Technical                                                                                 | Economic                                       | Environment                                                        | Social                                                                                    |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Option 1 –</b><br>berm with raised<br>entrance way                        | <b>High</b><br>Feasible & practical<br>Fully passive                                      | <b>High</b><br>\$3.1M                          | <b>Low</b><br>Minimal direct<br>impact & indirect<br>impacts       | <b>Low</b><br>Minimal disturbance<br>High safety                                          |
| <b>Option 2 –</b><br>temporary measure<br>at entrance way                    | <b>Low-Medium</b><br>Not practical<br>Not fully passive<br>Long-term<br>reliability issue | <b>High</b><br>\$2.3M                          | <b>Low</b><br>Minimal direct<br>impact & indirect<br>impacts       | <b>High</b><br>Ingress/egress is not<br>maintained<br>Temporary measures<br>a safety risk |
| <b>Option 3 –</b><br>extended to provide<br>protection at the<br>parking lot | <b>Medium-High</b><br>Feasible & practical<br>Additional flood<br>storage loss            | <b>High</b><br>\$2.9M                          | <b>Low</b><br>Minimal direct<br>impact & indirect<br>impacts       | <b>Low</b><br>Minimal disturbance<br>High safety                                          |
| <b>Option 4 –</b><br>do nothing                                              | <b>Low</b><br>No resiliency<br>provided                                                   | <b>High</b><br>Potential flood<br>damage costs | <b>Medium</b><br>No direct impacts,<br>Flood risk not<br>addressed | <b>High</b><br>Safety and<br>equipment concern<br>continues                               |

# Preliminary Preferred Solution – Site-Level Flood Protection

- **Option 1**, raised entrance way, is the preliminary preferred solution as it is a feasible and practical flood protection strategy. Although slightly more expensive, there are less floodplain storage impacts.
- **Option 2**, temporary measure at entrance way, does not maintain emergency ingress or egress, and the reliance on temporary measures introduces potential risk for both flood protection integrity and human safety.
- **Option 3**, extended to provide protection at the parking lot, is viable, however, a larger flood storage area is affected (>50%).
- **Option 4**, do nothing, does not address flood protection of the WWTP, address climate resiliency, or provide any meaningful alternative to maintaining critical infrastructure during a regulatory flood event.

# Preliminary Preferred Solution (Option 1) – Design Considerations

- Consider stormwater management strategies, including external areas, to address accumulation of precipitation and runoff within the WWTP.
- Apply localized transition between berms and vertical treatment to best suit environmental and physical constraints. Sheet-pile floodwall may be used in areas where WWTP infrastructure does not accommodate the footprint of an earthen berm.
- Any improvements to site roadway entrances must consider turning radii of large vehicles that enter the site.





# Evaluation of Effluent Pump Station Alternative Solutions

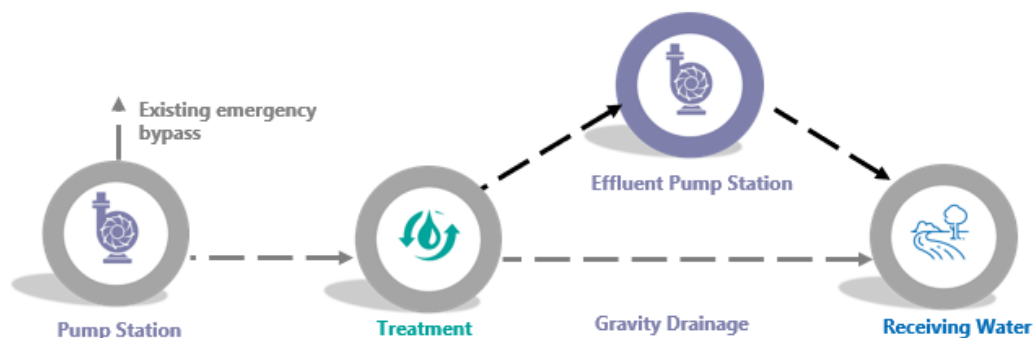


# Evaluation Criteria

| Technical                                                                                                                                                                                              | Economic                                                                                                       | Environment                                                                                                 | Social                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Level of flood protection</li> <li>• Construction approaches</li> <li>• Climate change resiliency</li> <li>• Wastewater treatment plant operations</li> </ul> | <ul style="list-style-type: none"> <li>• Capital costs</li> <li>• Operational and maintenance costs</li> </ul> | <ul style="list-style-type: none"> <li>• Ecology</li> <li>• Archaeology</li> <li>• Water quality</li> </ul> | <ul style="list-style-type: none"> <li>• Policy Considerations</li> <li>• Public Input</li> <li>• Public land-use the (e.g., recreational)</li> <li>• Public safety</li> </ul> |

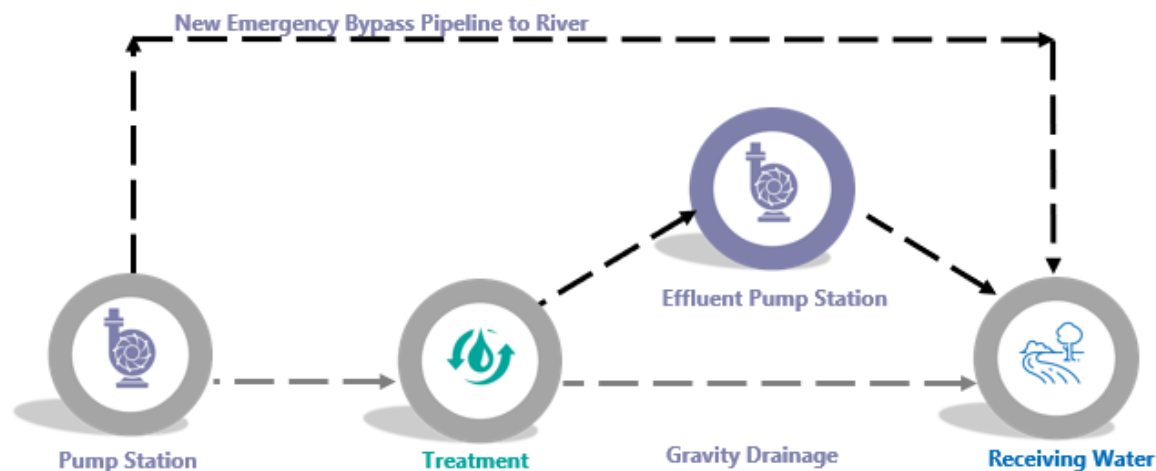
# Option P1: Maintain Existing Emergency Bypass

| Technical                                                                                                       | Economic                                                                                      | Environment                                                                                                                                                             | Social                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Pumped bypass provided using existing raw sewage pump station</li> </ul> | <ul style="list-style-type: none"> <li>\$5M</li> <li>105 MLD Effluent Pump station</li> </ul> | <ul style="list-style-type: none"> <li>Emergency bypass is directed to open space drainage</li> <li>Direct environmental impact when emergency bypass occurs</li> </ul> | <ul style="list-style-type: none"> <li>Protect of critical infrastructure</li> <li>Emergency discharge in space with public access</li> </ul> |



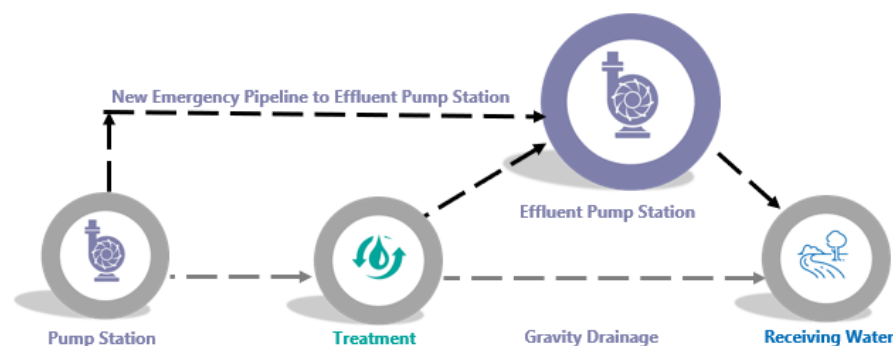
# Option P2: Build Pipeline Directly from Existing Pump Station to River

| Technical                                                                                                      | Economic                                                                                                                            | Environment                                                                                                                                 | Social                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Installation of new pipeline to river using existing outfall</li> </ul> | <ul style="list-style-type: none"> <li>\$6M</li> <li>105 MLD Effluent Pump Station</li> <li>Pipeline to existing outfall</li> </ul> | <ul style="list-style-type: none"> <li>Emergency bypass is directed into river</li> <li>Construction impacts environmental space</li> </ul> | <ul style="list-style-type: none"> <li>Protects of critical infrastructure</li> <li>Pipeline construction disrupts use of public space</li> </ul> |



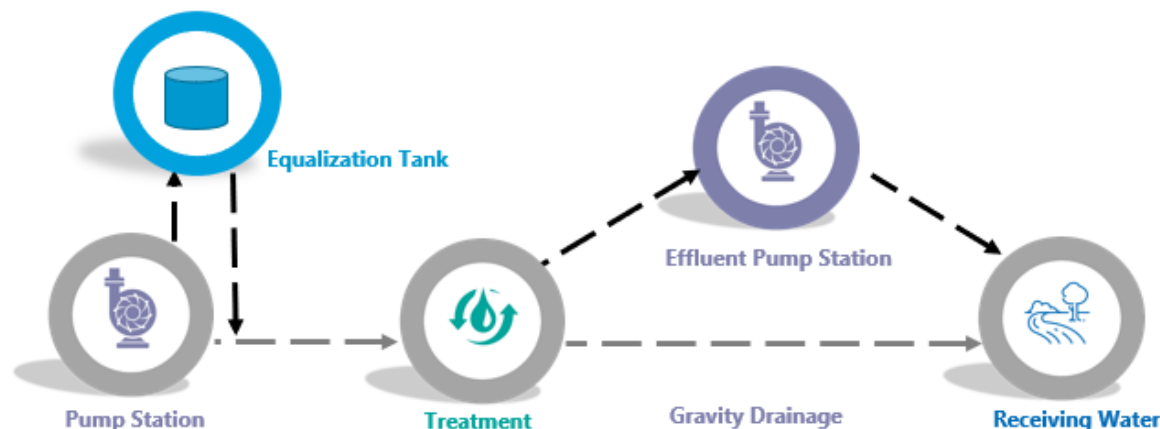
# Option P3: Build Pipeline Directly from Pump Station to Larger Effluent Pump Station

| Technical                                                                                                                                                                         | Economic                                                                                                                                                                                                                       | Environment                                                                                                                                                    | Social                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Complex construction</li> <li>• Deeper and larger effluent pump station to lift water and emergency bypass when river is high</li> </ul> | <ul style="list-style-type: none"> <li>• \$14M</li> <li>• 204 MLD Effluent Pump Station</li> <li>• Emergency pipeline to effluent pump station</li> <li>• Pipe to PS</li> <li>• Larger Pipeline to existing outfall</li> </ul> | <ul style="list-style-type: none"> <li>• Emergency bypass is directed into river</li> <li>• Impacts mostly limited to existing treatment plant area</li> </ul> | <ul style="list-style-type: none"> <li>• Protects critical infrastructure</li> </ul> |



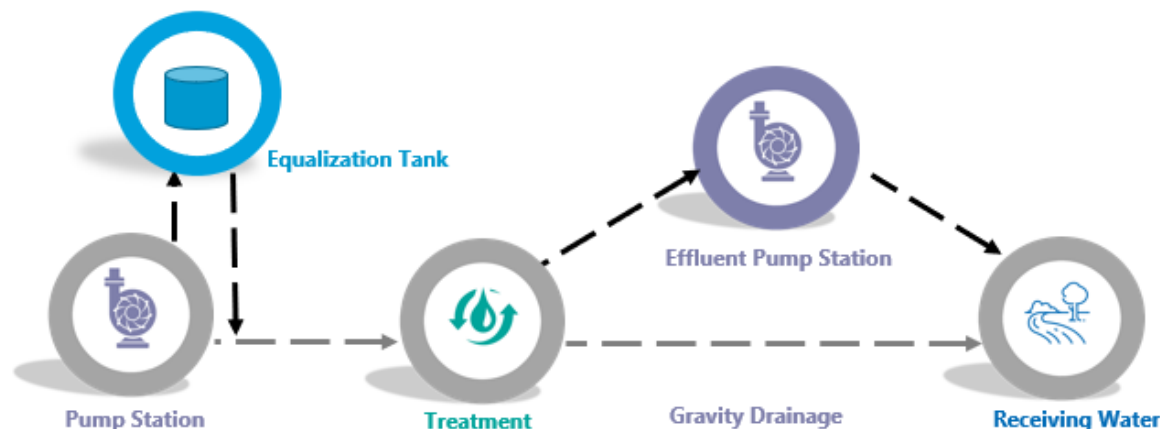
# Option P4a: Build Equalization Storage to the North

| Technical                                                                                                              | Economic                                                                                                                                    | Environment                                                                                                                                                               | Social                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Improved resiliency and operational flexibility to manage peak flows</li> </ul> | <ul style="list-style-type: none"> <li>\$10.5M</li> <li>105 MLD Effluent Pump Station</li> <li>Equalization tank</li> <li>Piping</li> </ul> | <ul style="list-style-type: none"> <li>Improved protection from bypass</li> <li>Some local impacts on existing park (turf) areas, including small meadow marsh</li> </ul> | <ul style="list-style-type: none"> <li>Protects of critical infrastructure</li> <li>Improved protection of public space and recreational land use</li> <li>New tank visible to public, adjacent to park area</li> </ul> |



# Option P4b: Build Equalization Storage to the South

| Technical                                                                                                                                                                        | Economic                                                                                                                                    | Environment                                                                                                                                 | Social                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Improved resiliency and operational flexibility to manage peak flows</li> <li>Location may conflict with future WWTP expansion</li> </ul> | <ul style="list-style-type: none"> <li>\$10.5M</li> <li>105 MLD Effluent Pump Station</li> <li>Equalization tank</li> <li>Piping</li> </ul> | <ul style="list-style-type: none"> <li>Improved protection from bypass</li> <li>Impacts mostly limited to existing site boundary</li> </ul> | <ul style="list-style-type: none"> <li>Improved protection of public space and recreational land use</li> <li>New tank visible to public, within WWTP</li> </ul> |

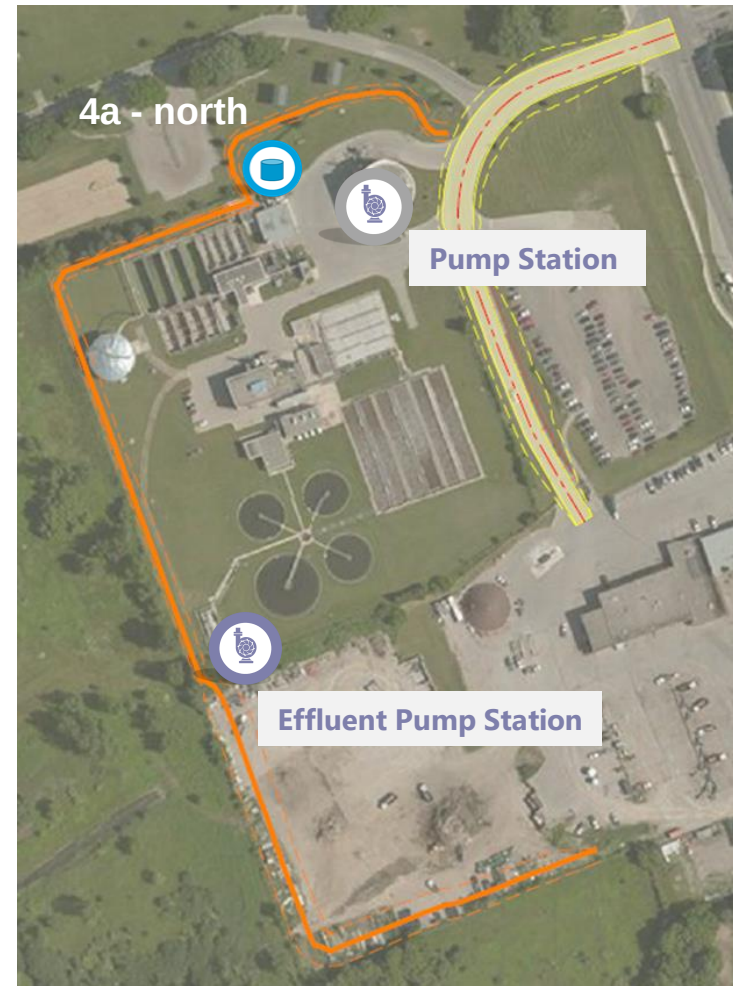


# Impact Evaluation – Effluent Pump Station

| PS Options                                                                                   | Technical                                                                                                          | Economic                        | Environment                                                             | Social                                                                                                       |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Option P1</b> – maintain existing emergency bypass                                        | <b>Medium</b><br>Uses existing infrastructure                                                                      | <b>Low</b><br>\$5M              | <b>High</b><br>Direct environmental impact when emergency bypass occurs | <b>High</b><br>Emergency sewage discharge in space with public access                                        |
| <b>Option P2</b> – build pipeline directly from pump station to river                        | <b>Medium</b>                                                                                                      | <b>Medium - Low</b><br>\$6M     | <b>Medium</b><br>Minimal direct impact & indirect impacts               | <b>Medium</b><br>Construction impacts use of public space                                                    |
| <b>Option P3</b> – build pipeline directly from pump station to larger effluent pump station | <b>Low</b><br>Most complex construction                                                                            | <b>High</b><br>\$14M            | <b>Medium</b><br>Minimal direct impact & indirect impacts               | <b>Medium</b>                                                                                                |
| <b>Option P4a</b> – Build equalization storage to the north                                  | <b>High</b><br>Improved resiliency and operator flexibility                                                        | <b>Medium - High</b><br>\$10.5M | <b>Low</b><br>Improved protection of the environment from bypass        | <b>Low - Medium</b><br>Improved protection of the public space. New tank visible to public, adjacent to park |
| <b>Option P4b</b> – Build equalization storage to the south                                  | <b>Medium</b><br>Improved resiliency and operational flexibility. Location may conflict with future WWTP expansion | <b>Medium - High</b><br>\$10.5M | <b>Low</b><br>Improved protection of the environment from bypass        | <b>Low - Medium</b><br>Improved protection of the public space. New tank visible to public, within WWTP.     |

# Integrated Preliminary Preferred Solution

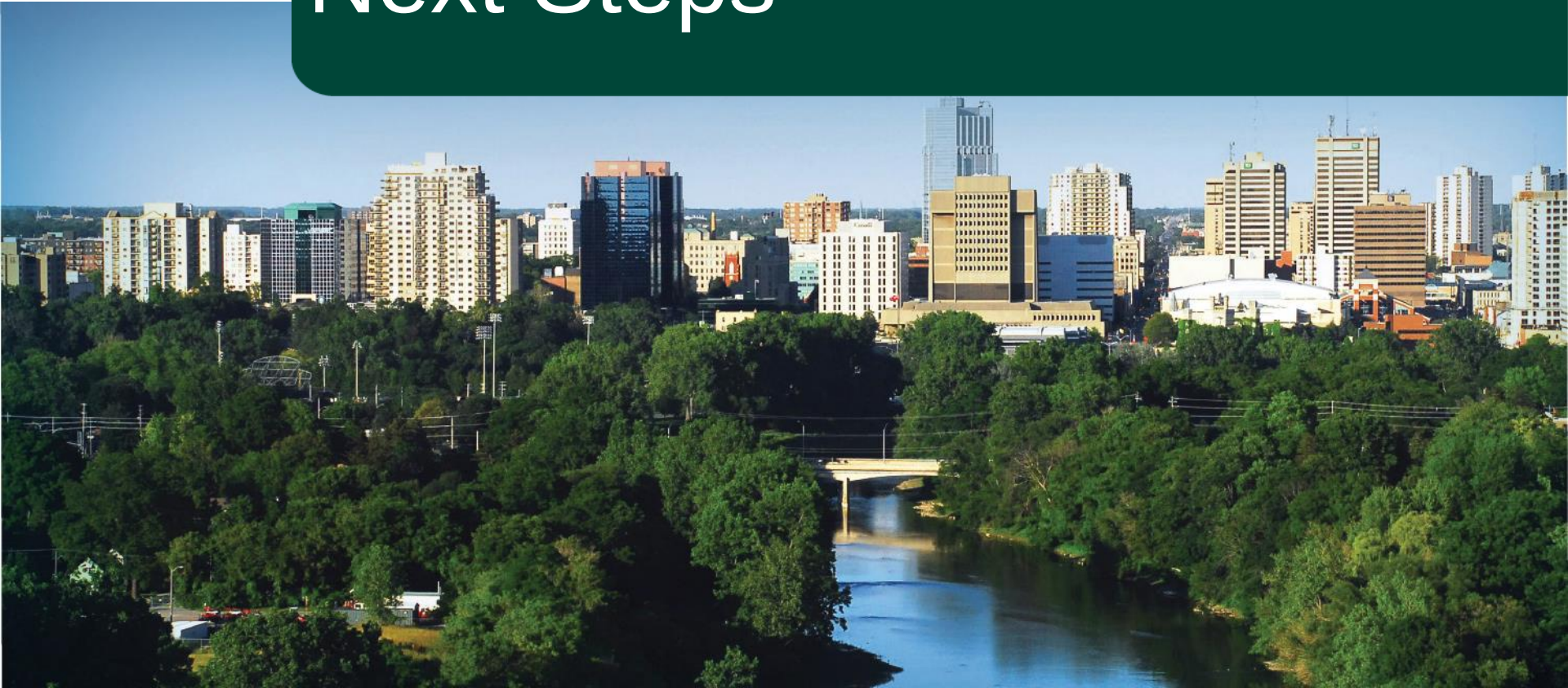
- The integrated preliminary preferred solution is a berm with raised entrance road (Option 1) with equalization storage and an effluent pump station (Option P4a).
- Further details for the preliminary preferred solution will be explored in subsequent preliminary and detailed design.
- Environmental mitigation strategies recommended in the Environmental Impact Study, including the small meadow marsh located near the new equalization storage, will be addressed in future design.





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# Next Steps



# Next Steps

## Next Steps in the environmental assessment process include:

1. Incorporate input from the public, First Nations, agencies, and stakeholders
2. Confirm preliminary preferred solution
3. Distribute Notice of Completion
4. Finalize EA project report and make available for 30-day review period

## Reminder

- Please complete the project survey/questionnaire, available on the *Get Involved* webpage (listed below) and email [mmckillop@london.ca](mailto:mmckillop@london.ca) and [sbraun@matrix-solutions.com](mailto:sbraun@matrix-solutions.com).

<https://getinvolved.london.ca/greenway-climate-change>

- If possible, please provide input related to the Public Information Centre No. 2 by **March 25, 2022.**



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# Questions

