WELCOME TO THE
PUBLIC INFORMATION CENTRE 3 FOR THE
ANCASTER ELEVATED WATER RESERVOIR
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Please complete the sign-in sheet and review the display materials.
Our representatives will be pleased to answer your questions and discuss any concerns.

Your input is much appreciated!
Introduction
The purpose of this Class EA study is to identify the preferred solution to address the long-term water storage needs in Pressure District (PD) 18 in Ancaster and PD-13, PD-14 and PD-15, and to mitigate pressure and operational issues in the system.

The preferred solution would improve system security and reliability, provide operations and maintenance savings, and alleviate pressure issues.

This project is classified as a Schedule ‘B’ Class EA and is being undertaken in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment process.

Purpose of this Public Information Centre
As part of the Class EA process, the public is invited to provide feedback for consideration in the planning and design of this project. The Class EA process ensures that the opportunity is given to Agencies and the public to provide comments and voice concerns regarding environmental, social, cultural, economic and other potential issues related to the project.

This evening’s Public Information Centre (PIC) is being held to allow local residents, landowners, and other stakeholders to:

• Review and discuss the information being presented with City staff and its Consultant
• Voice concerns regarding the project
• Provide input for the City to consider during this Class EA
• Discuss potential construction impacts to local residents, businesses and other stakeholders

The Study Area
The Study Area boundary shown below has been identified.
Municipal Class Environmental Assessment (EA) Process

The Ancaster Elevated Water Reservoir project corresponds to a Schedule ‘B’ undertaking, in accordance with the planning process outlined in the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment document (October 2000, amended in 2007, 2015). As such, the Study requires the completion of Phases 1 and 2 of the MEA Class EA process. Upon completion of the Study, a Phase 1 and 2 Class Environmental Assessment Project File Report will be prepared and filed for comment.
Ancaster Elevated Water Reservoir
Schedule ‘B’ Municipal Class EA
Panel No. 3

Ancaster Water System
Ancaster is divided into Pressure Districts 13, 14, and 18. Currently all of the water for Ancaster is supplied by the HD018 Pumping Station and HDR18 Reservoir, located on Garner Road. The Ancaster distribution system also feeds sub-zone PD-15 through a pressure reducing valve, and provides a secondary feed into PD-22 in northwest Dundas through a watermain along Sulphur Springs Road.

Problem Statement
The existing water system requires continuous pumping to meet the varying water demands, which results in high electricity and maintenance costs. Furthermore, the system is vulnerable to emergency situations such as watermain breaks and loss of power.

Historically, low water pressure issues have been reported in the high elevation areas of Ancaster (corresponding roughly to areas northwest of Wilson Street). To address these issues the City has modified the operation of the HD018 Pumping Station to run at a higher pressure. This change in operation philosophy has resulted in increased water recirculation within the station, lower pump efficiency, increased equipment wear and tear, and increased maintenance and energy costs.

It is the City’s objective to provide adequate water services to its residents, businesses and industries to meet existing community needs in an efficient and cost-effective manner.

Therefore, a solution is required in Ancaster to improve water system security and reliability, to alleviate system pressure issues, and to improve the efficiency and reduce operation and maintenance costs.
Several alternative servicing strategies were considered. These included:

- **Do Nothing - Retrofit of the Pumps at HD018 Pumping Station**
- **Alternative 1 - Upgrade HD018 Pumping Station** (*)
- **Alternative 2 - Upgrade HD018 Pumping Station and Construction of a New Elevated Water Reservoir**
- **Alternative 3 - Upgrade HD018 Pumping Station and Construction of a New Booster Station**
- **Alternative 4 - Upgrade HD018 Pumping Station and Construction of a New Booster Station and In-Ground Reservoir**
- **Alternative 5 - Upgrade HD018 Pumping Station and Construction of a New Elevated Water Reservoir**

The preferred servicing strategy is to upgrade HD018 pumping station and to construct a new elevated water reservoir in Ancaster. This alternative was preferred because it provides more reliability, results in more efficient operation, reduced energy costs and greenhouse gas emissions and results in the lowest overall lifecycle cost.

<table>
<thead>
<tr>
<th>Do Nothing Retrofit of Existing Pumps at HD018 PS</th>
<th>Alternative 1 Upgrade HD018 PS (*)</th>
<th>Alternative 2 Upgrade HD018 and Construct a New Elevated Water Reservoir</th>
<th>Alternative 3 Upgrade HD018 PS and Construct a New Booster Station</th>
<th>Alternative 4 Upgrade HD018 PS and Construct a New Booster Station and In-Ground Reservoir</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Current mode of operation at the Garner Road HD018 pumping station will be maintained. The existing pumps will be replaced with similar capacity pumps.</td>
<td>The pumps at the HD018 pumping station will be replaced with larger capacity pumps.</td>
<td>An elevated water reservoir will be constructed. Various pieces of equipment including the pumps at the HD018 pumping station will be replaced.</td>
<td>Construction of a new booster station to service high elevation areas in Ancaster.</td>
<td>Construction of a new booster station and in-ground reservoir to service high elevation areas in Ancaster.</td>
</tr>
<tr>
<td><strong>Unsustainable operation. Does not meet MOE requirements for firm capacity and does not provide adequate fire protection. Current mode of operation results in extremely high operations and energy costs.</strong></td>
<td>Can satisfy technical requirements. However, results in high operations and energy costs.</td>
<td>Water supply is uninterrupted by power outages and other emergencies within the pressure district. Provides superior equalization of daily flow cycles and system pressures. Permits power-saving time-of-day filling approaches. Lowest lifecycle cost.</td>
<td>Dependent on HD018 PS to maintain supply. Increased energy costs. Requires standby power to maintain supply during power outages. High lifecycle costs.</td>
<td>Dependent on Gamer Road HD018 PS to maintain supply. Increased energy costs. Requires standby power to maintain supply during power outages. Highest lifecycle costs.</td>
</tr>
<tr>
<td><strong>Risk Ranking</strong></td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Unsustainable. Station failure is imminent due to poor condition. Major rehabilitation would be required in addition to replacement of the pumps.</td>
<td>Increase operating efficiency. However, HD018 would remain the sole source of supply to the pressure district. Any failures in the station would result in complete loss of supply.</td>
<td>Minimizes risk. Most robust operation. Not as vulnerable to failures in HD018. Most efficient operation. Reduced energy costs and greenhouse gas emissions.</td>
<td>Increase operating efficiency. However, HD018 would remain the sole source of supply to the pressure district. Any failures in the station would result in complete loss of supply.</td>
<td>Increase operating efficiency. However, HD018 would remain the sole source of supply to the pressure district. Any failures in the station would result in complete loss of supply. Reservoir would amount to some protection in the new pressure district.</td>
</tr>
</tbody>
</table>

(*) – Pumping Station will be on the same site as existing
Ancaster Elevated Water Reservoir
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Elevated Reservoir Site Selection Criteria & Constraints

• Top water level of the elevated reservoir > 294 m
• Seek to minimize overall height of the elevated reservoir
• Ground elevations > 233 m to minimize pedestal height
• Compatible Land Use Designation (Outside Greenbelt Area and Niagara Escarpment boundary)
• Away from John C. Munro Hamilton International Airport Zoning Regulation areas
• Consider property acquisition requirements
• Preferred 60 m x 100 m site area with good road access. 60 m x 60 m minimum site area.
• Proximity to existing watermain infrastructure
• Lowest aesthetic impact on existing residents and customers
• Minimum natural/heritage/environmental impacts
• Optimum distribution system hydraulics to provide adequate pressure and fire flows
Updates from Previous PICs

• PIC #2 reviewed sites #1 - #12

• John C. Munro Hamilton International Airport and NAV Canada then informed us that an elevated water reservoir at sites #3 - #12 will violate the height restriction

• City determined to conduct further review with previous less preferred sites #1 – 2 and three new additional sites #13 - 15
Ancaster Elevated Water Reservoir
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Constraints Map

Elevated Water Reservoir Alternative Sites
Ancaster Elevated Water Reservoir
Schedule ‘B’ Municipal Class EA
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Elevated Water Reservoir Site Evaluation Criteria

- Proximity to Environmentally Sensitive Areas (e.g. Greenbelt, Niagara Escarpment and Conservation Authority Regulated Areas)

SOCIAL & CULTURAL ENVIRONMENT CONSIDERATIONS

- Proximity to built heritage areas and areas of archaeological importance
- Aesthetic impact on existing and proposed development
- Availability of Suitable Sites/Property Ownership
- Traffic impacts during construction
- Air and noise impact during construction

TECHNICAL CONSIDERATIONS

- Ground elevation
- Constructability and site access
- System reliability and hydraulic performance

ECONOMIC CONSIDERATIONS

- Capital cost
- Land acquisition costs
- Distance of new watermain connection to existing system
Ancaster Elevated Water Reservoir
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Alternative Elevated Storage Locations with Representative Sites

Site No. 1
Site No. 2
Site No. 13
Site No. 14
Site No. 15
### Natural Environment Considerations

**Proximity to Regulated Areas**
- Site 1 is located on lands designated under the Niagara Escarpment Plan and is adjacent to the Niagara Escarpment itself. This represents a potential visual obstruction of the Escarpment. Accordingly, the Niagara Escarpment Commission has requested a Visual Impact Assessment (VIA) to be completed.
- Portions of Site 15 are located within the highest elevation area of the pressure district, near the areas more likely to experience low pressures. The distance from the pumping station and the size of the pipe feeding the site results in greater pressure losses.

**Wetlands**
- There are no wetlands located on or in proximity to Site 1.
- Unevaluated wetlands occur approximately 50.0 metres to the southeast and 10.0m to the west of Site 15.

**Significant Wildlife Habitat**
- The Hamilton Official Plan identifies a woodland adjacent to Site 1 as an ANSI. However, the NHIC mapping does not show the presence of an ANSI.
- No Significant Wildlife Habitat functions are attributed to Site 15.

**Fisheries and Aquatic Resources**
- There are no watercourses located on Site 1, however there is a watercourse located within 100.0m.
- There are no watercourses on Site 15, however there is a watercourse located within 50.0m.

**Habitat of Threatened and Endangered Species**
- No SAR were identified on Site 1.
- Barn Swallows, a SAR, were observed on Site 15.

### Social & Cultural Environment Considerations

**Proximity to Cultural Heritage Resources**
- Site 1 is adjacent to the Woodend Estate (municipal address 638 Mineral Springs Road), a Designated Heritage Property.
- Site 15 is not adjacent to and contains no known cultural or heritage resources.

**Impact to Archaeological Resources**
- Site 1 is located on lands designated under the Niagara Escarpment Plan and is subject to a Visual Impact Assessment (VIA) to be completed.
- Site 15 is not located on lands designated under the Niagara Escarpment Plan.

**Visual Impact to Residents**
- Site 1 is adjacent to a major residential area south of Jerseyville Road West. Skylining mitigation measures will be required.
- Site 15 is not adjacent to major residential areas, however skylining mitigation measures will be required.

**Construction Impact Mitigation**
- Site 1 construction will require temporary closure of portions of the existing community recreational area. Acute impacts from construction activity will be managed through a Construction Mitigation Plan.
- Site 15 construction will require temporary closure of portions of the existing community recreational area. Acute impacts from construction activity will be managed through a Construction Mitigation Plan.

### Economic Considerations

<table>
<thead>
<tr>
<th>Capital Cost including Land Acquisition ($M)</th>
<th>Site 1</th>
<th>Site 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>$14.0</td>
<td>$14.5</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Considerations

**Site Access**
- Access to Site 1 would be provided via Jerseyville Road West.
- Access to Site 1 would be provided via Jerseyville Road West.

### System Reliability and Hydraulic Performance

**Site 1**
- 49

**Site 15**
- 60

### RANKING

**Site 1**
- Preferred

**Site 15**
- Less Preferred
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Preferred Solution

Site 1 is the preferred site of the elevated water reservoir. The specific location will be northeast corner of the Robert E. Wade Ancaster Community Park, next to the existing baseball fields. Consultation with NAV Canada and the John C. Munro Airport has concluded this is the most preferred site.

This site will have minimal impact on environmentally sensitive areas and built heritage areas. This site is preferred because they are north of Jerseyville Road W. and not near major residential areas.

(*) Typical Elevated Water Reservoir Site Layout

(**) Sample of an elevated water reservoir
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### Next Steps

<table>
<thead>
<tr>
<th>Public Consultation Centre # 1</th>
<th>Tuesday September 25th, 2012</th>
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<tbody>
<tr>
<td>Comment Sheets from Public Information Centre</td>
<td>Incorporation of comments received from Public and Review Agencies</td>
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<tr>
<td>Evaluation of Alternative Solutions</td>
<td>Identification of Recommended Solution (Siting of Elevated Tank)</td>
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</table>

<table>
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<tr>
<th>Public Consultation Centre # 2</th>
<th>Wednesday October 5th, 2016</th>
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<td>Comment Sheets from Public Information Centre</td>
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<td>Incorporation of Comments received from Public and Review Agencies</td>
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<th>Tuesday April 30th, 2019</th>
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<td>Comment Sheets from Public Information Centre</td>
<td>Incorporation of comments received from Public and Review Agencies</td>
</tr>
<tr>
<td>Incorporation of Comments received from Public and Review Agencies</td>
<td></td>
</tr>
</tbody>
</table>

### Selection of Preferred Site Location

- Prepare Project File Report
  - Distribute for Agency Review

### Issue Notice of Study Completion
- File Class EA Report followed by a mandatory 30-day Public Review Period (Anticipated Summer 2019)

### Commence Detailed Design and Construction of Preferred Solution
Ancaster Elevated Water Reservoir
Schedule ‘B’ Municipal Class EA
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• Please sign-in on the sheet provided.
• The Study Team is interested in receiving any comments that you may have about the Study.
• Comment Sheets are available for your input on the project.
• Should you have any questions, concerns or wish to obtain additional information, please contact one of the Study Team members.
• Additional information on the project can be found on the project website.

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