City of Belleville  
Public Information Centre No. 1  
October 27, 2011  
6:30 p.m. – 8:30 p.m.  
Parkdale Community Centre  
119 Birch Street  
Belleville, Ontario  

WELCOME!  
Thank you for coming  

Cannifton Planning Area Water Pressure Study  
and Storage Master Plan  

Please sign-in and take an information handout and comment sheet  

Displays and background information are available for viewing.  

Please feel free to ask questions!
The City of Belleville has initiated a Master Plan Study to address water pressure and system flow requirements for the Cannifton Planning Study Area in the City of Belleville to meet existing and future planning area needs.

The Master Plan Study is being conducted to develop and evaluate alternative solutions that will provide adequate pressure and system flows to the Cannifton Planning Area based on near-term, mid-term, and full build-out development scenarios.

Public participation is an integral part of the Master Plan process. We encourage you to provide us with any comments or concerns you may have.
Drinking water is supplied to the Cannifton Planning Area via the City’s water distribution system.

A treated water booster station (Adam Street Booster Station) located off Cannifton Road near Highway 401 currently provides continuous increased water pressure to the Cannifton Planning Area.

The Cannifton Planning Area distribution system operates as a separate pressure zone from the main “City” pressure zone (south of Highway 401).

Currently there is no water storage in the Cannifton Planning Area.
Cannifton Planning Study Area Land Use Map
This study is being carried out in accordance with the requirements of the Municipal Class Environmental Assessment (EA) Process.

The Cannifton Planning Area Water Pressure Study and Storage Master Plan will address Phases 1–2 of the Municipal Class EA Process.

Class Environment Assessment Process

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>Identify problem or opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE ARE HERE</td>
<td></td>
</tr>
<tr>
<td>PHASE 2</td>
<td>Identify and evaluate alternative solutions to problem or opportunity</td>
</tr>
<tr>
<td></td>
<td>Public Information Centre</td>
</tr>
<tr>
<td></td>
<td>Select a preferred solution</td>
</tr>
</tbody>
</table>
Cannifton Planning Area Water Pressure Study and Storage Master Plan

**Problem Statement**

- The Cannifton Planning Area is a growth area within the City of Belleville, and requires a robust water distribution system to provide adequate water pressure and flow. Therefore, the City of Belleville is investigating options to provide adequate water pressure and flow to meet near-term, mid-term, and long-term drinking water demands.

- The Cannifton Planning Area Water Pressure Study and Storage Master Plan is considering the following three growth period scenarios:
  
  - **Near-Term:** An approximate five year development estimate coinciding with the trunk watermain construction plans along Highway 62, Maitland Drive, and Farnham Road. The total projected development during this period in the Cannifton Planning Area involves 383 residential units, 22 ha of commercial land, and 3 ha of industrial land.
  
  - **Mid-Term:** Selected as being the mid-point development between full build-out and near-term scenario development projections.
  
  - **Full Build-out:** Full build-out planning projections of the residential, commercial, and industrial lands located within the Cannifton Planning Area (see Study Area Land Use Map).
Cannifton Planning Area Water Pressure Study and Storage Master Plan

Existing and Projected Water Demand and Storage

Existing Distribution Supply Capacity
- Adam Street Booster Station: 3,629 m³/d
- Storage: 0 m³

A general water supply design requirement for separate pressure zones is that booster pumping stations, alone or in conjunction with storage, should provide adequate supply to meet the pressure zone needs.

Projected Water Demand for Cannifton Planning Area Scenarios:

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Existing</th>
<th>Near Term</th>
<th>Mid-Term</th>
<th>Full Build-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected Average Day Flow Water Demand</td>
<td>m³/d</td>
<td>384</td>
<td>1,140</td>
<td>9,480</td>
<td>17,820</td>
</tr>
<tr>
<td>Projected Maximum Day Flow Water Demand</td>
<td>m³/d</td>
<td>960</td>
<td>2,840</td>
<td>18,960</td>
<td>35,650</td>
</tr>
</tbody>
</table>

If treated water storage is determined to be a part of the preferred solution, the calculated required storage is shown below for each Cannifton Planning Area scenario.

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Existing</th>
<th>Near Term</th>
<th>Mid-Term</th>
<th>Full Build-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculated Treated Water Storage (Based on MOE Design Guidelines)</td>
<td>m³</td>
<td>1,200</td>
<td>2,100</td>
<td>9,300</td>
<td>17,800</td>
</tr>
</tbody>
</table>
This study is at the stage of considering and developing alternative solutions. Example water model predictions of the “Do Nothing” and “Adam Street Booster Station Upgrade” potential solutions under average day flow conditions for the near-term scenario are illustrated in the following display.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do Nothing</td>
</tr>
</tbody>
</table>
| 2      | Upgrade the Adam Street Booster Station  
- To meet Near-Term and/or Mid-Term and/or Full Build-Out Water Demands |
| 3      | Provide Water Storage  
- Standpipe vs. Ground vs. Elevated  
- Near Term vs. Mid-Term vs. Full Build-Out |
| 4      | Combination of Booster Station Upgrades and Treated Water Storage |
**Water Model Analysis of Select Near-Term Options**

**Option 1: Do Nothing**

Description: An ADF water model analysis of the treated water distribution system in the Cannifton Planning Area. The red dots (nodes) are areas that the model predicts may experience pressures lower than the minimum MOE recommended pressure of 275 kPa (40 psi).

**Option 2: Upgrade Adam St. Booster Station**

Description: An ADF water model analysis of the treated water distribution with higher total discharge pressure booster pumps. The green dots (nodes) are areas that the model predicts may experience pressures within the MOE recommended pressure range of 350 to 480 kPa (50 to 70 psi).
Proposed Evaluation Criteria

- The following table presents proposed evaluation criteria and respective weighting.

- Please provide any input/comment using the provided comment sheet.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Criteria</td>
<td>35</td>
</tr>
<tr>
<td>(includes near term capital and life cycle (i.e. operations and maintenance) costs to both the municipality and private residences and businesses)</td>
<td></td>
</tr>
<tr>
<td>Environmental Criteria</td>
<td>20</td>
</tr>
<tr>
<td>(environmental impacts)</td>
<td></td>
</tr>
<tr>
<td>Social Criteria</td>
<td>20</td>
</tr>
<tr>
<td>(includes potential for growth and development, and public health considerations, i.e. the ability to provide a secure drinking water source, land use and aesthetics, cultural impacts and socio-economic impact on local community)</td>
<td></td>
</tr>
<tr>
<td>Technical Criteria</td>
<td>25</td>
</tr>
<tr>
<td>(includes technical feasibility, the ability of the preferred solution to supply treated drinking water to meet community needs)</td>
<td></td>
</tr>
<tr>
<td>Total (maximum score)</td>
<td>100</td>
</tr>
</tbody>
</table>
# Cannifton Planning Area Water Pressure Study and Storage Master Plan

## Next Steps

- Receive Public and Review Agency comments
- Develop and evaluate alternative solutions, and identify a preliminary preferred solution(s)
- Public Information Centre No. 2
- Receive comments on the evaluation of Water Supply Alternatives from Public and Review Agencies - **Identify Preferred Solution(s)**
- Consultation with Public and Review Agencies throughout Master Plan Study

## We Invite Your Comments

Please take the time to fill out the Comment Sheets provided.

## Notifications and Updates:

- Notice of Public Information Centre No. 2 will be advertised in local newspapers.
- To receive direct notification, please add your name to the project contact list.

Thank you for attending!