TOWN OF WASAGA BEACH

PUBLIC INFORMATION CENTRE NO. 2

Bay Sands Development Area
Storm Drainage and Outlet Improvements
Schedule ‘C’ Municipal Class Environmental Assessment
Thursday, June 22, 2017
Thank you for your interest in this Municipal Class Environmental Assessment.

This public meeting will present the following information:

- Project Background
- The Municipal Class EA process
- A summary of the drainage alternatives presented at PIC No. 1 held on November 6, 2014 and identification of the Preferred Solution.
- Design Options under consideration to implement the Preferred Solution
- Potential environmental impacts & mitigation
- Next step in the process

Your input is appreciated.

Please review the displays and feel free to discuss any concerns with the members of the study team in attendance.

We invite you to provide any comments, in writing, on the comment sheet provided.

PLEASE SIGN IN

MUNICIPAL FREEDOM OF INFORMATION & PROTECTION OF PRIVACY ACT

All comments received will be maintained on file for use during the project and may be included in study documentation. Information collected will be used in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.
The Bay Sands Development Area of Wasaga Beach was established circa 1970 using a “checkerboard” pattern of land ownership (i.e. individually owned).

It is a low density residential area consisting of approximately 104 lots and is currently undeveloped.

As this development received approval in the seventies, today’s standards of land use planning did not apply and as such, a servicing strategy was not developed prior to the subdivision being approved and the lots subsequently being sold.

A suitable sanitary, water and drainage design must be established before the development can move forward.

Knowledge of the drainage strategy for the Bay Sands Development Area is needed so it can be accommodated in any downstream area improvements such as Mosley Street or Shore Lane.

The Town of Wasaga Beach has initiated this Schedule ‘C’, Municipal Class Environmental Assessment (Class EA) to review the drainage options available with the goal of selecting a Preferred Solution to address the stormwater management needs for the Project Study Area which includes the Bay Sands Development Area.
• The study area for this project encompasses the existing undeveloped residential lots known as the Bay Sands Development Area as well as the existing residential areas within the outlet areas to Nottawasaga Bay.

• More specifically, the study area is described as the area between 60th Street North and 68th Street North, north of Mosley Street as well as the Bay Sands Area between 62nd Street and Highway 26.
A Municipality is required to conduct a Municipal Class Environmental Assessment (Class EA) before this type of improvement project can be undertaken.

Based on the scope of work, this undertaking constitutes a Schedule ‘C’ project and requires completion of Phases 1 to 5 of the Class EA process.

A Class EA follows an approved process designed to protect the environment (physical, natural, social and economic) and to ensure compliance with the Ontario Environmental Assessment Act.

During Phase 2 various alternative solutions were developed to address the existing deficiencies and presented to the public at Public Information Centre No. 1 held November 6, 2014.

We are currently in Phase 3 of the process. This meeting will present the Preferred Solution selected at the close of Phase 2 and identify the design alternatives currently under consideration to implement the Preferred Solution.

The Class EA process is considered complete at the close of Phase 4 and is eligible to move forward to detailed design and construction (i.e. Phase 5) at a future date.
The project study area consists of three drainage catchment areas as follows:

**67th Street Drainage Area**
- Drainage in this area is controlled by infiltration and overland flow to the existing outlet to Nottawasaga Bay at 67th Street.
- This existing outlet consists of a 1.8 m x 0.9 m box culvert that extends from Shore Lane to Nottawasaga Bay. It has been designed with the capacity to accept the drainage from the current catchment area that includes the Bay Sands Development Area.
- **Deficiencies:** There is no existing storm sewer south of Shore Lane so in extreme events all drainage is conveyed by overland flow which leads to flooding.

**Shore Lane Drainage Area**
- Existing drainage in this area flows via ditch, storm sewer and overland flow to Nottawasaga Bay.
- **Deficiencies:** There is insufficient drainage capacity along Shore Lane (very flat).

**61st Street Drainage Area**
- Existing drainage in this area flows via ditch and overland flow to the existing channel outlet east of 61st Street to Nottawasaga Bay.
- Mosley Street and 62nd Street south have rural road cross-sections with ditches.
- In general the remaining roads such as Shore lane, 62nd Street North, 67th Street and most of the north/south streets have semi-urban cross-sections with minimal drainage capacity.
- **Deficiencies:**
  - The existing drainage channel that branches off 62nd Street between Mosley Street and Shore Lane does not have sufficient capacity to accommodate overland flow for a storm event with a return period of once in one hundred years.
  - The existing channel is not within an assigned easement.
  - The channel crosses Shore Lane with a 1100mm diameter CSP and leads to the channel segment, which is also under capacity, through a rear yard to the bay.
ALTERNATIVE SOLUTIONS PRESENTED AT PIC NO. 1

ALTERNATIVE 1 – Do Nothing
- Proposes no changes to the existing infrastructure.
- No improvements would be provided.

ALTERNATIVE 2A
- Utilize existing channel outlet.
- Upgrade channel from Shore Lane north to the existing outlet to Nottawasaga Bay.
- Urbanize 62nd Street and Shore Lane from the Bay Sands Development to the existing channel.

ALTERNATIVE 2B
- Construct new outlet at 61st Street North.
- Urbanize streets from Bay Sands Development to 61st Street North outlet (i.e. 62nd Street, Shore Lane and 61st Street).

ALTERNATIVE 2C
- Construct new outlet at 62nd Street North.
- Urbanize 62nd Street from Bay Sands Development to new outlet at 62nd Street North.

ALTERNATIVE 3
- Obtain a drainage easement across private lands north of the Bay Sands Development Area to Mosley Street, in the vicinity of 67th Street.
- Construct a grass lined drainage swale within the drainage easement capable of conveying the greater of the 100-year or Regional flows. A maintenance access route will also be provided.
- Urbanize 67th Street including a large diameter storm sewer on 67th Street.
- Utilize the existing outlet at 67th Street.

ALTERNATIVE 4
- Install a new large diameter storm sewer on Highway 26 (71st Street)
- Connect to existing open channel at intersection of Mosley Street and 71st Street North.
- Utilize existing outlet at 71st Street.

AT PIC NO. 1 ALTERNATIVE 4 WAS IDENTIFIED AS UNACCEPTABLE AND REMOVED FROM FURTHER CONSIDERATION

A preliminary review of a possible drainage outlet along 71st Street was considered but initial analysis indicates that the resulting storm sewer grades will be unacceptable at approximately 0.06%. There are also existing capacity issues along the route that would also need to be addressed and, as such, this alternative was not pursued any further.
Each of the alternative solutions presented at PIC No. 1 included an option for a stormwater management facility to control runoff from the Bay Sands Development Area to pre-development rates as shown below:

**STORMWATER MANAGEMENT FACILITY OPTIONS CONSIDERED FOR ALTERNATIVE 2A, 2B, AND 2C**

**OPTION 1**
Construct One Stormwater Management Facility Within the Bay Sands Development Area Using 5 Lots

**OPTION 2**
Construct Two Stormwater Management Facilities Within the Bay Sands Development Area Using a Total of Seven Lots

**OPTION 3**
Construct One Stormwater Management Facility Off-Site on the Adjacent Property to the North of the Bay Sands Development

**STORMWATER MANAGEMENT POND**

A stormwater management facility (i.e. pond) will be required for the Bay Sands Development Area to address quality and quantity control; however, this Class EA process will not detail the location and sizing of the facility at this time for the following reasons:

- As the Bay Sands Development Area is not expected to be developed in the near future there is the potential that regulations governing stormwater management facilities will change. There is the possibility that Low Impact Development (LID) requirements will evolve resulting in an elimination of the need for a stormwater management pond or a requirement for some combination of both.

- Option 1 is preferred as it proposes one stormwater management pond within the Bay Sands Development Area that can potentially be shared with the development lands to the north.

- The exact location of the proposed facility would need to be established in conjunction with any development proposal submitted for the private lands located north of the Bay Sands Development Area. Since no land development application has been submitted for the lands to the north of Bay Sands it is not feasible to establish a specific location for a stormwater management facility at this time as it would be subject to change in the future to accommodate a development proposal. The need to acquire lands for a stormwater management facility to address the Bay Sands Development Area can be addressed at a future date in more detail.
• Initial attempts to combine the Bay Sands Development Area with the 61st Street catchment area was not feasible as the existing outlet has insufficient capacity, so two outlets will be required.

• As such, the study area has been divided into two drainage areas as follows:
  - **AREA 1**  67th Street drainage area and the Bay Sands Development drainage area.
  - **AREA 2**  61st Street Drainage Area.

• The proposed design maximizes the amount of stormwater conveyed to the existing 67th Street outlet to mitigate the insufficient capacity at the 61st Street outlet.
Alternative 3 is selected as the Preferred Solution to address the stormwater requirements for the Bay Sands Development Area including the 67th Street Drainage area (i.e. Area 1).

Alternative 2A and 2B are selected as the Preferred Solution(s) to address the drainage deficiencies affecting the 61st street drainage area (i.e. AREA 2).

**Area 1 Preferred Solution**

**Alternative 3**

- Utilize the existing 67th Street Outlet
- Obtain a drainage easement across the property to the north of the Bay Sands Development Area
- Urbanize 67th Street North from Mosely Street to Shore Lane

**Area 2 Preferred Solution**

**Combination of Alternatives 2A & 2B**

- Utilize the existing channel outlet east of 61st Street.
- Urbanize 62nd Street and Shore Lane from the Bay Sands Development Area east entrance (near Robinson Road) to the existing channel east of 61st Street.

- Construct new outlet at 61st Street North.
- Urbanize streets from Bay Sands Development to 61st Street North outlet (i.e. 62nd Street, Shore Lane and 61st Street).
As part of Phase 3 of the Class EA process, alternative design concepts are developed to implement the Preferred Solution selected at the close of Phase 2.

**AREA 1**
**DESIGN OPTIONS UNDER CONSIDERATION TO IMPLEMENT THE PREFERRED SOLUTION TO ADDRESS THE DRAINAGE REQUIREMENTS FOR THE BAY SANDS DEVELOPMENT / 67th STREET DRAINAGE AREA**

- **Design Option 1A**
  - Utilize the existing 67th Street Outlet
  - Urbanize 67th Street and Shore Lane from 62nd Street North to 67th Street North.
  - Construct a drainage channel on the west side of the existing wetland, across the private lands north of the Bay Sands Development Area to Mosley Street

  **OR**

- **Design Option 1B**
  - Utilize the existing 67th Street Outlet
  - Urbanize 67th Street and Shore Lane from 62nd Street North to 67th Street North.
  - Construct a drainage channel on the east side of the existing wetland, across the private lands north of the Bay Sands Development Area to Mosley Street

**AREA 2**
**DESIGN OPTIONS UNDER CONSIDERATION TO IMPLEMENT THE PREFERRED SOLUTION TO ADDRESS DEFICIENCIES AFFECTING THE 61ST STREET DRAINAGE AREA**

- **Design Option 2A**
  - Utilize the existing channel outlet to Nottawasaga Bay
  - Upgrade the existing channel from Shore Lane north to the existing outlet.
  - Future urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.

  **OR**

- **Design Option 2B**
  - Construct new storm sewer in 61st Street right-of-way and connect to the existing channel south of Shore Lane
  - Retain existing channel outlet east of 61st Street as an emergency overflow outlet
  - Future urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.
**BAY SANDS DEVELOPMENT AREA STORM DRAINAGE AND OUTLET IMPROVEMENTS**

**SCHEDULE ‘C’ MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**

**AREA 1 – DESIGN OPTIONS**

**AREA 1 DESIGN OPTION 1A**

- **Utilize existing 67th Street Outlet**
- **Urbanize 67th St. North and Shore Lane from 62nd St. North to 67th St. North.**
- **Construct Drainage Channel WEST Side of Wetland**

**AREA 1 DESIGN OPTION 1B**

- **Utilize existing 67th Street Outlet**
- **Urbanize 67th Street North and Shore Lane from 62nd St. North to 67th St. North.**
- **Construct Drainage Channel EAST Side of Wetland**

**Utilize Existing 67th Street Outlet:**
- Utilize existing 67th Street outlet to Nottawasaga Bay.
- The existing outlet has sufficient capacity to accommodate all contributing lands including the Bay Sands Development Area.
- This outlet has an existing oil and grit separator to assist with quality control.

**Urbanize 67th Street & Shore Lane:**
- From Mosely Street to Shore Lane, flow exiting the drainage channel would be conveyed into a large diameter storm sewer on 67th Street.
- 67th Street would be urbanized to accommodate overland flow that exceeds the capacity of the proposed storm sewer.
- Shore Lane would also be urbanized from 62nd Street North to 67th Street North.

**Obtain Drainage Easement on Lands North of Bay Sands Area:**
- Obtain 20.0 m wide drainage easement through private lands north of Bay Sands Development Area to convey controlled flow to Mosley Street near 67th Street.
- The drainage easement would eventually be developed into a grass lined drainage swale approximately 360 m in length that is capable of conveying the greater of the 100-year or Regional flows. A maintenance access route will also be provided along its length.
Design Option 2A for Area 2 Proposes the Following:
- Utilize the existing channel outlet to Nottawasaga Bay
- Upgrade the existing channel from Shore Lane north to the existing outlet.
- Future urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.

Channel Upgrades:
Upgrades to the existing channel will involve significant widening of the channel and will result in adverse impacts to property at 1760 Shore Lane.

Existing Channel
The existing channel is 2.0 m wide at the bottom and 4.0 m at the top with 1:1 side slopes as illustrated below:

Proposed Channel
The proposed channel will be 2.0 m wide at the bottom and 9.2 m wide at the top with 3:1 sides slopes.
Design Option 2B for Area 2 Proposes the Following:

- Construct new outlet at 61st Street North right-of-way
- Retain existing channel outlet east of 61st Street as an emergency overflow outlet
- Construct new storm sewer in 61st Street right-of-way and connect to the existing channel south of Shore Lane
- Future urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.
A number of studies have been completed to identify sensitive environmental features within the project study area and to determine the potential for impact from construction on these features. The accompanying map and information below summarize the potential environmental concerns and constraints for this project.

### Environmental Features

<table>
<thead>
<tr>
<th><strong>Environmental Features</strong></th>
<th><strong>Terrestrial Vegetation /Wildlife Including Species at Risk</strong></th>
<th><strong>Aquatic Vegetation/Wildlife</strong></th>
<th><strong>Wetlands</strong></th>
<th><strong>Drainage/Surface Water</strong></th>
<th><strong>Groundwater</strong></th>
<th><strong>Archaeological/Built Heritage Resources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Potential habitat exists for several Species at Risk – (Milksnake, Red-headed Woodpecker &amp; Eastern Wood-pewee – all Species of Special Concern) and (Hill’s Thistle &amp; Chorus Frog - Threatened) within the project study area.</td>
<td>• Drainage features within the study area consist of swales or ditches that are man-made, undefined or flow intermittently.</td>
<td>• Unevaluated wetland areas were identified within the project study area.</td>
<td>• Portion of study area is within the Nottawasaga Valley Conservation Area (NVCA) Regulated Area. A permit will be required from this agency to complete work proposed.</td>
<td>• The majority of adjacent properties are currently on municipal services and there is limited potential to impact local wells.</td>
<td>• A Stage 1 archaeological assessment was completed during the Class EA process.</td>
</tr>
<tr>
<td></td>
<td>• One Butternut Tree (Endangered) was identified south of Mosley Street near the unevaluated wetland</td>
<td>• Drainage features within the study area do not provide fish habitat.</td>
<td></td>
<td>• Although the project is within a Vulnerable Aquifer Area as identified in the Town’s Official Plan, the work proposed is considered to be a low risk and is a significant distance from existing municipal wells.</td>
<td></td>
<td>• A Stage 2 assessment will be required during the detailed design phase for the 62nd Street corridor and the drainage channel at 61st Street.</td>
</tr>
</tbody>
</table>
Each option was reviewed in relation to the same criteria to determine which option will address the key issues, but create the least amount of impact on the area environment (physical, natural, social, cultural & economic).

## EVALUATION MATRIX

### EVALUATION OF AREA 1 DESIGN OPTIONS

<table>
<thead>
<tr>
<th>PHYSICAL ENVIRONMENT</th>
<th>OPT. 1A</th>
<th>OPT. 1B</th>
<th>DESCRIPTION OF EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater System Capacity</td>
<td></td>
<td></td>
<td>Both options will equally address the stormwater system capacity.</td>
</tr>
<tr>
<td>Constructability</td>
<td></td>
<td></td>
<td>The scale selection for Option 1A is constrained by the wetland and the neighboring property. Option 1A has less constraints for channel alignment and has a more favorable scorable grade.</td>
</tr>
<tr>
<td>Outlet Requirements</td>
<td></td>
<td></td>
<td>Both options propose use of an existing outlet that was previously used and constructed to accommodate the Bay Sands Development Area and as such, no improvements will be required to the existing structure.</td>
</tr>
<tr>
<td>Utilities &amp; Servicing</td>
<td></td>
<td></td>
<td>Both options propose the urbanization of 67th Street North, but it is expected that construction will be contained within the existing right-of-way with minimal impacts to existing utilities. Both options equally impact water services in proximity to the north side of 67th Street North.</td>
</tr>
<tr>
<td>Terrestrial Vegetation/Wildlife/Species at Risk</td>
<td></td>
<td></td>
<td>Both options propose construction within a previously and undeveloped channel and is proximity to several wetland areas, there is increased potential to impact aquatic vegetation and wildlife. However, the drainage channel has been cleared outside of the existing wetland area and as per the criteria requirements it has the least potential to impact aquatic vegetation and wildlife.</td>
</tr>
<tr>
<td>Aquatic Vegetation &amp; Wildlife</td>
<td></td>
<td></td>
<td>Option 2A proposes improvements to the existing channel from Shore Lane to the beach and there is an increased potential to impact aquatic vegetation and wildlife in comparison to OPT 2B.</td>
</tr>
<tr>
<td>Risk</td>
<td></td>
<td></td>
<td>Both options have no impact on water quality during construction as work is proposed within an existing channel. However, impacts can be reduced through effective management practices for working in and around water.</td>
</tr>
<tr>
<td>Surface Runoff Quality</td>
<td></td>
<td></td>
<td>Both options will equally address the stormwater management facility which will equally address water quality concerns and reduce flooding potential.</td>
</tr>
<tr>
<td>Surface Water Quantity/Flooding</td>
<td></td>
<td></td>
<td>Both options propose the construction of a stormwater management facility which will address water quantity/flooding concerns.</td>
</tr>
</tbody>
</table>

### EVALUATION OF AREA 2 DESIGN OPTIONS

<table>
<thead>
<tr>
<th>PHYSICAL ENVIRONMENT</th>
<th>OPT. 2A</th>
<th>OPT. 2B</th>
<th>DESCRIPTION OF EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater System Capacity</td>
<td></td>
<td></td>
<td>Both options will equally address the stormwater system capacity issues between shown lines and Mattawa River.</td>
</tr>
<tr>
<td>Outlet Requirements</td>
<td></td>
<td></td>
<td>Option 2B requires construction of a new outlet at 67th Street North.</td>
</tr>
<tr>
<td>Impacts to Existing Utilities and Services</td>
<td></td>
<td></td>
<td>Both options include urbanization, but it is expected that construction will be contained within the existing right-of-way with minimal impacts to existing address.</td>
</tr>
<tr>
<td>NATURAL ENVIRONMENT</td>
<td></td>
<td></td>
<td>Both options propose construction within the existing residential area and Option 2B will require work within an existing right-of-way. The potential for impact to exposed vegetation and wildlife is expected to be low in either case.</td>
</tr>
<tr>
<td>Terrestrial Vegetation/Wildlife/Species at Risk</td>
<td></td>
<td></td>
<td>Option 2B proposes construction on an existing residential lot and Option 2A involves work within an existing right-of-way. The potential for impact to exposed vegetation and wildlife is expected to be low in either case.</td>
</tr>
<tr>
<td>Aquatic Vegetation &amp; Wildlife</td>
<td></td>
<td></td>
<td>Both options propose construction within previously and undeveloped channel and is proximity to several wetland areas, there is increased potential to impact aquatic vegetation and wildlife. However, the drainage channel has been cleared outside of the existing wetland area and as per the criteria requirements it has the least potential to impact aquatic vegetation and wildlife.</td>
</tr>
<tr>
<td>Risk</td>
<td></td>
<td></td>
<td>Both options have no impact on water quality during construction as work is proposed within an existing channel. However, impacts can be reduced through effective management practices for working in and around water.</td>
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<td>Surface Runoff Quality</td>
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<td>Surface Water Quantity/Flooding</td>
<td></td>
<td></td>
<td>Both options propose the construction of a stormwater management facility which will address water quantity/flooding concerns.</td>
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</tbody>
</table>

### SOCIAL ENVIRONMENT

<table>
<thead>
<tr>
<th>pnl</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town of Wasaga Beach Land Use Planning Objectives</td>
<td>Both options will address the drainage requirements for the Bay Sands Development Area which will address the existing needs and move it closer to development, which is in accordance with the Town’s land use planning objectives.</td>
</tr>
<tr>
<td>Adjacent Property Impacts</td>
<td>Both options propose construction within the existing channel for both options in accordance with the existing right-of-way in accordance with the detailed design process. The application of mitigation measures during construction will make the channel a beneficial extension of the existing channel.</td>
</tr>
<tr>
<td>Noise</td>
<td>Both options have no impact.</td>
</tr>
<tr>
<td>Traffic Impacts</td>
<td>Both options will equally address traffic concerns.</td>
</tr>
<tr>
<td>Property Access</td>
<td>Both options will equally address property access.</td>
</tr>
</tbody>
</table>

### CULTURAL ENVIRONMENT

<table>
<thead>
<tr>
<th>pnl</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeological</td>
<td>Both options have no impact on cultural concerns.</td>
</tr>
<tr>
<td>Built Heritage</td>
<td>Both options have no impact on built heritage structures within the project study area and as such, there will be no impacts in this regard.</td>
</tr>
</tbody>
</table>

### ECONOMIC ENVIRONMENT

<table>
<thead>
<tr>
<th>pnl</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Acquisition Costs</td>
<td>Both options do not impact property acquisition.</td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Both options have no impact on construction costs.</td>
</tr>
<tr>
<td>Operating/Maintenance Costs</td>
<td>Both options have no impact on operating/maintenance costs.</td>
</tr>
</tbody>
</table>

### RESULTS:

- **RESULTS: Either option is equally viable.**
- **RESULTS: AREA 2 - Design Option 2B is preferred.**
# AREA 1 DESIGN OPTIONS

## SUMMARY OF KEY ADVANTAGES AND DISADVANTAGES

### DESIGN OPTION 1A
- ✓ Utilize the existing 67th Street Outlet
- ✓ Urbanize 67th Street North and Shore Lane from 62nd Street North to 67th Street North.
- ✓ Construct a drainage channel on the WEST side of the existing wetland, across the private lands north of the Bay Sands Development Area to Mosley Street

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design will address stormwater system capacity requirements</td>
<td>• Potential to impact a Butternut Tree, a Species at Risk, but impacts can be mitigated.</td>
</tr>
<tr>
<td>• Utilizes an existing outlet (i.e. 67th Street)</td>
<td></td>
</tr>
</tbody>
</table>

### DESIGN OPTION 1B
- ✓ Utilize the existing 67th Street Outlet
- ✓ Urbanize 67th Street North and Shore Lane from 62nd Street North to 67th Street North.
- ✓ Construct a drainage channel on the EAST side of the existing wetland, across the private lands north of the Bay Sands Development Area to Mosley Street

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design will address stormwater system capacity requirements</td>
<td>• Route selection constrained by the limited area available between the wetland and the neighboring property.</td>
</tr>
<tr>
<td>• Utilizes an existing outlet (i.e. 67th Street)</td>
<td>• Deeper channel required.</td>
</tr>
</tbody>
</table>
**AREA 2 DESIGN OPTIONS**

**SUMMARY OF KEY ADVANTAGES AND DISADVANTAGES**

**DESIGN OPTION 2A**

- Utilize the existing channel outlet to Nottawasaga Bay east of 61st Street North.
- Upgrade the existing channel from Shore Lane north to the existing outlet.
- Complete localized urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design will address stormwater system capacity requirements</td>
<td>• Significant property impacts including loss of existing cottage.</td>
</tr>
<tr>
<td>• Utilizes an existing outlet (i.e. channel)</td>
<td>• Higher costs due to the need for property acquisition.</td>
</tr>
</tbody>
</table>

**DESIGN OPTION 2B**

- Construct new outlet at 61st Street
- Urbanize 62nd Street with a large diameter storm sewer.
- Complete localized urbanization of 62nd Street South and North and Shore Lane from 61st Street North to 62nd Street North.

<table>
<thead>
<tr>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Design will address stormwater system capacity requirements</td>
<td>• Requires construction of new outlet at 61st Street North.</td>
</tr>
<tr>
<td>• Cheaper of the two options since no property acquisition required.</td>
<td></td>
</tr>
<tr>
<td>• Minimal impacts to adjacent properties since construction to be contained within existing right-of-way.</td>
<td></td>
</tr>
</tbody>
</table>
The mitigation measures as outlined below will assist in minimizing the potential for impact:

### Aquatic Wildlife (Including Species at Risk)
- Obtain necessary approvals from the Nottawasaga Valley Conservation Authority and the Ministry of Natural Resources and Forestry.
- Application of standard best management practices for working in and around water (i.e. sediment & erosion control; site restoration following construction; equipment refueling and maintenance restrictions etc.).

### Terrestrial Wildlife (Including Species at Risk)
- Complete vegetation removals outside of the active season for breeding birds in accordance with the Migratory Birds Convention Act and the Migratory Birds Regulations so as to avoid impacting migratory birds, including Species at Risk.
- Obtain input from relevant agencies.
- Minimize vegetation removals and impacts to habitat.

### Wetlands
- Obtain necessary approvals from the Nottawasaga Valley Conservation Authority and the Ministry of Natural Resources and Forestry.
- Application of standard best management practices for working in and around water (i.e. sediment & erosion control; site restoration following construction; equipment refueling and maintenance restrictions etc.).

### Surface Water
- Obtain necessary approval from the Nottawasaga Valley Conservation Authority for working within a regulated area.
- Application of standard best management practices for working in and around water (i.e. sediment & erosion control; site restoration following construction; equipment refueling and maintenance restrictions etc.).
- Complete water taking (consumptive use, surface water diversions etc.) in accordance with the requirements of the Ontario Water Resources Act and the Environmental Protection Act.

### Groundwater
- Complete water taking (groundwater) in accordance with the requirements of the Ontario Water Resources Act and the Environmental Protection Act.
- Potential design considerations such as directing clean roof runoff to infiltration galleries to assist in maintaining the groundwater balance.

### Vegetation (Including Species at Risk)
- Re-stabilize and re-vegetate exposed surfaces as soon as possible following construction.
- Define limits of construction with fencing to minimize intrusion into unnecessary areas.
- Mitigation strategy to address Butternut Tree impacts to be developed during detailed design in consultation with the Ministry of Natural Resources and Forestry and the Nottawasaga Valley Conservation Authority, if applicable.

### Archaeological/Built Heritage
- Complete additional localized studies during detailed design to confirm cultural resources and establish mitigation strategy during construction.

### Noise
- Complete construction in accordance with municipal noise by-law.
- Utilize standard noise mitigation measures to minimize potential for impact (i.e. construction equipment to comply with the noise emission standards; equipment to be in good repair & fitted with functioning mufflers; maximize the separation distance between construction staging areas and nearby receptors to the greatest extent possible).

### Adjacent Land Use
- Use of grading techniques to minimize potential for impact to adjacent properties.
- Use of traffic management measures (i.e. construction staging, detours etc.) to minimize impacts to local traffic and to maintain access during construction.
- Providing advance notice to property owners regarding temporary access closures during construction.

### Utilities/Servicing
- Advance contact with utility companies during detail design process to develop re-location strategies.
- Ongoing communication with utility companies during construction.

### Air Quality
- Utilize standard best management practices during construction to minimize impacts to air quality.
- These may include covering stockpiles, utilizing dust suppressants; and ensuring that all equipment pollution control devices are operational and properly maintained.
Is there an increased potential for the Bay Sands Development Area drainage to negatively impact Nottawasaga Bay water quality?

- Drainage design will be completed in accordance with water management policies, guidelines, and provincial water quality objectives of the Ministry of Environment and Climate Change and will comply with other applicable legislation that includes the Ontario Environmental Protection Act and the Ontario Water Resources Act.

- The proposed outlets to Nottawasaga Bay currently include an oil and grit separator to address quality control. A Stormwater Management Facility (i.e. pond) is also proposed to provide quality control prior to reaching the outlet.

- Detailed design for the Bay Sands Development Area will involve quantifying the limits on lot coverage and infiltration and will be designed to address the requirements of the Ministry of Environment and Climate Change (MOECC) and the Nottawasaga Valley Conservation Authority (NVCA).

- The future design for the Bay Sands Development Area may incorporate a “treatment train” approach to reduce the impacts from the urbanization of the Bay Sands Development Area on the receiving waterbody (i.e. Nottawasaga Bay). This approach involves a sequence of practices (i.e. lot level, conveyance and end-of-pipe controls) designed to meet stormwater management objectives and may include the following:
  - Zoning Restrictions for the Bay Sands Development Area – establishing limits on the size of a home and the percentage of lot coverage.
  - Individual On-Site Infiltration Galleries: Taking runoff from roof areas for average small rainfall events and discharging via eaves troughs to infiltration galleries on each lot with the aim of matching the annual average ground water recharge of the site in its undeveloped condition. These are a well proven method of reducing total runoff volume where sandy soils and suitable separation from water table are available.
  - Other – rear yard soak away pits, grassed swales along roadway boulevards for conveyance control, oil and grit separators (pre-treatment), and filters (water quality control).

Is this undertaking going to result in an increased number of outlets to Nottawasaga Bay?

- The design team has attempted to utilize an existing outlet; however, the existing channel east of 61st Street has insufficient capacity for existing flows. The existing channel will remain for local surface drainage and provide for emergency spills / overflow conveyance if the new outlet at 61st Street North is plugged.
Will the cost of the improvements be assigned to existing residents?

- The cost of the outlet improvements for the Bay Sands Development Area will be covered 90% by Development Charges and 10% by taxation.

- Costs associated with improvements to the 61st Street outlet will be assigned to the Town’s capital project budget.

Is there the potential that effluent and sediment will not be able to be effectively cleared from the shore in the area of Nottawasaga Bay from 71st Street North to the 67th Street right-of-way?

- Quality control features will be included in the Bay Sands development to address water quality concerns.

- The design of the storm sewer drainage for the Bay Sands development will include water quality control features and will attenuate peak flows to pre-development rates.

- The combination of zoning, individual lot infiltration measures, stormwater management pond and oil grit separators will develop a layered solution to control runoff volume and quality.

Will the Bay Sands development result in an increased potential for flooding?

- The Town is aware that there is flooding potential within the Project Study Area and that is part of the reason why a drainage analysis was completed. The solution as proposed will assist in reducing the potential for flooding.

- The drainage system for the Bay Sands Development Area will be designed to attenuate peak flows to pre-development rates. This means that the flow rates will not change and it provides an opportunity to address existing deficiencies along 67th Street.

- The amount of flow to the 61st Street outlet is being reduced from current conditions.

Will the drainage solution for the Bay Sands Development Area result in an increased volume of water entering the beach area that will make it continuously wet and contribute to the overgrowth of vegetation (i.e. phragmites)?

- The Town is aware of the overgrowth of vegetation that exists in the beach area near the 67th Street outlet and the resulting overgrowth of an invasive species.

- The Town has discussed this problem with Ontario Parks. The potential to develop a suitable strategy for beach maintenance will be considered as part of the ongoing beach management plan between the Province and the Town.
How Does the Bay Sands Development Proceed From Here?

• The Town has received many inquiries from Bay Sands property owners asking for information on how their Bay Sands properties may eventually be developed. The Town is aware that many property owners are interested in developing their property and the Town would like to assist them to move forward.

• The Town proposes that if the drainage improvement Class EA is successfully concluded along with resolution of all other servicing issues for water, sanitary sewer, roadways and grading etc. that the Local Improvement Act, in accordance with the Municipal Act, be followed and applied to the Bay Sands Development.

• The requirements for “Local Improvements” in the Town of Wasaga Beach specify that a minimum of 66.7% of the property owners that would benefit from the project and possessing a minimum of 51% of the assessed property value must petition the Town in order to proceed.

• Following receipt of a petition from the majority of Bay Sands owners, the Town of Wasaga Beach would lead the process and arrange for the design, approvals and construction of the Bay Sands development.

• All benefitting owners in the area will then have the option to reimburse their share of the cost for the local improvement by either paying the Town the full amount immediately following construction completion or having the cost added to their annual taxes which may be paid over a period of up to 10 years with applicable interest.

• Although the Bay Sands Development works are dependent on a petition, the Town plans to proceed with work associated with the outlet including local drainage improvements and the urbanization of 67th Street and Shore Lane.
THE NEXT STEP IN THE CLASS EA PROCESS....

- The project team will give consideration to all public and agency comments received and select a Preferred Design.

- The Class EA process completed for this project will be documented in an Environmental Screening Report that will be made available for a 30 day public review period.

- A Notice of Completion will be issued to identify selection of the Preferred Design. The notice will also identify the public venues available to review the Environmental Screening Report.

- Once the 30 day public review period ends and there are no further objections or requests for a Part II Order, the Class EA process is considered complete. The project can then move forward to Phase 5 involving the completion of detailed design and construction at a future date.
We invite you to provide any comments, in writing, on the Comment Sheet provided.

As of June 23, 2017 all PIC material, including the Comment Sheet, will be available for download on the Town’s website www.wasagabeach.com

All comments are to be submitted by July 6, 2017 to either of the following members of the Project Team:

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All Public Information Centre material will be available for download on the Town’s website www.wasagabeach.com Friday, June 23, 2017. Please summarize below any comments or concerns that you have for this project:

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