Ben Brenman Pond & Lake Cook
Stormwater Retrofit Projects

Parks and Recreation Commission Meeting
July 21, 2016
Agenda

- Background Information
- Chesapeake Bay Stormwater Cleanup Mandate
- Ben Brenman Pond Retrofit 10% Design
  - Schedule / Next Steps
- Lake Cook Stormwater Retrofit Design
  - Schedule
The Stormwater System

- Stormwater is NOT treated
- Everything that flows into the stormwater system goes into local waterbodies
## Acres Requiring Treatment for Chesapeake Bay Cleanup

<table>
<thead>
<tr>
<th>Permit Cycle</th>
<th>TN (lbs)</th>
<th>TP (lbs)</th>
<th>TSS (lbs)</th>
<th>Approx. Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>First MS4 Permit Cycle Target (5%)</td>
<td>380</td>
<td>50</td>
<td>43,097</td>
<td>~120 - 300</td>
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<tr>
<td>Second MS4 Permit Cycle Target (35%)</td>
<td>2,659</td>
<td>352</td>
<td>301,678</td>
<td>~660</td>
</tr>
<tr>
<td>Third MS4 Permit Cycle Target (60%)</td>
<td>4,558</td>
<td>603</td>
<td>517,162</td>
<td>~1,450</td>
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<tr>
<td><strong>Total Reduction Target</strong></td>
<td><strong>7,597</strong></td>
<td><strong>1,005</strong></td>
<td><strong>861,937</strong></td>
<td><strong>~2,405</strong></td>
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</table>
Upgrade the lake / pond to better treat stormwater runoff to meet Chesapeake Bay Cleanup Mandates and protect downstream waterways

Enhance amenities, new trail connections

New landscaping to discourage geese and provide habitat for riparian birds and animals

New educational signage with ecological information around trail
Ben Brenman Pond
10% Concept Plan
- Create new weir to expand forebay
- Create new overlook structures at the weir
- Replace existing pedestrian bridge
Ben Brenman Pond
New Weir and Boardwalk

- New weir to create multiple cells
- New pedestrian bridge / boardwalk
- Existing pavilion / gazebo will remain
- Wildlife opportunities on weir
Ben Brenman Pond
Wetland Vegetation

- New aquatic bench around the pond
  - Discourage geese
  - Safety
- New floating wetland islands
- Wildlife opportunities with new vegetation
“First flush” diversion to add 34 acres of treatment area to pond

Continue to model storm sewer system to ensure adequate capacity
Ben Brenman Pond
Schedule / Next Steps

- August 2016 – 30% Design Submittal
- September 2016 – Public Meeting
- Spring 2018 – Final Design
- Fall 2018 – Construction Scheduled to Begin
- Spring 2019 – Construction Complete
Lake Cook Pedestrian Connections

- Circular path around lake, pervious asphalt
- Pedestrian bridge with weir at forebay
- Pedestrian boardwalk at upflow filter

Artist’s rendition
Lake Cook
Landscape Plan

- Aquatic bench around lake
- Specimen trees are preserved
- Native species
- Wildlife opportunities with new vegetation
- Wildlife management plan
Lake Cook
Additional Amenities

- Overlook area along Eisenhower Avenue
  - Cook Memorial
- Expanded fishing pier
Lake Cook
Schedule / Next Steps

- July 22, 2016 – 100% Design Submittal
- August 2016 – Bid Documents Submittal
- November 2016 – Construction Scheduled to Begin
- Spring 2017 – Construction Scheduled to be Complete
Thank You

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