Presentation Goals

Goals

• Review site plans and stormwater management report
• Identify any errors with the design
• Suggest potential solutions
Determining Applicable Design & Performance Standards

Does the Development
• Trigger the municipality’s SCO?
• Disturb one acre or more?
• Increase impervious coverage by ¼ acre or more?

Municipal Stormwater Control Ordinance:
• Major Development:

“Any development that provides for ultimately disturbing one or more acres of land or would create ¼ acre or more of impervious surface.”
Familiarize Yourself with the Site

Where are the pre-construction conditions?
- Important in determining the requirements
- Existing land cover
- Has the existing land cover existed for the past 5 years?

Pre-Development Site Condition
Pre-Development Site

A runoff coefficient for existing conditions...

May be used if the design engineer verifies that the hydrologic condition has existed on the site for at least five years

If more than one land cover has existed...

During the five years immediately prior to the time of applications, the land cover with the lowest runoff potential shall be used for the computations

Pre-Development Site

Which has the lowest runoff potential?
Pre-Development Conditions

What does this mean for stormwater management of the site?

<table>
<thead>
<tr>
<th>Coverage Item</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof &amp; Paved Driveway</td>
<td>60,342 sf</td>
</tr>
<tr>
<td>Gravel</td>
<td>6,495 sf</td>
</tr>
<tr>
<td>Lawn</td>
<td>4,664 sf</td>
</tr>
</tbody>
</table>

Based on 2007 conditions...

<table>
<thead>
<tr>
<th>Coverage Item</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof &amp; Paved Driveway</td>
<td>46,342 sf</td>
</tr>
<tr>
<td>Gravel</td>
<td>6,495 sf</td>
</tr>
<tr>
<td>Lawn</td>
<td>18,664 sf</td>
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</tbody>
</table>

Proposed Coverage

<table>
<thead>
<tr>
<th>Coverage Item</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof &amp; Paved Driveway</td>
<td>59,626 sf</td>
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<tr>
<td>Gravel</td>
<td>0 sf</td>
</tr>
<tr>
<td>Lawn</td>
<td>11,875 sf</td>
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</tbody>
</table>
Stormwater Management Report

Based on 2007 conditions...

- Impervious coverage was reduced, the time of concentration was maintained
- The post-construction hydrographs did not exceed the pre-construction hydrographs
- Water quantity was met
- Water quality was not required
- No groundwater recharge was required

Stormwater Management Report

Based on 2012 conditions...

- Impervious coverage was increased by greater than ¼ acre, time of concentration was decreased
- Water quantity was not met
- Water quality was required
- Groundwater recharge was required
What are some ways to meet the requirements?

- Water quantity:
  - Underground detention system

- Water quality:
  - Green infrastructure