Better Site Design for Stormwater Control

Reducing Impervious Cover & Promoting Infiltration

Presented by
Matthew W. Kofroth
Watershed Specialist
Lancaster County Conservation District
Stormwater Definitions

- **Impervious Cover** – any surface in the landscape that water is unable to penetrate into & thus is forced to runoff. (i.e. roads, driveways, parking lots, rooftops, sidewalks, etc.)

- **Infiltration** – the downward movement of water into the soil thus recharging groundwater supplies.
Impervious Cover
Residential Streets & Parking Lots

1. Street Width
2. Street Length
3. Cul-de-Sacs
4. Vegetated Open Swales
5. Parking Ratios
6. Parking Lot Design
7. Parking Lot Runoff
Street Lengths
TRADITIONAL

a. GRID

ALTERNATIVE

b. BRANCHING

c. COUNTRY ROAD

d. LONG CUL-DE-SAC
Cul-de-Sacs
40 FT CUL-DE-SAC W/ ISLAND

30 FT RADIUS CUL-DE-SAC

T-SHAPED TURNAROUND

LOOP ROAD
Vegetated Open Swales
Parking Ratios
# Recommended Parking Demand Ratios for Selected Land Uses

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Better Site Design Parking Ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Homes</td>
<td>2 spaces or less/dwelling unit</td>
</tr>
<tr>
<td>Professional Offices</td>
<td>1 space/200 sq. ft.</td>
</tr>
<tr>
<td>Retail</td>
<td>1 space/250 sq. ft.</td>
</tr>
<tr>
<td>Restaurant</td>
<td>1 space/50 sq. ft.</td>
</tr>
<tr>
<td>Industrial</td>
<td>1 space/1,000 sq. ft.</td>
</tr>
<tr>
<td>Church</td>
<td>1 space/5 seats</td>
</tr>
<tr>
<td>Golf Course</td>
<td>1 space/hole</td>
</tr>
</tbody>
</table>
Lot Development

8. Open Space Developments
9. Setbacks & Frontages
10. Sidewalks
11. Driveways
12. Rooftop Runoff
Rooftop Runoff
Conservation of Natural Areas

13. Aquatic Buffers
14. Clearing & Grading
Aquatic Buffers
Stormwater is a precious resource not a problem to be disposed of, let’s embrace its value.