Stormwater Runoff

3/26/2012
Calculate: Run-off Volume for AUP for a Storm event in New York City

http://en.wikipedia.org/wiki/Surface_runoff
Calculate:
Infiltration Volume for AUP for a Storm event in New York City

http://www.atmos.albany.edu/daes/atmclasses/atm301/soilm.html
Guided Worksheet

• We need to calculate the percent permeable and impermeable (1-7) area you mapped around AUP to insert into a Run-off Volume Calculation (11-12)

• Includes Tree Pits and other Green Space regions
Tree Pit and Green Space Measurements

KEY
- Permeable
- Impermeable

1 in = 26.5 m
Total Permeable Area
(1) Total Campus Area

Length

Width
Percent Permeable Area

\[ \left( \frac{\text{Total Permeable Area}}{\text{Total Campus Area}} \right) \times 100 = \% \]
Remember Your Units!

Unit Conversions

Map Scale: 1 inch = 26.5 meters

1 inch = 0.025 meters

1 meter$^3$ = 264 gallons
(9) Storm Event Selection

Figure 4.2 One-Year Design Storm

Precipitation (inches)
Accumulation Period = 24-hr
Return Period = 1-yr
Data Ending 2003

Northeast Regional Climate Center

Figure 4.1 90% Rainfall in New York State (NYSDEC, 2000)
Map Elements

North Arrow

Scale Bar

1 inch = 1 mile