

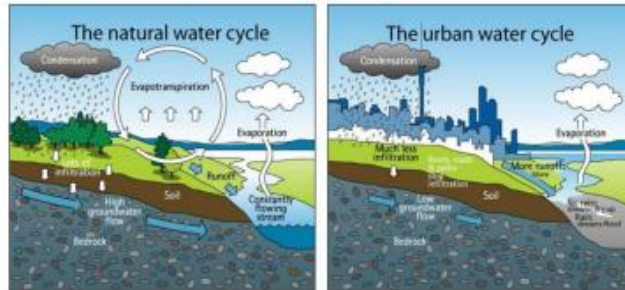


# Stormwater Management Regulations

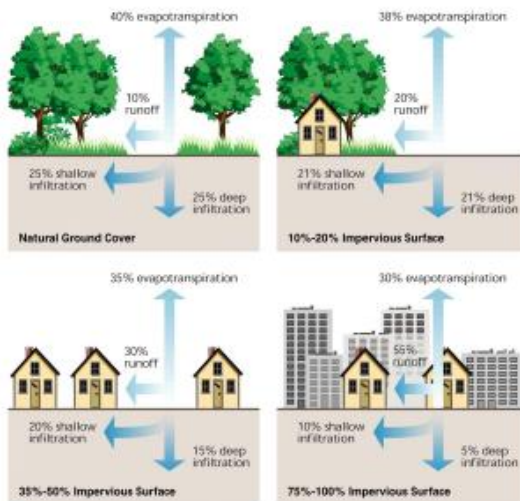
Prepared by the Township of Maplewood Engineering Department



## Effect of Development on the Water Cycle



## Effects of Development on Runoff and Infiltration



## Stormwater Requirement Objectives

- Stormwater Quantity** – Rates and volumes of stormwater runoff from a development site
  - Reduce peak post-development runoff rates
- Stormwater Quality** – Accumulation of pollutants that stormwater runoff transports to waterways
  - Remove Total Suspended Solids (TSS)
  - Maximize nutrient removal from post-development runoff
- Groundwater Recharge** – Downward movement of water replenishing subsurface groundwater supplies
  - Prevent the loss of groundwater recharge from pre- to post-development conditions

## Low Impact Development (LID)

An innovative stormwater management approach that uses Best Management Practices (BMPs) that work with nature to manage stormwater as close to its source as possible.

### Structural BMPs

- Bioretention System
- Constructed Stormwater Wetlands
- Dry Wells
- Extended Detention Basins
- Infiltration Basins
- Manufactured Treatment Devices
- Pervious Paving Systems
- Rooftop Vegetation
- Sand Filters
- Vegetative Filters
- Wet Ponds

### Nonstructural BMPs

- Preservation of Natural Areas
- Native Ground Cover
- Vegetative Buffers
- Impervious Area Management
- Surface Roughness Changes
- Land Slope Reduction
- Utilization of Natural Flow Pathways
- Vegetated Conveyance
- Enhancement of Riparian Areas
- Utilization of Cluster Development Design



Stormwater Inlet Retrofit with Eco-Safe Bar and Bicycle Safe Grate

## Solids and Floatable Control

- Street Sweeping
- Storm Drain Inlet Retrofitting
  - NJDOT Bicycle Safe Grate
  - Curb Inlet Openings
- Stormwater Facility Maintenance
- Road Erosion Control
- Outfall Pipe Stream Scouring Remediation

## Improper Disposal of Waste

- Pet Waste Collection and Proper Disposal
- Litter Collection and Proper Disposal
- No Dumping into Storm Sewers
- Wildlife Feeding Prohibited
- Outfall Pipe Mapping and Inspections
- Illicit Connections Prohibited



## Maintenance of Yard Operations

Areas of focus for preventing spillage of harmful chemicals containing pollutants from washing into the storm sewer systems and eventually discharging into surface waters:

- De-icing Material and Sand Storage
- Fueling Operations
- Vehicle Maintenance
- Good Housekeeping



## Best Management Practices (BMPs)

### Pervious Pavement



### Dry Well



### Constructed Wetlands



### Rain Garden / Bioretention Basin



### Rooftop Vegetation



### Manufactured Treatment Device



### Wet Pond

