

# CREATING SUSTAINABLE COMMUNITIES

## A GUIDE FOR DEVELOPERS AND COMMUNITIES

### LOW IMPACT SITE DESIGN

Land development can cause significant adverse impacts associated with stormwater runoff, particularly in areas where land is converted from a wooded or vegetated condition into an impervious surface. Impacts include increases in runoff, increased pollutants, and loss of groundwater recharge. Runoff increases result in additional erosion and flooding. Increased pollutants negatively impact the streams that eventually receive the runoff, and losses in groundwater recharge (water that enters the ground below the roots) can impact wells and the baseflow that keep streams healthy.

Many different regulations have been put in place to mitigate the impacts of development through construction of best management practices that capture the water and manage it to address the runoff impacts. However, it is recognized that mitigating runoff impacts through best management practices (BMPs) is a last resort in stormwater management, and low impact site design focuses on first minimizing impacts, keeping rainfall where it occurs, and reducing pollutants before using the BMP structures which have been the standard stormwater management technique.

Nine methods to minimize impacts are discussed in the New Jersey stormwater management rules at N.J.A.C. 7:8-5.3 that ranges from reducing impacts by preserving vegetation and reducing impervious areas to selecting low-maintenance landscaping instead of lawn areas. The implementation of any of the suggested actions and strategies below demonstrate a commitment to implementing low impact development whether on a site or in a local ordinance.

### APPLICABLE NEW JERSEY GOAL AND TARGETS

The New Jersey Department of Environmental Protection's Priorities and Action Plan, dated January 2007, sets forth the goal of Clean and Plentiful Water as a priority. To accomplish this goal, the Department is proposing to fully restore 40 to 50 stream segments from impaired in 2002 to unimpaired in 2012 and to meet the 80-100 waterbody/pollutant restoration goal by 2012.

### SUGGESTED ACTIONS AND STRATEGIES

- Reduce existing impervious areas by 20%
- Use grass swales or vegetated swales to convey stormwater runoff for 25% of the stormwater system. The stormwater system is the network of pipes, swales, and BMPs used to manage runoff resulting from precipitation in a development. Note: Conveyance is established where the inflow drainage area is 0.1 or more acres of impervious surface.\*
- Provide a 25% permanently preserved vegetated open space with low maintenance vegetation that are not mandated by regulation (i.e., freshwater wetlands, floodway, Category 1 buffers)
- Disconnect 20% of post-development impervious areas. Disconnection is the practice allowing a portion of runoff to be reabsorbed back into the ground, typically by allowing the runoff to pass over a vegetated area.\*\*
- Limit disturbance to 75% or less (excluding environmentally regulated areas) of the project site
- Retrofit existing stormwater facilities to provide improved water quality and groundwater recharge beyond permit requirements

\* Additional information regarding vegetated conveyance requirements is available at the Nonstructural Stormwater Management Strategies User Guide.

\*\* Additional information regarding disconnection of impervious cover is available in chapter 5 of the NJ Stormwater Best Management Practices Manual.



- Amend 20% of the lawn to low maintenance native non-invasive vegetation
- Provide vegetated rooftops or parking deck
- Limit impervious cover to 20% less than allowed under municipal ordinance

## **STATE TECHNICAL/FINANCIAL ASSISTANCE**

Funding may be available using 319(h) federal grant funding. Additional information is available at [www.nj.gov/dep/watershedmgt/nps\\_program.htm](http://www.nj.gov/dep/watershedmgt/nps_program.htm)

## **FURTHER INFORMATION**

The New Jersey Nonstructural Strategies Point System (NSPS) evaluates sites for effectiveness in the implementation of low impact development techniques. For more information visit the New Jersey stormwater program ([www.njstormwater.org/](http://www.njstormwater.org/)).

New Jersey Stormwater Best Management Practices Manual - [www.njstormwater.org/bmp\\_manual2.htm](http://www.njstormwater.org/bmp_manual2.htm)

Additional information on grant and loans is available at [www.nj.gov/dep/grantandloanprograms/](http://www.nj.gov/dep/grantandloanprograms/).

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