

Nature-based Stormwater Strategies work for NEW DEVELOPMENT

Nature-based Stormwater Strategies utilize the landscape to infiltrate, filter, store and evaporate runoff throughout a development site. Instead of directing stormwater to ditches, pipes and ponds, nature-based strategies capture and absorb rain before it becomes polluted runoff. These strategies include bioretention, permeable paving and disconnecting impervious surfaces. Nature-based strategies are most effective when incorporated early into the design phase of new projects.



Nature-based Stormwater Strategies such as permeable pavement, cisterns and rain gardens promote infiltration and rainwater reuse. These techniques reduce stormwater runoff even on high density development sites.

Nature-based Stormwater Strategies

Bioretention

Bioretention captures and filters stormwater runoff, which improves water quality while providing aesthetic benefits.

Disconnected Impervious Surfaces

Designing impervious surfaces to be interspersed with permeable surfaces, like rain gardens or permeable pavers, will reduce stormwater runoff.

Permeable Pavers

Permeable pavers reduce runoff by allowing rain to soak into the soil below while providing long-term cost savings.

Nature-based Stormwater Strategy Project Examples

Tonbo Meadow

Located in Wilmington, NC, this clustered housing development uses nature-based strategies to reduce stormwater runoff.



This clustered housing design utilizes multiple nature-based strategies including bioretention, native plant landscaping and permeable paving.

River Bluffs

This subdivision in Castle Hayne, NC, uses large bioretention areas which provide co-benefits of stormwater collection and recreational areas for residents.



Permeable pavement promotes infiltration on site reducing stormwater from entering the Cape Fear River.

Glenstal Apartments

This affordable housing apartment complex was the first designed using low impact development techniques in Jacksonville, NC.



This complex includes swales, constructed wetlands, and bioretention areas.

Sierra Nevada Brewing Co.

Located in the mountains, this brewery uses bioswales and native vegetation to disconnect impervious surfaces.



This brewery is located in Mills River and has over 2.5 acres of permeable pavers which allows for guest parking and stormwater management.

Why use Nature-based Stormwater Strategies?

"Such simplistic, nonstructural methods can reduce the need to build large structural runoff controls like retention ponds and stormwater conveyance systems and thereby decrease the overall infrastructure costs of the project."

Environmental Protection Agency

"We saved about \$2 million in development costs on 100 lots by not installing curbing and by using natural areas as infiltration basins and not having to excavate for wet ponds."

*Burrows Smith, developer
River Bluffs*

"When designed correctly, most homeowners perceive these systems as value-added builder amenities and provide for their maintenance."

*National Association of Home
Builders Research Center*

"Planning and designing in concert with nature not only builds for resilience, but also provides amenities for communities and value for investors in development."

Urban Land Institute