



LEED BD+C: Core and Shell | v3 - LEED 2009

Stormwater design - quantity control

SSc6.1 | Possible 1 point

Glossary

Intent

To limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from stormwater runoff and eliminating contaminants.

Requirements

Option 1. Design storms

Case 1. Sites with existing imperviousness 50% or less

Path 1

Implement a stormwater management plan that prevents the postdevelopment peak discharge rate and quantity from exceeding the predevelopment peak discharge rate and quantity for the 1- and 2-year 24-hour design storms.

OR

Path 2

Implement a stormwater management plan that protects receiving stream channels from excessive erosion. The stormwater management plan must include stream channel protection and quantity control strategies.

Case 2. Sites with existing imperviousness greater than 50%

Implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the 2-year 24-hour design storm.

OR

Option 2. Percentile rainfall events

Case 1. Non-zero lot line projects

In a manner best replicating natural site hydrology¹ processes, manage onsite² the runoff from the developed site for the 95th percentile of regional or local rainfall events using Low Impact Development (LID)³ and green infrastructure⁴.

Use daily rainfall data and the methodology in the United States Environmental Protection Agency's Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act to determine the 95th percentile amount.

OR

CASE 2: zero lot line projects

For zero lot line projects located in urban areas with a minimum density of 1.5 FAR (13,800 square meters per hectare net), in a manner best replicating natural site hydrology processes, manage onsite the runoff from the developed site for the 85th percentile of regional or local rainfall events using LID and green infrastructure.

¹Natural Site Hydrology is defined as the natural land cover function of water occurrence, distribution, movement, and balance.

²Manage Onsite refers to capturing and retaining the specified volume of rainfall to mimic natural hydrologic function. This includes, but is not limited to, strategies that manage volume through evapotranspiration, infiltration, or capture and reuse.

³Low Impact Development (LID) is defined as an approach to managing stormwater runoff that emphasizes on-site natural features to protect water quality by replicating the natural land cover hydrologic regime of watersheds and addressing runoff close to its source. Examples include better site design principles such as minimizing land disturbance, preserving vegetation, minimizing impervious cover, and design practices like rain gardens, vegetated swales and buffers, permeable pavement, rainwater harvesting, and soil amendments. These are engineered practices that may require specialized design assistance.

⁴Green Infrastructure is a soil and vegetation-based approach to wet weather management that is cost-effective, sustainable, and environmentally friendly. Green infrastructure management approaches and technologies infiltrate, evapotranspire, capture and reuse stormwater to maintain or restore natural hydrologies (US EPA).