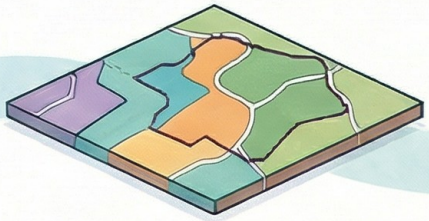
NJ Stormwater Design: A Step-by-Step Guide

This guide details the mandatory process for stormwater management design in New Jersey, from initial planning to system verification.

PHASE 1: PLANNING & HYDROLOGIC ANALYSIS

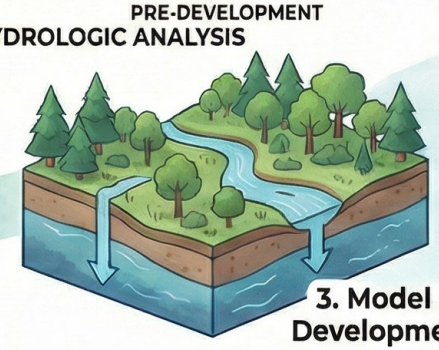
1. Follow Regulations & Low-Impact Principles

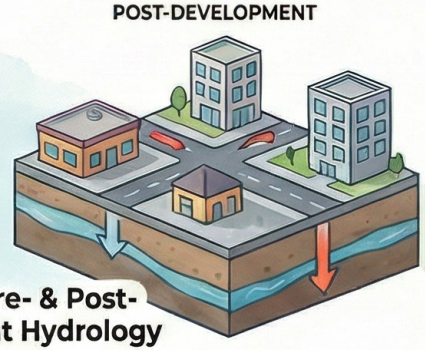
Adhere to state rules and non-structural strategies to guide site layout.



2. Map Runoff Discharge & Catchment Areas

Identify where runoff will exit the site and the contributing land area.





3. Model Pre- & Post-Development Hydrology

Calculate and compare runoff volume, peak rate, and groundwater recharge for both scenarios.

PHASE 2: BMP DESIGN & SYSTEM VERIFICATION

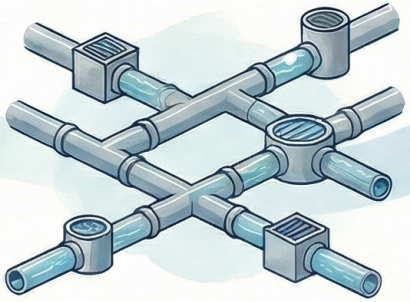
4. Design BMPs for 3 Core Requirements

Size Best Management Practices (BMPs) to meet state standards for recharge, quality, and quantity.

Design Storm Standard: Average annual precipitation year

Design Storm Standard: NJ Water Quality Design Storm (NJWQDS)

Design Storm Standard: 2-year, 10-year, and 100-year storms



5. Engineer the Storm Sewer Network

Design the pipe system using a storm event specified by local authorities (e.g., 25-year storm).

6. Verify System for Extreme Storm Events

Model the final design against a major storm (e.g., 500-year storm) for emergency management.