

Structural Stormwater BMPs

Structural stormwater Best Management Practices (BMPs) are stormwater management systems used to reduce the discharge of pollutants and the volume of runoff from developed sites to maintain pre-development hydrology, pollutant loads, and groundwater recharge. Structural stormwater BMPs can be designed to collect, store, treat, infiltrate, and evapotranspire stormwater runoff.

Structural stormwater BMPs that primarily rely on vegetation and soils to mimic natural processes and manage rainwater close to where it falls are also commonly referred to as “Green Infrastructure (GI).” Structural stormwater BMPs are one element of a comprehensive stormwater management approach and should be selected and designed only after consideration of LID site planning and design strategies and in combination with operational source control practices and pollution prevention. Note that GI can also be applied as a form of LID, especially at a watershed scale.

Stormwater quality and quantity controls are related and complementary elements of an effective stormwater management strategy. Structural stormwater BMPs are typically designed for small, frequent storms to achieve stormwater quality objectives (i.e., smaller than a one-year return frequency storm), in contrast to drainage and flood control facilities, which are typically designed for the two-year and larger storms. Stormwater BMPs can also be designed for stormwater quantity control by reducing post-development runoff volumes and peak flows.

This Manual includes the following major categories and types of structural stormwater BMPs that are recommended for use in Connecticut, based on their primary function:

- Pretreatment BMPs
- Infiltration BMPs
- Filtering BMPs
- Stormwater Pond and Wetland BMPs
- Water Quality Conveyance BMPs
- Stormwater Reuse BMPs

- Proprietary BMPs
- Other BMPs and BMP Accessories

Chapters [7](#) through [13](#) address the selection, design, construction, and maintenance of structural stormwater BMPs for new development, redevelopment, and retrofitting of existing developed areas.

This Manual addresses the topics of storm drainage design and flood control as they relate to stormwater quality management. Storm drainage facilities (catch basins, manholes, storm sewers, etc.) and stormwater BMPs used primarily for flood control should be designed in accordance with the [Connecticut Department of Transportation Drainage Manual](#) as well as applicable local and state design and permitting requirements, including flood management requirements.