

SUSTAINABLE STORMWATER SOLUTIONS: GUIDE TO RETROFITTING

WHAT IS RETROFITTING?

Retrofits include upgrades or installations of Best Management Practices (BMPs) in order to remedy past design or performance deficiencies. Retrofits can be used to greatly improve stormwater management by means of:

- Reducing stormwater runoff volume
- Increasing infiltration of stormwater runoff
- Improving water quality
- Increasing water retention within the area

EXAMPLES

INFILTRATION:

Increase infiltration of stormwater



Permeable pavement at Blue Hole Regional Park in Wimberley, TX

DETENTION:

Maximize pollutant removal



Extended detention basins in Wisconsin

RETENTION:

Drain and retain stormwater locally



Rainwater harvesting in Alabama

WHY RETROFIT?

While new development may be required to manage stormwater on-site, older developments may have been constructed before stormwater management was required or modern criteria were established. By retrofitting existing development, we can update development that is already in place to do more to manage stormwater runoff.

BENEFITS

CORRECTS PRIOR DESIGN OR PERFORMANCE DEFICIENCIES



Areas that routinely flood provide excellent opportunities for improvement.

ADDRESSES POLLUTANTS OF CONCERN



Installing vegetated filter strips between curbs and drains can reduce pollutant loading.

DEMONSTRATES NEW TECHNOLOGIES



Disconnecting impervious areas allows stormwater to infiltrate into groundwater.

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DOWNTOWN REDEVELOPMENT

Incorporating BMPs in Redevelopment Projects

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EXAMPLES

- Small, vegetated filter strips along roadway medians
- Stormwater planter boxes along sidewalks
- Permeable pavement in public parking lots
- Rainwater harvesting from downtown rooftops

BENEFITS

FLOOD MITIGATION



Development that incorporates BMPs can be proactive in reducing the effects of flooding - saving money in the long run.

LAND STEWARDSHIP



Improving stormwater management supports stream restoration, increases wildlife habitat, and provides positive examples of land management.

SAFETY



BMPs can be used as barriers - clearly delineating the space between people and traffic. They also reduce potentially hazardous puddling.

AESTHETIC



Incorporating adaptive, native landscaping can beautify downtown spaces while also improving stormwater drainage.