

Blue-Green Roofs

Description

Blue-green roofs are a hybrid system consisting of a green roof (moisture-interception layer/geotextile, drainage layer, engineered growing medium, and vegetation above the roofing system and its waterproofing membrane) and a blue roof, a portion of the roof that will become flooded during storm events to aid in the retention of runoff to be used by the green roof vegetation.

Key Advantages

- Manage stormwater runoff without occupying surface-level space
- Well-suited for sites where roofs make up a large portion of the total impervious area and for sites with ground-level space constraints
- Require no minimum flow path of runoff across the green roof surface since runoff is restricted at the outfall
- Enhance building aesthetics and market value
- Help regulate building temperature in both the summer and winter, thus reducing cooling and heating costs
- Reduce urban heat island effect by providing evaporative cooling
- Can improve air quality by filtering particulate matter
- Extend the service life of the roof
- Eligible for inclusion in an Expedited PCSMP Review project

Key Limitations

- May need to be combined with other SMPs to meet the Flood Control requirement
- More expensive to install than most conventional roofs
- May have limited Stormwater Retrofit feasibility for existing buildings and structures due to structural loading limitations

DEVELOPMENT ATTRIBUTES

Construction Costs



HIGH

Operations & Maintenance Costs



HIGH

Likelihood of Failure



LOW

Ground-Level Encroachment



LOW

Building Footprint Encroachment



LOW

Triple Bottom Line Benefits



HIGH

COMPLIANCE ATTRIBUTES

