



Green Roofs

Description

Green roofs, also referred to as vegetated roofs, eco roofs, and roof gardens, consist of a layer of vegetation that covers an otherwise conventional flat or moderately pitched roof. A green roof is composed of multiple layers which may include a waterproofing roof protection layer, moisture interception layer, drainage layer, leak detection layer, an engineered planting medium, and specialized plants. Through the appropriate selection of materials, green roofs can provide runoff volume reduction and runoff peak rate attenuation.







Key Advantages

- Manage stormwater runoff without occupying surface-level space
- Well-suited for sites at which roofs make up a large fraction of the total impervious area and for sites with ground-level space constraints
- 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 retrofit feasibility for existing buildings and structures due to structural capacity issues

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

<i>Water Quality Effluent Pollutant Load</i>	<i>Water Quality Infiltration & Volume Reduction</i>	<i>Water Quality Evapotranspiration</i>	<i>Water Quality Rate Control</i>	<i>Channel Protection/ Flood Control/ PHS Rate Control</i>
 LOW	 LOW	 HIGH	Yes	 LOW

A description of each evaluated attribute can be found in the SMP Hierarchy Ranking Criteria in [Section 3.2.4](#).