

# GREEN ROOF MAINTENANCE GUIDANCE

Green roof maintenance activities largely focus on maintaining drainage capacity and the health of vegetation. All facility components, including plant material, growing medium, filter fabric, drainage layer, and waterproof membrane must be inspected regularly for proper operations, integrity of the waterproofing, and structural stability throughout the life of the green roof. General recommended maintenance activities for green roofs are summarized in Table 4.3-1.

During the plant establishment period, maintenance staff must conduct three to four visits per year to conduct basic weeding, fertilization, and in-fill planting. Thereafter, only two annual visits for inspection and light weeding is required (irrigated assemblies will require more intensive maintenance).

Use of herbicides must be avoided to prevent root penetration of waterproofing.

Fertilization must be applied according to soil test to maintain soluble nitrogen (nitrate and ammonium ion) levels between one and four ppm. The best source of nutrients for fertilization is mature compost.

Spill prevention measures from mechanical systems located on roofs must be exercised when handling substances that can contaminate stormwater.

The designer is referred to Section 4.12, Outlet Controls, for information on maintenance guidance for outlet controls.

**TABLE 4.3-1:  
Green Roof Maintenance Schedule**

	ACTIVITY	FREQUENCY
EARLY	Water vegetation at the end of each day for two weeks after planting is completed.	<i>Daily for two weeks after installation</i>
	Water vegetation regularly to ensure successful establishment.	<i>Every four days during periods of four or more days without rain, June through August for the first year after installation</i>
	Hand-weed non-target/invasive plants.	<i>Four times per year for the first 24 months after planting</i>
	Inspect vegetation for signs of disease or distress.	<i>Biweekly for the first year after installation</i>
ONGOING	Roof drains must be cleared when soil substrate, vegetation, debris or other materials clog the drain inlet. Under normal operating conditions, all roof discharge must be filtered and medium must not be vulnerable to migration toward the drains. Sources of sediment and debris must be identified and corrected.	<i>As needed</i>
	Plant material must be maintained to provide a minimum of 90% foliage cover during warm months. If coverage rate is declining, determine the reason (e.g., soil nutrition or soil moisture conditions) and implement remedial measures.	
	Preferentially, weeding must be done manually, with herbicide use limited to extreme instances of weed infestations that compromise the plant cover integrity. Weeds must be removed entirely.	
ONGOING	Inspect root development. If root zone is not well developed, determine the reason (e.g., soil nutrition or soil moisture conditions) and implement remedial measures.	<i>Quarterly</i>
	Projects with permanent irrigation must be inspected and irrigation dosing rates adjusted to optimize plant performance and water use efficiency.	
	Growing medium must be inspected for evidence of erosion from wind or water. If erosion channels are evident, a problem with the drainage system or with the green roof medium is indicated. Surface ponding or runoff must not occur except during very large rainfall events. After correcting the problem, refresh the affected areas with additional growth medium and provide temporary soil stabilization.	
ONGOING	Manually cut detrital herbaceous vegetation from the previous growing season to four to six inches above the ground.	<i>Annually</i>
	Inspect drain inlet pipe and containment system.	
	Test growing medium for soluble nitrogen content. Fertilize as needed.	

This is an excerpt from SMGM v 3.2.

More information on green roofs can be found in Section 4.3.