Planter Boxes

Source: www.americastusa.com, 2003

General Description

There are two types of planter boxes: contained and infiltration/flow-through design. The contained planter boxes are designed to intercept rainfall and slowly drain through filter media and out of the planter. The infiltration and flow-through planter boxes are designed to intercept rainfall or receive runoff (e.g., downspout from rooftop), filter it through the planter, and allow infiltration into native soil (infiltration planter) or allow filtered runoff to be collected in a pipe and discharged off-site (flow-through planter). Pollution reduction is achieved as the water filters through the soil and plant roots. Water should drain through the planter within 3-4 hours after a storm event.

Inspection/Maintenance Considerations

Planter boxes require maintenance of filter media to allow uniform percolation of stormwater through planter. Vegetation needs to be kept healthy and dense enough to provide filtering function while protecting underlying soils from erosion. Obstructions and debris need to be removed from source of runoff (e.g., downspout) to allow unimpeded flow to the planter. All holes, cracks and damage to planter construction need to be repaired to maintain structural integrity of planter.

Maintenance Concerns, Objectives, and Goals

- Clogged Soil
- Vegetation Management
- Aesthetics

Targeted Constituents

✓	Sediment	■
✓	Nutrients	■
✓	Trash	
✓	Metals	■
✓	Bacteria	■
✓	Oil and Grease	■
✓	Organics	■
✓	Oxygen Demanding	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

Santa Clara Valley
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Inspection Activities	Suggested Frequency
■ Inspect for proper construction. ■ Inspect for accumulated sediment/debris.	Immediately following construction As needed
■ Inspect runoff inlet structure to insure flow is unimpeded. Inspect rock splash pads to insure inflow is not creating erosion. ■ Inspect filter media for clogging and check that infiltration rate meets target (drains 3-4 hours after storm event). ■ Inspect planter box for structural deficiencies and needed repairs. ■ Inspect vegetation for health and check if plant growth is interfering with planter operation. Inspect irrigation to see if it is working properly. ■ Inspect overflow pipe for obstructions and debris.	Annually, or as needed
Maintenance Activities	**Suggested Frequency**
■ Excavate, clean and or replace filter media (sand, gravel, topsoil) to insure adequate infiltration rate. ■ Plug holes in planter that are not consistent with the original design. ■ Allow water to flow directly through the planter to the ground. ■ Remove litter and debris, including fallen leaves from deciduous plants and accumulated sediments from the planter. ■ Repair all cracks and structural deficiencies in planter. ■ Add mulch to planter soil. ■ Replant, and prune or remove plants that interfere with planter operation.	Annually, or as needed

References

Stormwater Management Manual, Chapter 6, O & M Requirements, City of Portland, 2002.