Maintenance Criteria for Bio-Infiltration Swales

Swale Components	Potential Defect	Condition When Maintenance is Needed	Results Expected When Maintenance Is Performed
General	Trash and Debris	Any trash and debris > 5 cubic feet (cf) per 1,000 square feet (sf). (This is about equal to the amount of trash it would take to fill up one standard size garbage can). In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash is picked up and removed from the site.
	Poisonous Vegetation and Noxious Weeds	Any poisonous or nuisance vegetation that may constitute a hazard to maintenance personnel or the public. Any evidence of noxious weeds as defined by state or local regulations. (Apply requirements of adopted integrated pest management policies for the use of herbicides).	No danger of poisonous vegetation where maintenance personnel or the public might normally be. (Coordinate with local health department). Complete eradication of noxious weeds may not be possible. Compliance with state or local eradication policies required.
	Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants . (Coordinate removal/cleanup with local water quality response agency).	No contaminants or pollutants present.
	Rodent Holes	Any evidence of rodent holes if wetpond is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents destroyed and dam or berm repaired. (Coordinate with local health department; coordinate with the Washington State Department of Ecology Dam Safety Office if pond ≥ 10 acre-feet.)
Storage Area	Sediment	Water ponding in infiltration pond after rainfall ceases and appropriate time allowed for infiltration. (A percolation test pit or test of BMP indicates BMP is only working at 90% of its designed capabilities. If ≥ 2 inches of sediment is present, remove).	Sediment is removed and/or BMP is cleaned so that infiltration system works according to design.
Rock Filters	Sediment and Debris	By visual inspection, little or no water flows through filter during heavy rain storms.	Gravel in rock filter is replaced.

Maintenance Criteria for Bio-Infiltration Swales (continued)

Swale Components	Potential Defect	Condition When Maintenance is Needed	Results Expected When Maintenance Is Performed
Sideslopes of Swale	Erosion	Eroded damage > 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted berm embankment.	Slopes should be stabilized using appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction. If erosion is occurring on compacted berms, a licensed engineer in the state of Washington should be consulted to resolve source of erosion.
Emergency Overflow Spillway and Berms Over 4 Feet in Height	Tree Growth	Tree growth on berms > 4 feet in height may lead to piping through the berm, which could lead to failure of the berm.	Trees should be removed. If root system is small (base < 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. A licensed engineer in the state of Washington should be consulted for proper berm/spillway restoration.
	Piping	Discernible water flow through swale berm. Ongoing erosion with potential for erosion to continue. (Recommend a licensed engineer in the state of Washington with geotechnical expertise be called in to inspect and evaluate condition and recommend repair of condition.)	Piping eliminated. Erosion potential resolved.
Presettling Ponds and Vaults	BMP or Sump Filled With Sediment and/or Debris	6 inches or designed sediment trap depth of sediment.	Sediment is removed.