

**#2 – Maintenance Standards for Infiltration Basins (BMP IN.01) and Trenches (BMP IN.02):**

√	Drainage System Feature	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
	General	Trash and Debris	Any trash and debris, including yard wastes such as grass clippings and tree branches, which exceed five cubic feet per 1,000 square feet. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site.
	General	Poisonous Vegetation and Noxious Weeds	Any poisonous or nuisance vegetation which may constitute a hazard to maintenance personnel or the public. Any evidence of noxious weeds as defined in the <a href="#">Thurston County Noxious Weeds List</a> . (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 Thurston County Public Works) Complete eradication of noxious weeds may not be possible. Compliance with state or local eradication policies required.
	General	Contaminants and Pollution	Any evidence of oil, gasoline, contaminants, or other pollutants.	No contaminants or pollutants present. (Coordinate removal/cleanup with Thurston County Water Resources 360-754-4681 and/or Thurston County Spill Hotline 360-239-8369.)
	General	Rodent Holes	If the facility is constructed with a dam or berm, look for rodent holes or any evidence of water piping through the dam or berm.	Rodents removed and dam or berm repaired. (Coordinate with Thurston County; coordinate with Ecology Dam Safety Office if pond exceeds 10 acre-feet.)
	General	Beaver Dams	Beaver dam results in an adverse change in the functioning of the facility.	Facility returned to design function. (Contact WDFW Region 6 to identify the appropriate Nuisance Wildlife Control Operator)
	General	Insects	When insects such as wasps and hornets interfere with maintenance activities.	Insects destroyed or removed from site. Apply insecticides in compliance with adopted integrated pest management policies.
	General	Performance	Check crest gauge against design expectations (see Maintenance and Source Control Manual).	Crest gauge results reflect design performance expectations. Reading recorded. County notified if not meeting design performance.

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	Crest Gauge	Crest Gauge Missing/ Broken	Crest gauge is not functioning properly, has been vandalized, or is missing.	Crest gauge present and functioning. Repair/replace crest gauge if missing or broken.
	Storage Area	Water Not Infiltrating	Water ponding in infiltration basin after rainfall ceases and appropriate time allowed for infiltration. Treatment basins should infiltrate Water Quality Design Storm Volume within 48 hours, and empty within 24 hours after cessation of most rain events. <i>(A percolation test pit or test of facility indicates facility is only working at 90 percent of its designed capabilities. If 2 inches or more sediment is present, remove).</i>	Facility infiltrates as designed. Sediment is removed and/or facility is cleaned so that infiltration system works according to design.
	Filter Bags (if applicable)	Filled with Sediment and Debris	Sediment and debris fill bag more than one-half full.	Filter bag less than one-half full. Filter bag is replaced or system is redesigned.
	Rock Filters	Sediment and Debris	By visual inspection, little or no water flows through filter during heavy rainstorms.	Water flows through filter. Replace gravel in rock filter if needed.
	Trenches	Observation Well (Use Surface of Trench if Well is Not Present)	Water ponds at surface during storm events. Less than 90 percent of design infiltration rate.	Remove and replace/clean rock and geomembrane.
	Ponds	Vegetation	When grass becomes excessively tall. When nuisance weeds and other vegetation starts to take over.	Vegetation mowed or nuisance vegetation removed so that flow is not impeded. Grass or groundcover mowed to a height of 3 to 4 inches. Removed clippings.
	Ponds	Vegetation	Bare spots.	No bare spots. Revegetate and stabilize immediately.
	Side Slopes of Pond	Erosion	Erosion damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion.	Slopes stabilized using appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction. <i>If erosion is occurring on compacted slope, a professional engineer should be consulted to resolve source of erosion.</i>

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	Pond Berms (Dikes)	Settlements	Any part of berm which has settled 4 inches lower than the design elevation. If settlement is apparent, measure berm to determine amount of settlement. Settling can be an indication of more severe problems with the berm or outlet works.	Dike is built back to the design elevation. <i>If settlement is significant, a professional engineer should be consulted to determine the cause of the settlement.</i>
	Pond Berms (Dikes)	Piping	Discernable water flow through pond berm. Ongoing erosion with potential for erosion to continue.	No water flow through pond berm. Piping eliminated. Erosion potential eliminated. <i>Recommend a geotechnical engineer be called in to inspect and evaluate condition and recommend repair of condition.</i>
	General	Hazard Trees	If dead, diseased, or dying trees are identified.	Hazard trees removed. <i>(Use a certified Arborist to determine health of tree or removal requirements).</i>
	General	Tree Growth and Dense Vegetation	Trees growing on pond bottom or side slopes. Tree growth and dense vegetation which impedes inspection, maintenance access or interferes with maintenance activity (i.e., slope mowing, silt removal, vactoring, or equipment movements).	Trees removed from facility bottom, side slopes, and maintenance access areas. Species removed that are not part of recorded planting plan. Harvested trees should be recycled into mulch or other beneficial uses (e.g., alders for firewood).
	Pond Berms (Dikes)	Tree Growth	Tree growth on berms over 4 feet in height may lead to piping through the berm which could lead to failure of the berm.	Trees on berms removed. <i>If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. A professional engineer should be consulted for proper berm/spillway restoration.</i>
	Emergency Overflow/ Spillway	Tree Growth	Tree growth on emergency spillways creates blockage problems and may cause failure of the berm due to uncontrolled overtopping.	Trees on emergency spillways removed. <i>If root system is small (base less than 4 inches) the root system may be left in place. Otherwise the roots should be removed and the berm restored. A professional engineer should be consulted for proper berm/spillway restoration.</i>

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	Emergency Overflow/ Spillway	Rock Missing	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out-flow path of spillway.	Rocks and pad depth restored to design standards. (Riprap on inside slopes need not be replaced.)
	Emergency Overflow/ Spillway	Erosion	Erosion damage over 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 stabilized using appropriate erosion control measure(s); e.g., rock reinforcement, planting of grass, compaction. <i>If erosion is occurring on compacted berms a professional engineer should be consulted to resolve source of erosion.</i>
	Presettling Ponds and Vaults	Facility or sump filled with Sediment and/or Debris	6 inches or designed sediment trap depth of sediment.	No sediment present in presettling pond or vault. Sediment is removed.
	Drain Rock	Water Ponding	If water enters the facility from the surface, inspect to see if water is ponding at the surface during storm events. If buried drain rock, observe drawdown through observation port or cleanout.	No water ponding on surface during storm events. <i>Clear piping through facility when ponding occurs. Replace rock material/sand reservoirs as necessary. Tilling of subgrade below reservoir may be necessary (for trenches) prior to backfill.</i>