

LID.04 Downspout Infiltration Systems

This checklist reflects most, but not necessarily all of the items that will be reviewed by the Development Review. It is intended to be used as an aid by us to provide a consistent review of development work in Thurston County. All items may not be applicable in the review of each project and all items of concern to this office may not be covered on this checklist.

Y	N	
		MODELING AND SIZING
		If roof runoff is infiltrated according to the requirements of this BMP, the roof area is discounted from the project area used for sizing stormwater facilities.
		Downspout infiltration system is sized per DDECM Volume V, Section 2.2.1.7.1 or an alternate engineered design is provided.
		DESIGN CRITERIA
		Soils on the lot(s) or site are not silty clay loam, clay loam, clay, or any other soil having a percolation rate slower than 1 inch per hour.
		There is at least 12 inches or more of permeable soil from the proposed bottom (final grade) of the infiltration system to the seasonal high groundwater table.
		Infiltration facility is setback a minimum of 50 feet from top of slopes steeper than 20% and greater than 10 feet high ¹ .
		Infiltration facility is a minimum 30 feet upgradient/10 feet downgradient of septic drainfield primary and reserve areas. This requirement can be waived if site topography will clearly prohibit flows from intersecting the drainfield or where site conditions (soil permeability, distance between systems, etc.) indicate that this is unnecessary.
		Infiltration facility is a minimum of 10 feet away from any structure or property line.
		Infiltration Trench
		Trench is no greater than 100 feet in length.
		Spacing between distribution pipes is at least 6 feet.
		Aggregate material meets WSDOT Specifications 9-03.12(5).
		Geotextile fabric is wrapped entirely around trench drain rock (a 6-inch layer of sand may be used in lieu of geotextile fabric on the bottom).
		A structure with sump is located upstream of the trench.
		If placed in fill material, the measured infiltration rate is at least 8 inches/hour.
		If placed under pavement, overflow is at least 1 foot below the pavement.
		Trench is sized according to the sizing charts in DDECM Volume V, Section 2.2.1.7.1 or other sizing method approved by the county.
		Infiltration Drywell
		A settling chamber is provided.
		Drywell is at least 48 inches in diameter.

Y	N	
		Drywell is at least 5 feet in depth (4 feet of gravel and 1 foot suitable cover material).
		Filter fabric is wrapped entirely around drain rock.
		Spacing between drywells is a minimum of 4 feet measured from edge of gravel backfill.
		Drywell is sized according to the sizing charts in DDECM Volume V, Section 2.2.1.7.1 or other sizing method approved by the county.
		CONSTRUCTION CRITERIA INCLUDED IN THE SWPPP
		A soil and vegetation management plan is provided showing areas to be protected and restoration methods for disturbed areas.
		Construction SWPPP sheets outline construction sequencing that will protect the infiltration area during construction and addresses the inspection requirements outlined below.
		Construction SWPPP BMPs and protection techniques are implemented as applicable. The upslope of construction areas are stabilized and overland flow distances are minimized.
		The infiltration area is clearly identified (e.g., using flagging or high visibility fencing) and protected prior to construction.
		Machinery is operated only outside of infiltration areas during construction.
		Infiltration area is excavated to final grade only after all disturbed areas in the upgradient project drainage area have been permanently stabilized. If infiltration areas must be excavated before permanent site stabilization, initial excavation is conducted to no less than 6 inches of the final elevation of the facility floor.)
		No excavation of infiltration areas during wet or saturated conditions.
		If placed in fill material, fill is compacted under supervision of professional civil engineer with geotechnical expertise.
		INSPECTION CRITERIA
		The infiltration system meets applicable design and construction criteria (see * in Design and Construction Criteria above).