LID.05 Downspout Dispersion Systems

This checklist reflects most, but not necessarily all of the items that will be reviewed by the Development Reveiw. 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.

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		MODELING AND SIZING
		If roof runoff is dispersed according to the requirements of this section over a vegetative flowpath that is 50 feet or longer (for splashblocks) through undisturbed native landscape or lawn/landscape area that meets the soils criteria outlined in Section 3.1, the roof area may be modeled as grass/lawn surface. If the available vegetated flowpath is 25 to 50 feet, use of a dispersion trench allows modeling the roof as 50% impervious/50% landscape.
		DESIGN CRITERIA
		The dispersion of runoff does not create flooding or erosion impacts.
		Flowpath is undisturbed native landscape, or well-established lawn, landscape, groundcover over soil.
		Natural resource protection areas and critical area buffers counted towards flowpath lengths are permanently protected from modification through a covenant or easement, or a tract dedicated by the proposed project.
		Discharge point is not within 300 feet of erosion hazard or landslide hazard areas.
		Dispersion flowpaths are 20 feet apart at the upslope end and do not overlap at any point.
		Dispersion facility is setback a minimum of 50 feet from top of slopes steeper than 20 percent and greater than 10 feet high[1] and a vegetated flowpath is maintained between the outlet of the facility and the slope.
		Discharge point is a minimum 30 feet upgradient/10 feet downgradient of the drainfield primary and reserve areas. In addition, the flowpath does not intersect with the drainfield primary and reserve area. 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.
		Flowpath is not over contaminated sites or abandoned landfills.
		Dispersion Trench Design Criteria
		Dispersion trench is designed as shown in DDECM Volume V, Section 2.2.2.4.
		Each downspout dispersion trench has a separate flowpath.
		Flowpath is at least 25 feet in length between the outlet of the trench and any property line, structure, stream, wetland, or impervious surface.
		If the trench serves ≤ 700 square feet of roof area, the trench is 10 foot by 2 foot wide and gravel.

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		If the trench serves > 700 square feet of roof area, a notched grade headboard is included.
		If the trench serves > 700 square feet of roof area, the trench is at least 10 feet in length per each 700 square feet of roof area (up to a maximum of 50 feet in length).
		Trench is at least 1.5 feet in depth.
		Type 1 catch basin or equivalent structure is provided upstream of the trench.
		Trench aggregate meets WSDOT Specifications 9-03.12(5).
		A 4-inch diameter perforated underdrain pipe is 6 inches below the surface of the trench.
		Splashblock Design Criteria
		Flowpath is at least 50 feet in length from the downspout to the downstream property line, structure, slope over 20 percent, stream, wetland, or other impervious surface.
		Flowpath is at least 10 feet in width.
		≤ 700 square feet of roof area drains to each splashblock.
		Splashblock or pad of crushed rock (2 feet wide x 3 feet long x 6 inches deep) is placed at each downspout discharge point.
		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 dispersion area during construction.
		Construction SWPPP BMPs and protection techniques are implemented as applicable. The upslope of construction areas are stabilized and overland flow distances are minimized.
		The dispersion area is clearly identified (e.g., using flagging or high visibility fencing) and protected prior to construction.
		Operate machinery outside of dispersion area during construction.
		Excavate dispersion area to final grade only after all disturbed areas in the upgradient project drainage area have been permanently stabilized.
		No excavation of dispersion areas during wet or saturated conditions.
		INSPECTION CRITERIA
		The dispersion system meets applicable design and construction criteria (see * in Design and Construction Criteria above).