Checklist IN.01 Infiltration Basins

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	
		SIZING AND MODELING CRITERIA
◯	◯	For compliance with Minimum Requirements #6 and/or #7, the Western Washington Hydrologic Model (WWHM), MGSFlood, or other approved continuous runoff model is used to model the infiltration basin and contributing area.
◯	◯	The facility is represented by the pond element with predetermined infiltration rates.
◯	◯	For compliance with Core Requirement #6, the underlying soil meets the requirements for Infiltration Treatment (see below).
◯	◯	For compliance with Core Requirement #6, the infiltration basin does not overflow/bypass more than 9% of the influent runoff file.
◯	◯	For infiltration basins sized to meet the LID Performance Standard and/or the Flow Control Performance Standard, the basin either infiltrates all the influent file, or a sufficient amount of the influent file such that any overflow/bypass meets the standard.
		Infiltration Treatment (Basic Treatment Only)
◯	◯	Measured (initial) saturated hydraulic conductivity of 9 inches per hour or less. Design (long-term) saturated hydraulic conductivity of up to 3 inches per hour with correction factor.
◯	◯	Based on the judgment of the site professional, the native soil has characteristics comparable to the following: • Cation Exchange Capacity (CEC): ≥ 5 meq/100 grams of dry soil • Organic matter content: 1% minimum (ASTM D2974) • Minimum depth of 18 inches
		DESIGN CRITERIA
		Setbacks and Site Constraints
◯	◯	1 foot vertical clearance from any open water maximum surface elevation to structures within 25 feet.
◯	◯	50 feet from septic tank, holding tank, containment vessel, pump chamber, and distribution box.
◯	◯	10 feet from open water maximum surface elevation or edge of infiltration facility to property lines and onsite structures.
◯	◯	50 feet from top of slopes steeper than 15% and greater than 10 feet high.

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◯	◯	300 feet from an erosion hazard or landslide hazard area.
◯	◯	100 feet from edge of septic drainfield and drainfield reserve area. Infiltration facility located downgradient unless site topography clearly prohibits subsurface flow from intersection drainfield. May be reduced to 30 feet for infiltration facilities serving a single family residence.
◯	◯	Projects located within groundwater protection areas meet the soil requirements for infiltration for enhanced water quality treatment.
◯	◯	Infiltration basins are no closer than 100 feet from drinking water wells and springs used for drinking water supplies.
◯	◯	Access is provided for vehicles to easily maintain the forebay (presettling basin) area and not disturb vegetation, or resuspend sediment any more than is absolutely necessary.
◯	◯	If the infiltration basin is located within the 1-year capture zone of any well, it is preceded by a water quality treatment facility.
		Infiltration Basin Design Criteria
◯	◯	A crest gauge is included to record maximum basin water surface elevation after a storm event for infiltration basins with a maximum depth of 4 feet or more and a minimum storage volume of 5,000 cubic feet.
◯	◯	Appropriate pretreatment for oil and debris to prevent clogging. Appropriate pretreatment devices include a pre-settling basin or a basic treatment BMP.
◯	◯	Access roads to the control structure are provided (at least one access point per cell), designed and constructed as specified in Volume V, Appendix V-D.
◯	◯	Infiltration basin sign requirement are met (as specified in Volume V, Appendix V-E).
◯	◯	The slope of the basin bottom does not exceed 3% in any direction.
◯	◯	Freeboard is at least 1 foot.
◯	◯	The embankment, emergency spillways, spoil and borrow areas, and other disturbed areas are stabilized and planted in accordance with the stormwater site plan. See Volume V, Appendix V-E for recommended vegetation and seed mixtures.
		CONSTRUCTION CRITERIA
◯	◯	A soil and vegetation management plan is provided showing areas to be protected and restoration methods for disturbed areas.
◯	◯	The infiltration basin area is clearly identified (e.g., using flagging or high visibility fencing) and protected prior to construction.
◯	◯	Infiltration basin areas are not excavated during wet or saturated conditions.
◯	◯	Machinery is operated only outside of infiltration basin during construction.
◯	◯	Initial basin excavation is conducted to within 2 feet of the final elevation of the basin floor.

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◯	◯	Construction SWPPP sheets outline construction sequencing that will protect the infiltration area during construction and addresses the inspection requirements identified here.
◯	◯	Construction SWPPP BMPs and protection techniques are implemented as applicable. The upslope of construction areas are stabilized and overland flow distances are minimized.
◯	◯	Disturbed areas in the upgradient project drainage area are permanently stabilized prior to excavating infiltration basins to final grade.
◯	◯	All accumulated silt is removed from the infiltration basin (via excavation to final depth) before putting it into service.
		INSPECTION CRITERIA
◯	◯	The infiltration basin meets applicable design and construction criteria (see Design and Construction Criteria above).