



Public Works Department, Engineering Division

121 5th Ave N
Edmonds, WA 98020

Checklist 13: Downspout Full Infiltration Systems

Per ECDC 18.30, all Category 1 projects must comply with Minimum Requirements No. 1 through No. 5, and all Category 2 projects must comply with Minimum Requirements No. 1 through No. 9. Downspout full infiltration may be used to help meet Minimum Requirement Nos. 5 and 7, provided that the following requirements are met. See also Addendum Checklists 1 through 3 for submittal requirements, and Addendum Appendix A for infeasibility criteria that apply to Minimum Requirement No. 5 specifically.

Downspout full infiltration shall be designed in accordance with the Department of Ecology's Stormwater Management Manual for Western Washington (SWMMWW), ECDC 18.30, and the requirements in the Addendum. The City of Edmonds developed the following checklist to aid project proponents and plan reviewers in complying with the applicable SWMMWW requirements for this BMP. In addition, City-specific requirements (i.e., requirements presented in ECDC 18.30, the Addendum, or other City requirements that are not included in the SWMMWW) are also included in the checklist.

This checklist reflects most, but not necessarily all, of the items that shall be documented by the project proponent, for review by the Engineering Division. It is intended to be used as an aid for developers and plan reviewers by providing a foundation for clear and consistent BMP design in the City of Edmonds. However, all items may not be applicable to every project, and all items of concern to this office may not be covered on this checklist.

Applicant:

Application #:

Within each blank cell, enter comment codes as follows:	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
MODELING AND SIZING (SWMMWW Volume III, Section 3.1.1)	
1	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.
2*	Infiltration trench length is sized based on underlying soil type as follows: <ul style="list-style-type: none"> • Coarse sand and cobbles: 20 linear feet of trench per 1,000 square feet contributing roof area • Medium sand: 30 linear feet of trench per 1,000 square feet of contributing roof area • Fine or loamy sand: 75 linear feet of trench per 1,000 square feet of contributing roof area • Sandy loam: 125 linear feet of trench per 1,000 square feet of contributing roof area • Loam: 190 linear feet of trench per 1,000 square feet of contributing roof area • Fill: 60 linear feet of trench per 1,000 square feet of contributing roof area
3*	Infiltration drywell is sized based on underlying soil type as follows: <ul style="list-style-type: none"> • Coarse sand and cobble: 60 cubic feet of gravel per 1,000 square feet of contributing impervious surface • Medium sand: 90 cubic feet of gravel per 1,000 square feet of contributing impervious surface
SETBACKS (Addendum, Appendix A)	
4*	The downspout infiltration system is not within the North Edmonds Earth Subsidence and Landslide Hazard Area (ESLHA).
5*	The downspout infiltration system is not within the buffer of the ESLHA (minimum buffer equal to the height of the steep slope or 50 feet, whichever is greater) unless a geotechnical assessment and soils report is prepared addressing the potential impact of the proposed system.
6*	The downspout infiltration system is not within 50 feet of the top of slopes greater than 15 percent (unless a geotechnical assessment and soils report is prepared addressing the potential impact of the proposed system).
7	There is at least 3 feet or more of permeable soil from the proposed final grade (i.e., ground elevation at the facility location) to the seasonal high groundwater table or other impermeable layer, AND there is at least 1 foot or more of permeable soil from the proposed bottom of the infiltration system to the seasonal high groundwater table or other impermeable layer.
8*	The downspout infiltration system is not within 5 feet from any property lines and easements.
9*	If the contributing area is less than 5,000 square feet, the downspout infiltration system is not within 5 feet from a structure without a basement and 10 feet for a structure with a basement.

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CONSTRUCTION CRITERIA INCLUDED IN THE SWPPP (Addendum, Section 6.1)	
31*	The infiltration area is clearly identified (e.g., using flagging or high-visibility fencing) and protected prior to construction.
32	A soil and vegetation management plan is provided showing areas to be protected and restoration methods for disturbed areas.
33*	Construction SWPPP sheets outline construction sequencing that will protect the infiltration area during construction.
34*	General (i.e., non-BMP-specific) construction SWPPP BMPs and protection techniques are implemented as applicable. The upslope of construction areas is stabilized, and overland flow distances are minimized.
35*	Machinery is operated outside of the infiltration areas during construction.
36*	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.
37*	Excavation of infiltration areas does not occur during wet or saturated conditions.
38*	The bottom of the infiltration facility excavation is raked or scarified to a minimum depth of 3 inches after final excavation to restore infiltration rates.
39*	Downspout infiltration facilities are not used as sediment control facilities during construction, and all drainage is directed away from the facility after initial rough grading.
40*	Clogging and over-compaction of the subgrade, native soil, rain garden soils, or amended soils is prevented during construction.
41*	If placed in fill material, fill is compacted under supervision of professional civil engineer with geotechnical expertise.
INSPECTION CRITERIA	
42	The infiltration system meets applicable siting, design, and construction criteria (see * notations in applicable rows).

Reviewer: _____

Review Date: _____

Reviewer Phone #: _____

Reviewer Comments: