

Worksheet B3

Downspout Full Infiltration (BMP T5.10A)



This worksheet is to aid in the preparation and submission of a site plan containing downspout full infiltration system. Applicants must submit this completed worksheet if selecting this technology. To complete this worksheet, applicant must:

1. Review infeasibility criteria below to determine if this BMP is feasible
2. Check that applicable design criteria below is met
3. Submit Applicable Details
4. Submit Site plan showing approximate location of technology and relevant setbacks, etc.



{ Downspout Full Infiltration }



{ Dry Well }



{ Step 1: Review Infeasibility Criteria }

If any of the following infeasibility criteria are met, this technology is considered infeasible. Applicant must list the specific infeasibility criteria below on the Stormwater Site Plan (Worksheet A1) and move on to the next BMP technology.

Infeasibility Criteria
The lot(s) or site does not have outwash or loam soils.
There is not at least 3 feet or more of permeable soil from the proposed final grade to the seasonal high groundwater table.
There is not at least 1 foot of clearance from the expected bottom elevation of the infiltration trench or dry well to the seasonal high ground water table.
Infiltration trench site slopes are steeper than 25%. (4:1)
Infiltration system cannot feasibly be located at least 10 feet from any structure, property line, or environmentally sensitive area. (Or other spacing criteria cannot be met)
Infiltration system cannot feasibly be located at least 50 feet from the top of any slope over 40%.
Infiltration system cannot feasibly be located downslope from a septic system drain field.



{ Step 2: Review Applicable Design Criteria }

Complete the following checklist (list "N/A" where design criteria does not apply)

Design Criteria for Infiltration Trenches												
Applicant	Reviewer	Criteria										
		Project does not trigger any of the infeasibility requirements above										
		Maximum length of trench is less than 100 feet										
		Minimum spacing between trenches is 6 feet										
		Geotechnical analysis included in report if trench is located: On a slope greater than 15% OR Within 200 feet of the top of a slope greater than 40% OR Within a landslide hazard area										
		If trench is located under pavement: Yard drain or catch basin proposed at the end of the trench pipe Rim elevation of inlet is at least 1' below the surface of the pavement. Overflow has no adverse impact on downhill properties or drainage systems										
		If trench is placed in fill material: Measured infiltration rate of fill material is at least 8 inches per hour Trench length is 60 linear feet per 1,000 square feet of roof area Note on the plan that a geotechnical engineer must be present on-site for the placement and compaction of fill material for trench										
		The following sizing criteria is met based on the soil type (minimum length of trench in linear feet per 1,000 square feet of roof area) <table border="0" style="margin-left: 20px;"> <tr> <td>Coarse Sand and Cobbles</td> <td>20 LF</td> </tr> <tr> <td>Medium Sand</td> <td>30 LF</td> </tr> <tr> <td>Fine Sand, Loamy Sand</td> <td>75 LF</td> </tr> <tr> <td>Sandy Loam</td> <td>125 LF</td> </tr> <tr> <td>Loam</td> <td>190 LF</td> </tr> </table>	Coarse Sand and Cobbles	20 LF	Medium Sand	30 LF	Fine Sand, Loamy Sand	75 LF	Sandy Loam	125 LF	Loam	190 LF
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{ Step 3: Trench Length Calculation }

Fill in the following blanks to determine minimum trench length based on roof area

<p>1. Roof Area = _____ (Square Feet) \div 1000 (Square Feet) = Multiplier = _____</p> <p>2. Multiplier = _____ X Soil Type (Linear Feet) = _____ = Minimum Trench Length _____</p>
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<p>Example</p> <p>1. Roof Area = 2500 (Square Feet) \div 1000 (Square Feet) = Multiplier = 2.5</p> <p>2. Multiplier = 2.5 X Medium Sand = 30 LF = Minimum Trench Length = 75 LF</p>

Design Criteria for Drywells		
Applicant	Reviewer	Criteria
		Project does not trigger any of the infeasibility requirements above
		Minimum spacing between dry wells is 10 feet
		Minimum diameter is 48 inches
		Geotechnical analysis included in report if drywell is located: On a slope greater than 15% OR On or above a landslide hazard area
		The following sizing criteria is met based on the soil type (minimum volume of gravel in cubic feet per 1,000 square feet of roof area) Coarse Sand and Cobbles 60 CF Medium Sands 90 CF



{ Step 3: Submit Applicable Details }

For **infiltration trenches**, use City Standard details 02.05.01-03 located here:

<http://www.cityofpuyallup.org/DocumentCenter/Home/View/5514>

For **dry wells**, use Department of Ecology detail located here:

<http://www.ecy.wa.gov/programs/wq/stormwater/manual/2014SWMMWWinteractive/>



{ Step 4: Submit a Site Plan }

Submit a site plan that contains all of the following information:

- Scale and North arrow
- Location, dimensions, and total area of proposed bioretention
- Area of surface draining to bioretention
- Location and type of inflow
- Location of overflow drains, if applicable
- Applicable details from Step 3 above
- Dimension to nearby property lines, structures, steep slope, lake, wetland, or other