



Single Family Residential Stormwater Management Plan

DRY WELL (INFILTRATION)

Definition:

A dry well is an excavated pit filled with gravel and sand that provides temporary storage of runoff from roofs and allows for infiltration of that runoff over a 48 hour period.

Constraints:

- Dry wells should not be used in areas where their operation may create a risk for basement flooding, interfere with septic sewage disposal systems, or cause downslope seepage problems
- May not be installed on slopes greater than 20%
- Drainage area to each dry well shall not exceed 1000 square feet
- Dry wells may not be used in HSG D or if the infiltration rate of the soil is less than 0.27 inches per hour
- Dry wells are intended to capture rooftop runoff only

Design Guidance:

- Dry wells must be installed in accordance with the attached detail
- Dry wells should not intercept water table, bedrock, fragipan or other confining layer
- Dry wells must be located down gradient of building structures and set back at least 10 feet from buildings, 50 feet from water supply wells and 25 feet from septic systems
- Dry wells must be set back at least 50 feet from fill slopes of 25% or steeper
- Soils will be evaluated during excavation by ASCD representative to evaluate soil suitability assumed in original design which may alter type of practice to be constructed

Installation:

- Minimize compaction of dry well bottom and sidewalls
- Collection pipes from downspouts shall be 4"-6" PVC installed at min. slope of 1%
- The bottom of the dry well excavation should be level and scarified prior to backfilling
- Dry well materials shall conform to Table 1 specifications

Construction Inspections:

A minimum of three (3) inspections must be made during construction as follows:

- During excavation to subgrade
- During placement of backfill and appurtenant piping, including downspout conveyance
- Upon completion of final grading and stabilization

Failure to provide for inspection by Allegany Soil Conservation District, Maryland Registered Professional Engineer or adequate photographs to verify all construction details shall be cause to withhold issuance of Occupancy Permit.

Maintenance:

After installation, dry wells and associated conveyances will be delineated on the site sketch with an easement. The sketch and this Stormwater Management Plan must be attached to the executed Operation & Maintenance Agreement, which must be recorded in the land records of Allegany County prior to issuance of Occupancy Permit. The dry well is subject to maintenance inspection by Allegany County on a periodic basis.

Dry wells shall be inspected by the homeowner and cleaned as needed and annually, as a minimum. This includes pipes, gutters, downspouts and media (via observation well).

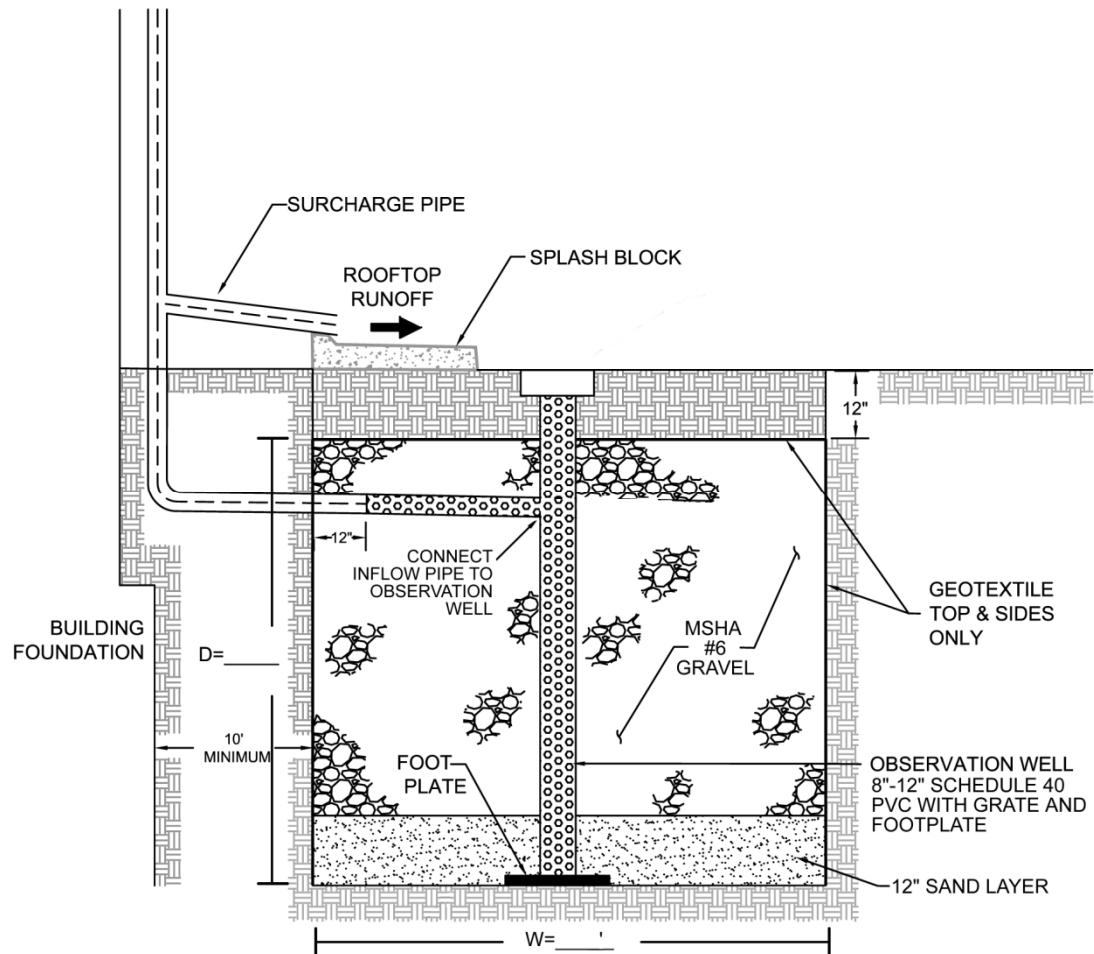
If water ponds for more than 48 hours or more than 6" of sediment has accumulated, the gravel media shall be excavated and replaced.

Roof gutters should be cleaned at least once annually to keep debris from entering the dry well. The dry well observation pipe should be cleaned of debris at least once annually.

Table 1: Construction Specifications for Dry Wells

Material	Specification	Size	Notes
Gravel	AASHTO M-43 or MSHA Section 901	No. 57 Aggregate (1/8 " to 1½")	
PVC Inflow Pipe	F 758, Type PS 28 or AASHTO M-278	4"-6" rigid schedule 40 PVC or SDR35	Slotted or perforated section in dry well; 3/8" perf. @ 6" on center, 4 holes per row
Observation Well		8"-12" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10, calcium carbonated or dolomitic are not acceptable. No "rock dust" used for sand.

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Length, L = _____

Width, W = _____

Surface Area A = _____

Depth D = _____