



Township of Montville

Stormwater Management Information Sheet

What:

- If you propose addition 150 sq. ft. or greater than Montville Township ordinance requires stormwater management controls

Why:

Stormwater management helps:

- prevent run-off, especially into neighboring yards
- control erosion
- groundwater recharge to replenish aquifer and general water supply

How:

To control stormwater run-off, installation of either a dry well, or a rain garden, is required. Both require an engineer to review soil maps and soil testing. For example, there must be two (2) feet between bottom of structure and top of groundwater table.

Rain Garden

- A rain garden allows for water collection of rainwater and stormwater runoff.
- Rain Gardens are normally a small garden designed to handle extreme moisture and concentrations of nutrients, which are found in stormwater runoff.
- They are best placed near places of stormwater runoff like on the side of a road, driveway, sidewalk, or house.
- Rain gardens are best planted in a depressed piece of ground, allowing the water to run downhill into the plants.
- The ideal plants to use are ones, which are native to the environment in which you live.
 - a. For more information, please go to the following websites:
 1. http://www.npsnj.org/rain_garden_home.htm
 2. http://www.water.rugters.edu/Fact_Sheets/fs513.pdf

Dry Well

(The following can also be found in the “New Jersey Best Management Practices Manual,” Chapter 9, Section 3 (http://www.nj.gov/dep/stormwater/bmp_manual2.htm))

A dry well is a subsurface storage facility that receives and temporarily stores stormwater runoff from roofs of structures. Discharge of this stored runoff from a dry well occurs through infiltration into the surround soils. A dry well may be either a structural chamber and/or an excavated pit filled with aggregate.

What is the purpose of a dry well?

Dry wells can be used to reduce the increased volume of stormwater runoff caused by roofs of buildings. Dry wells can also be used to indirectly enhance water quality by reducing



the amount of stormwater quality design storm runoff volume to be treated by the other, downstream stormwater management facilities.

What are the conditions where this practice applies?

Dry wells are relevant only where their subgrade soils have the required permeability rates. Dry wells are not useful in areas where high pollutant or sediment loading is anticipated due to the potential for groundwater contamination or where there is significant risk for basement seepage or flooding, cause surficial flooding of groundwater or interference with the operation of subsurface sewage disposal systems. Dry wells must be located and configured where their construction will not compact the soils below the dry well. Finally, a dry well must have a maintenance plan, and if privately owned, should be protected by easement, deed restriction, ordinance, or other legal measures that prevent its neglect, adverse alteration, and removal.

What are the Design Criteria like for Dry Wells?

The basic design parameters for a dry well are its storage volume and the permeability rate of the subgrade soils. A dry well must have sufficient storage volume to contain the design runoff volume without overflow, while the subgrade soils' permeability rate must be sufficient to drain the stored runoff within 72 hours.

a. Storage Volume, Depth, and Duration

The dry well must be designed to treat the total runoff volume generated by the dry well's maximum design storm. The dry well must fully drain the runoff within 72 hours. Runoff stored for greater times can render the dry well ineffective and may result in anaerobic conditions, odor, and both water quality and mosquito breeding problems. The bottom of the dry well must be at least two (2) feet above the seasonal high water table or bedrock, and be as level as possible to uniformly distribute runoff infiltration over the subgrade soils.

b. Permeability Rates

The minimum design permeability rate of the subgrade soils below a dry well depend upon the dry well's location and maximum design storm. Dry wells designed for storms greater than the groundwater recharge storm can be constructed only in areas with Hydrologic Soil Group A and B soils.

c. Drainage Area

The maximum drainage area to a dry well is one (1) acre.

d. Overflows

All dry wells must be able to safely convey system overflows to downstream drainage systems. The capacity of the overflow must be consistent with the remainder of the site's drainage systems and sufficient to provide safe, stable discharge of stormwater in the event of an overflow. The downstream drainage system must have sufficient capacity to convey the overflow from the dry well.

****The Planning and Zoning Department recommends that you consult a licensed professional engineer (PE) or qualified architect if you have specific questions about design and installation of the systems.**