

# DISPERSING WATER FROM A DOWNSPOUT

There are a couple of ways to divert and disperse water from the base of a downspout. These methods include splash blocks and gravel-filled trenches, both of which divert rainwater (also called stormwater) away from the foundation and direct it toward a vegetated area (lawn or garden).

## What is a splash block?

Splash blocks are simple devices that are placed on the ground directly underneath a downspout extension to divert roof runoff to a vegetated area. Splash blocks are typically made out of concrete or plastic. They are designed as a rectangular concave surface widening at one end with a lip rising on three sides.



[http://www.grit.com/uploadedImages/GRT/blogs/Jeans\\_Blog/FrontDownspout.jpg?n=6549](http://www.grit.com/uploadedImages/GRT/blogs/Jeans_Blog/FrontDownspout.jpg?n=6549)



[http://www.vtwaterquality.org/stormwater/htm/sw\\_StormwaterDisconnection.htm](http://www.vtwaterquality.org/stormwater/htm/sw_StormwaterDisconnection.htm)

## What else should I know about splash blocks?

- Generally, a maximum of 700 square feet of roof area may drain to a single splash block.

- The splash block should discharge to a well established vegetated area or garden so that rainwater can disperse and infiltrate. The ground cover must be dense enough to help disperse and infiltrate flows to prevent erosion.

- If your house is set on a crawl space, concrete slabs, or has a basement; use a downspout extension with a splash block to move the discharge point away from the foundation. If your home has a basement, disconnected downspouts must be extended to discharge water at least 6 feet from the basement. If your home is set on a crawl space or concrete slabs, disconnected downspouts must be extended at least 2 feet from the crawl space or slab foundation.

- The discharge point must be down slope of any primary drain fields for septic systems, and a splash block or pad of crushed rock should not be used on or above slopes greater than 10%.

## What are the advantages of gravel-filled trench?

Comparatively, gravel-filled trench is a good substitute of splash blocks if you want to direct rainwater further away from your downspout or divert downspouts underground to avoid a path or obstructions. Similar to the splash block, the trench carries water away from the foundation of your home while maintaining water on your property. A gravel-filled trench is an excavated trench filled with washed gravel used to capture storm water runoff and it is usually adjacent to a disconnected downspout. At the same time, the trench allows infiltration into surrounding soils from the bottom and sides of the trench. Depending on your preference, you can use both splash blocks and gravel-filled trench at the same time.

## How do I install a gravel-filled trench?

Depending on how long you would like your trench to be, the process of installing a gravel-filled trench is simple, but may be time consuming. The dimensions of the trench must be at least 10 feet long for every 700 square feet of roof area being drained, and must not exceed 50 feet in length. Also, there must be at least 5 feet between any edges of the trench to any structure or property line.

The following information lists the procedures to installing a gravel-filled trench:

- 1) Start by digging a trench that is 6" wide by 24" deep.

- 2) Compact the soil at the bottom of the trench, then line it with landscape fabric
- 3) With the holes pointed down, place a drainage pipe inside the drain sleeve (or fabric that wraps around the pipe to filter out sand and sediments) on top of about 2-4" of washed gravel.
- 4) Fill the rest of the trench with gravel.

If you wish to hide the trench, you have an option to cover the trench with a small amount of soil. Furthermore, you have an option to either connect your downspout to the underground trench pipe or let your downspout release rainwater onto the surface of the trench.

## What else should I know about gravel-filled trenches?

-There must be a vegetated flow path of at least 25 feet between the outlet of the trench to property line, structure, stream, wetland, or impervious surfaces.

-The discharge point must be down slope of any primary and reserve drain fields for septic systems.

-Before you begin installing your own gravel-filled trench, make sure to call 1-800-962-7962 (DigSafelyNewYork) to locate all underground utilities on your property so you can avoid them when installing the trench. Keep in mind that this number is only for residents of New York State.

-As for materials to buy, make sure to purchase perforated PVC pipe and not a flexible corrugated perforated plastic

pipe. A 4" diameter PVC pipe of 10 feet long can be purchased for under \$7. Also, to prolong the life of the trench, buy landscape fabric and a drain sleeve to keep soil and silt out of your gravel and pipe. Landscape fabric of 3 feet by 50 feet can be purchased for \$5 and drain sleeves of a 4" diameter can be purchased at a 10-foot length for \$6, and a 100-foot length for \$24. These materials can be purchased at your local home improvement stores.