

## What is Stormwater?

Stormwater is surface water runoff resulting from a precipitation event or snowmelt. This water can either seep into the ground, or if it is unable to infiltrate, collect to potentially become a flood.

In urban and suburban areas covered with buildings and pavement, much of the stormwater cannot infiltrate into the ground. Instead, it is captured by a series of drains, pipes, and water quality improving Best Management Practices (BMPs) called a Municipal Separate Storm Sewer System (MS4) in order to mitigate the risk of flooding.

The MS4 directly drains to our lakes, streams, rivers, and ponds, and it carries with it everything the runoff picks up along its way to the storm drain. Our MS4 plays a very important part in keeping our waters clean.

## What does Construction have to do with it?

Residential construction activities, such as the addition of a deck, pool, driveway, or shed, increase the impervious area of your property. More impervious area means more stormwater runoff, which leads to an increased risk of pollution in our streams.

The loss of infiltration from the increase in impervious surfaces is also to blame for a decreased rate of groundwater recharge. Lack of available groundwater can spell trouble for both wells and municipal water supplies during times of drought.

## Additional Resources

For more information on the impacts of development and best practices for residential construction activities, please refer to the websites linked below. Additional stormwater information can be found on the MS4 Information subpage of the Town website.

Homeowner's Guide to Stormwater Management  
<http://www.stormwaterguide.org/static/HomeownersGuide.pdf>

Protecting Water Quality from Urban Runoff  
[https://www.epa.gov/sites/production/files/2015-09/documents/nps\\_urban-facts\\_final.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/nps_urban-facts_final.pdf)

Walkersville Town Code  
<http://walkersvillemd.gov/government/town-code/>

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# Stormwater & Construction

For Town Residents



**ARRO**

# Controlling Impacts of Impervious Development

There is a wide variety of alternatives to traditional methods of construction that can make a big difference in improving stormwater quality.

## For Pavement

Permeable pavement allows for stormwater infiltration unlike conventional asphalt and concrete. It can also help filter out pollutants and reduce the need for deicers. Pervious concrete, porous asphalt, and interlocking pavers are some of the most commonly used. While more expensive than traditional pavements, permeable alternatives have been shown to have longer lifespans and less maintenance costs over their lifetimes.

## For Structures

When installing a new shed or home addition, additional runoff from new roofs must be considered. Rain barrels capture runoff from a roof and store it for future use on lawns and gardens. Rain barrel kits can be purchased inexpensively and in varying capacities and designs.

Rain gardens are another option for managing runoff in a useful way. They are shallow, vegetated basins designed to collect and absorb rainwater. Rain gardens offer a versatile and aesthetic solution to stormwater that can be scaled to your particular project's needs.

## Permeable Pavement



Credit: USGS Wisconsin Water Science Center

## Rain Barrel



Credit: CT DEEP, Winooski Natural Resources Conservation District

## Rain Garden



Credit: MA Watershed Coalition

## Container Garden



Credit: National Garden Bureau, Miriam Manon

## For Decks

If installing a deck or patio on your property, consider wood construction that allows for stormwater to drain and infiltrate into the soil beneath the structure. Stone pavers, bricks, or other forms of permeable pavement are other options to consider. If you choose a concrete deck, consider installing a small rain garden or rock garden to assist with proper drainage.

## For Pools

Runoff from discharged swimming pool water containing chlorine and other chemicals can have harmful effects on aquatic life. Measure the pH and total residual chlorine levels of your pool before draining or lowering the water level. Ensure pH is between 6 and 9 before proceeding to drain. If lowering the water level of the pool, do so slowly, and drain to a lawn to prevent flow from reaching the MS4.

## Other Practices

It is important not to discount the benefit of micro-scale practices for stormwater management. Container gardens placed on impervious surfaces make use of rainwater that would have otherwise become runoff. Planting trees also helps improve stormwater quality. Tree roots don't just aid the infiltration of rainwater, they absorb it too!