

STORMWATER RUNOFF

A CREATE Resilience Resource



**DUMP
NO WASTE
—
DRAINS TO
WATERWAYS**

The hazard...

In urban communities, as green space is replaced with asphalt and concrete, rain and meltwater can't be absorbed. The excess water, including any pollutants, is carried away to larger bodies of water, flooding homes and roads and contaminating drinking water. The accumulating volume of stormwater causes rivers to overflow and flood surrounding areas.

To help prevent localized flooding, it is important to keep storm drains and gutters clear of debris.



The impacts...

Stormwater runoff can impact the Lehigh Valley by bringing pollutants into rivers, affecting the health of the local fish population within the Delaware River as well as the people living around the area. Runoff can also cause localized flooding.



A "storm drain" or "storm sewer" carries polluted stormwater underground away from roads and property. These systems often release the untreated water directly into nearby rivers and streams.

Some solutions...

Rain gardens are a form of 'bioretention,' in which a garden is planted over layers of soil, sand, and organic mulch; this is a visually attractive and natural way to filter out pollutants and minimize flooding. Rain barrels collect and filter rainwater, saving it for use in your lawn or garden. Green roofs soak up precipitation and minimize runoff. Pervious pavers and pervious concrete are alternatives to sidewalk, patio or playground pavement. Pervious materials allow water to leak through it, soaking into the dirt or gravel bed below.

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EPA Soak up the Rain <https://www.epa.gov/soakuptherain>

Green Infrastructure Options to Reduce Flooding <https://coast.noaa.gov/data/docs/digitalcoast/gi-econ.pdf>

Stormwater Management Model <https://toolkit.climate.gov/tool/storm-water-management-model>

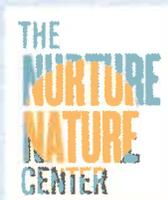
National Stormwater Calculator <https://toolkit.climate.gov/tool/national-stormwater-calculator%E2%80%94climate-assessment-tool>

Local examples...

Bushkill Township - a rain garden was constructed in 2019 on a 90-acre tract, which had been experiencing problems with stormwater runoff since a parking lot had been built nearby. This garden allows stormwater to permeate into the ground and educates the local community on rain gardens and best management practices for stormwater.

Lafayette College, Easton, PA - a green roof was installed on the roof of the Acopian Engineering Center. The roof is able to hold a half inch of stormwater, greatly lessening the volume of stormwater runoff and contributing to the insulation of the building.

Lehigh Valley, PA - many local watershed organizations offer rain barrel building workshops. A rain barrel collects water off of your roof during each rain event; the water can be saved and used to water plants in your yard. Rain barrels help to decrease the amount of stormwater runoff and reduces the amount of pollution that could be picked up from the rain water as it passes over driveways and roads. To find your local watershed organization, visit: www.watershedcoalitionlv.org.



This publication was prepared by the Nurture Nature Center, Inc., under award NA18SEC0080005 from the Environmental Literacy Program of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.