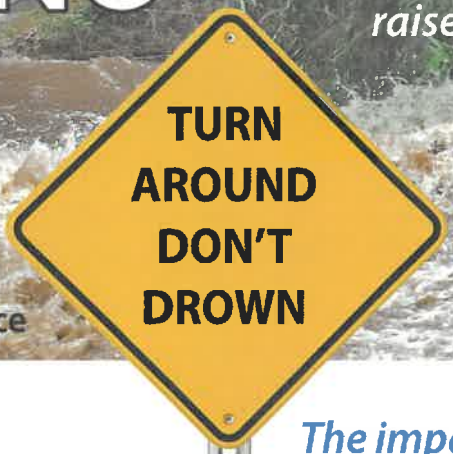
FLASH FLOODING

The increased occurrence of heavy precipitation events associated with climate change raises the risk of flash flooding



A CREATE Resilience Resource

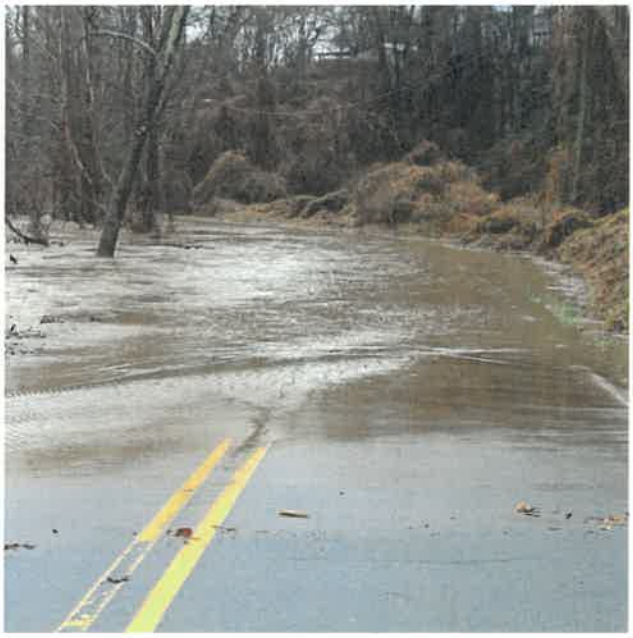
The hazard...

Flash flooding is the rapid flooding (in less than six hours) of low-lying areas, such as streams, washes, rivers, dry lakes, and depressions, usually caused by heavy rainfall, hurricanes, tropical thunderstorms, or meltwater from snow and ice. Climate change contributes to the hazard, as it has increased the occurrence of heavy precipitation events, which raises the risk of flash flooding in the Northeast region.

Communities can work together to create open spaces to restore and maintain buffers to limit the overall effect of flooding along streambanks.

The impacts...

Flash flooding in the Lehigh Valley generally occurs on smaller tributaries and in some urban environments without adequate stormwater infrastructure. Flooding can damage properties, disrupt transportation, and even lead to loss of life. Attempting to drive through flooded roadways is especially dangerous.



It is NEVER safe to drive or walk into flood waters. More than half of all flood-related drownings occur when a vehicle is driven into hazardous flood water.

The solutions...

There are several mitigation strategies that individuals and communities can take to lessen the impacts of flash flooding:

Don't Wait, Elevate!

If homeowners live in high flood risk area, they should elevate their furnace, water heater, and electrical panels as soon as possible. For more see:

▶ https://www.fema.gov/media-library-data/14041503061227-fa382623802512d66e4835281547fd0/FEMA_P312_ Chap_9.pdf

Be Tougher and Build a Buffer!

Riparian buffers are the natural vegetation that grows along rivers and creeks. The vegetation and soils in riparian buffers reduce flooding impacts by increasing storage and infiltration of flood waters and slowing floodwater velocities, protecting riverfront and streamside properties from maximum flood damage. Communities can work together to create open spaces to restore and maintain buffers to limit the overall effect of flooding along stream banks. For more see:

▶ https://www.chescoplanning.org/MuniCorner/Tools/RiparianBuff.cf

▶ https://www.brandywine.org/sites/default/files/media/BrandywineConservancy-RiparianBufferGuide.pdf

Local examples...

Coffeetown, Williams Township:

Heavy rainfall events along the small waterway of the Fry's Run have caused dangerous flash flooding, damaging homes in this small village and causing streambanks to collapse. In 2014-15, local and state organizations, along with watershed volunteers, stabilized the streambanks with heavy log structures and planted the banks with 190 trees and shrubs. The newly graded banks and structures slow and direct the flow of water away from the banks and help to protect it from further erosion.

Lower Mount Bethel Township:

When Hurricane Ivan (2004) caused severe erosion along Little Martin's Creek, local and state agencies implemented a plan to stabilize then restore the streambank with a more tapered profile that would allow flood waters to spread and slow through the area. The area was then planted with deep-rooted trees to help contain the soil and buffer the creek.

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