# Enviro dep FACTS

# URBAN RUNOFF

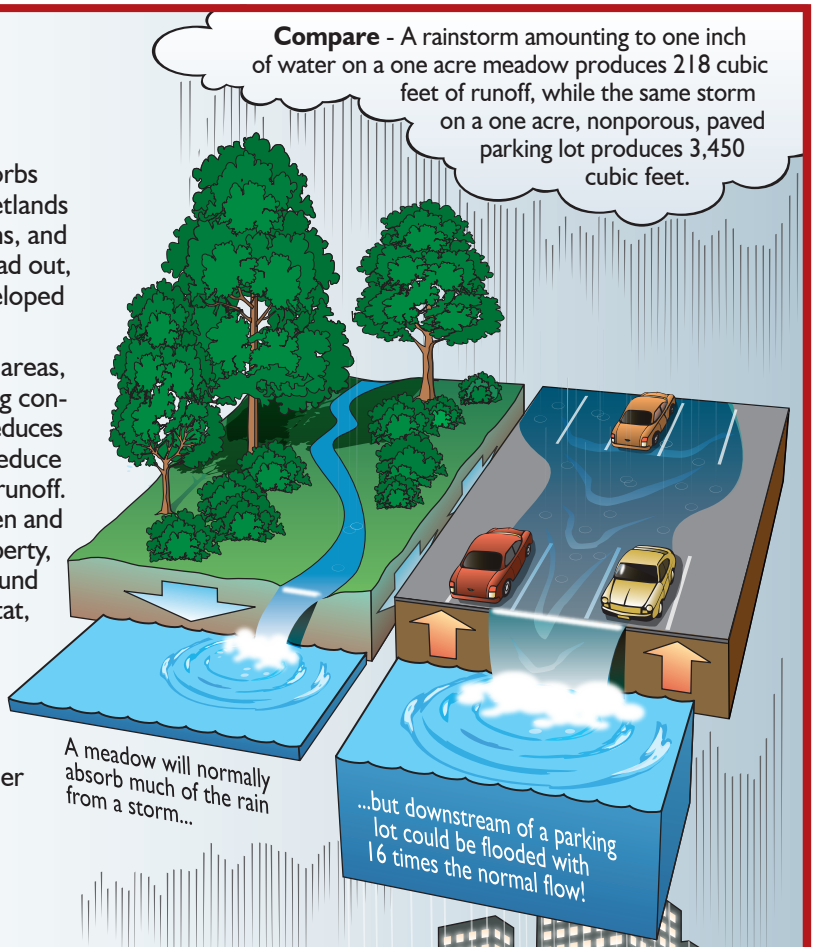
**What happens to rain or snow that falls on urban areas?**

**Under natural conditions** the ground absorbs a significant percentage of precipitation, wetlands store much of the excess water from storms, and floodplains give high water levels a chance to spread out, reducing the destructive energy of floods. In developed areas, however, the results are much different.

Urban development drains or fills in streambank areas, and constricts stream channels. Sedimentation occurring during construction and from later erosion fills in the stream's pools and reduces its capacity to carry water. Roads, parking lots and rooftops reduce absorption of water into the ground, increasing the volume of runoff. The result is increased flooding. Stream channels begin to widen and and downcut, eroding banks and threatening downstream property, roads bridges and buildings. A loss of 15 percent of porous ground surface in a watershed will increase flooding and damage habitat, water quality, biological diversity and streambank stablity.

During storms, pollutants built up on impenetrable surfaces will quickly run off into streams, degrading water quality and threatening public health. Such pollutants include gasoline, oil, salt, antifreeze, brake and transmission fluids, and metals. Other pollutants common in urban and suburban areas are sewage, fertilizers, pesticides and other toxic chemicals. The economic impact of urban/suburban runoff includes flooding, expensive channelization and other flood control structures, road and property damage, increased drinking water treatment and loss of recreational choices.

Parking lots and roads absorb heat, making runoff 10-12 degrees warmer than a forested stream.




**Urban Runoff Treatments**

Protecting floodplains • Vegetated buffer zones • Wetlands • Detention ponds • Infiltration trenches and grass swales • Bio-retention islands in parking lots • Porous pavements • Open spaces

**Urban Runoff Impacts**

Flooding • Loss of aquatic life • Dry streams
Threats to public health • Increased erosion
Increased public expenses

**For more information contact:**

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