

Carrollton Environmental Services  
**THE STORM WATER READER**

May 2012



## *Did You Know?*

A watershed is a defined land area that captures rainfall and other precipitation and funnels it to a particular river, lake or stream.

Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. No matter where you are, you're in a watershed!

The United States has made tremendous advances since Congress passed the Clean Water Act in 1972 to clean up the aquatic environment by controlling pollution from industries and sewage treatment plants. Today, nonpoint source (NPS) pollution remains the nation's largest source of water quality problems. Sometimes referred to as polluted runoff, nonpoint source pollution occurs when rainfall, snowmelt, or irrigation runs over land or through the ground, picks up pollutants, and deposits them into surface waters or introduces them into ground water. The most common nonpoint source pollutants are sediments and nutrients. Other common nonpoint source pollutants include pesticides, pathogens, salts, oils, and excess fertilizer.

The watershed approach is the preferred way to restore a stream, river, or lake. It

looks beyond the waterbody itself and examines the entire land area that drains to the waterbody, including all the potential sources of pollution that drain into it.

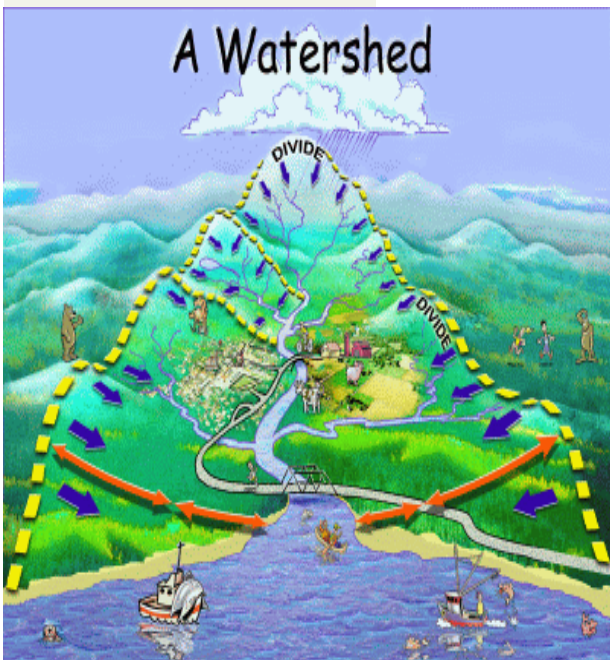
Water conservation uses practices and technologies that limit water use in the bathroom, kitchen, laundry room, lawn, driveway, and garden.

Conserving water reduces the demand on existing water supplies and limits the amount of water that

runs off the land. Runoff should also be minimized by using low impact development (LID) techniques, which work with the natural landscape and native plants to soak up more rainwater by improving infiltration. Low impact development solutions include rain gardens and green roofs, which treat rainwater as a precious resource.

Landscape using Texas SmartScape to incorporate native plants

which minimize maintenance and watering needs. Other ways to control polluted runoff include erosion control techniques such as silt fencing around construction sites and establishment of vegetated zones next to waterbodies to filter out pollutants. Finally, many local groups organize volunteer monitoring efforts, which provide information that can help government agencies understand the impacts of nonpoint source pollution and solve problems. Working together, we can all make a difference.





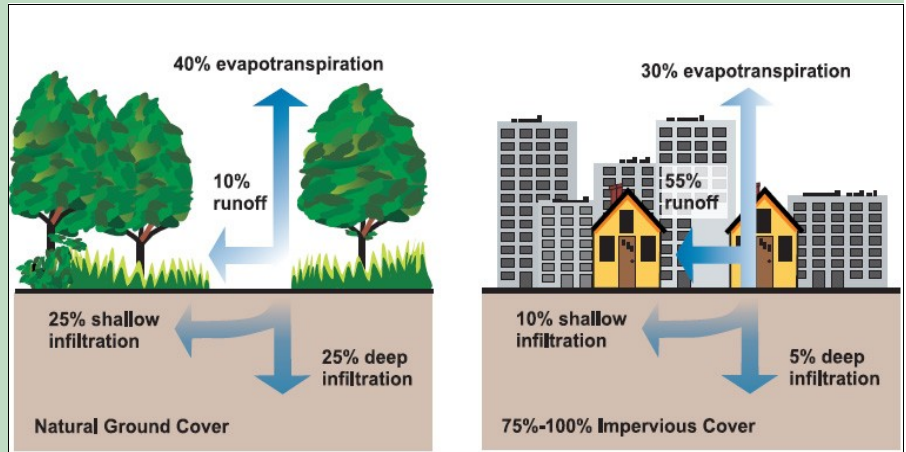
# Protect Water Quality From Urban Runoff

Urbanization increases the variety and amount of pollutants carried into our nation's waters. In urban and suburban areas, much of the land surface is covered by buildings, pavement and compacted landscapes with impaired drainage. These surfaces do not allow rain and snowmelt to soak into the ground which greatly increases the volume and velocity of stormwater runoff. In addition to these habitat-destroying impacts, pollutants from urban runoff include:

- Sediment from construction sites
- Oil, grease and toxic chemicals from motor vehicles
- Pesticides and nutrients from lawns and gardens
- Viruses, bacteria and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles and other sources
- Thermal pollution from dark impervious surfaces such as streets and rooftops

These pollutants can harm fish and wildlife populations, kill native vegetation, foul drinking water, and make recreational areas unsafe and unpleasant.

Courtesy EPA



Typical water cycle in an undeveloped area

Typical water cycle in an urban area

# What YOU Can do to Prevent Nonpoint Source Pollution

