



After the Storm

A Citizen's Guide to Understanding Stormwater

What is stormwater runoff? Stormwater runoff occurs when precipitation from rain and snowmelt flows over the ground. Impervious surfaces like roofs, driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground. **Why is stormwater runoff a problem?** Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system, or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer

system is discharged untreated into our area lakes and streams. This can create polluted, unsightly waterbodies and affect water quality.

The Effects of Pollution—Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people. Sediments can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment can also destroy aquatic habitats. Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and aquatic organisms can't exist in water with low dissolved oxygen levels. Bacteria and other pathogens can wash into swimming areas and create health hazards. Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can create polluted lakes and streams and choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds. Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish or ingesting polluted water. Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

Lawn Care—Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams. Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler. Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible. Compost or mulch yard waste. By City ordinance, yard waste cannot be left in the street or swept into storm drains or streams. Cover piles of dirt or mulch being used in landscape projects.

Residential landscaping—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain to soak through, decreasing stormwater runoff. **Rain Barrels**—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas. **Rain Gardens and Grassy Swales**—Specially designed areas planted with native plants (Texas Smartscape information can be found at <http://www.txsmartscape.com/NorthCentralTX/main.asp>) can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains. **Vegetated Filter Strips**—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Auto Care—Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody. Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground. Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

For more information contact: City of Benbrook, 911 Winscott Road, Benbrook, Texas 76126 817-249-3000

Or go to : www.cityofbenbrook.com and click on "Residents' and "Stormwater Information"

Modified storm water Information provided by the United States Environmental Protection Agency (EPA)