

# Important Things to Know about Stormwater

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In North Carolina, stormwater runoff is the number one source of pollution to our surface water.

Pollutants commonly found in stormwater runoff include:

- ❖ Sediment (dirt)
- ❖ Fertilizer and pesticides
- ❖ Automotive fluids/waste
- ❖ Bacteria
- ❖ Litter
- ❖ Yard Waste

## Sediment (dirt)

Sediment is the number one source of pollution in North Carolina waterways. The primary sources of sediment include: construction site activities, farmland erosion, streambank erosion and alterations, and the removal of vegetative buffers along streams. As the stormwater swiftly enters the stream it scours away the stream beds and erodes the stream banks, causing instability within the stream system.

Sediment in the water, buries aquatic nurseries, reduces water clarity and suffocates fish. Sediment can also carry harmful pollutants such as fertilizers and pesticides, pathogens, fecal matter, and heavy metals that further hinder the aquatic conditions for fish and other wildlife within the ecosystem.

## Fertilizer and Pesticides

Fertilizers and pesticides are among the many common stormwater pollutants that can degrade water quality. Though fertilizers contain chemicals that are good for lawns and plants when used properly, excessive amounts applied to lawns and gardens wash off and pollute streams.

Fertilizers are made of nutrients, such as nitrogen and phosphorus. When it rains, these nutrients are carried by stormwater into the nearest stream, river, or other water body. Too many nutrients in water can cause algae to grow, which uses up the oxygen in the water. Low levels of oxygen in water can hurt aquatic wildlife and even lead to fish kills.

Pesticides are any substance or mixture of substances intended for preventing or destroying pests. The term applies to herbicides, fungicides and other substances used to control pests.

When it rains, nutrients from fertilizers are carried by stormwater into the nearest stream, river, or other water body, and become a major source of water pollution. Too many nutrients in water can cause algae to grow, which uses up the oxygen in the water, harming aquatic life.

You may not see the effect of fertilizers and pesticides in stormwater right where you live, but their detrimental effects are very apparent in North Carolina's rivers and estuaries.

### **Automotive Fluids and Waste**

Vehicles are a source of many pollutants in stormwater. Oil, antifreeze, and other fluids often leak from cars onto parking lots or are spilled during maintenance. Normal automobile use also creates copper and other heavy metal dust, which settles onto surfaces wherever vehicle exhaust exists.

Stormwater runoff carries both metal dust and toxic fluids to streams and rivers, where they can eventually become concentrated enough to disrupt aquatic ecosystems.

### **Bacteria**

In North Carolina, bacterial contamination of streams, lakes, and rivers is a serious problem. Bacteria may come from pet, wildlife, or human waste, causing diseases and dangerous infections in animals and people that come in contact with the water.

When waste such as pet droppings is left on our lawn, it is easily transported to nearby waterways by stormwater. Human waste may enter streams and rivers through sewer overflows, leaks in the sanitary sewer system, or failing septic systems. Pet waste is primarily from dogs, although cats may contribute some as well.

### **Litter**

Of all the pollutants litter is the most visible, it is an eyesore in a community that can easily be prevented. Litter is a problem that impacts all of us. When thrown on the ground, litter travels and can eventually end up in storm drains, ditches and streams causing harm to humans and wildlife. Disposing of litter can be a costly expense for a large number of communities.

### **Yard Waste**

Yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams. Grass clippings, leaves, and yard trimmings that are recycled or composted are a free source of nutrients for your yard, supplying not only carbon and nitrogen, but they also shade the soil and reduce the need for water.

Source: Piedmont Triad Water Quality Partnership

<http://www.piedmontwaterquality.org>