

STORMWATER GLOSSARY

Algal bloom – Rapidly occurring growth and accumulation of algae within a body of water, which usually results from excessive nutrients or sluggish circulation within a waterbody. Persistent and frequent blooms can result in low oxygen conditions which is hazardous to aquatic life.

Annual plant - A plant that completes its entire life cycle in a single growing season.

Baffle – Any deflector device used to change the direction or flow of water.

Base flow – The flow in a stream between storm events. The flow is supplied by groundwater.

Best Management Practice (BMP) – actions, behaviors or on-the ground landscaping practices that reduce pollution and/or the amount of storm water runoff flowing into local waterways. BMPs can be *structural*, such as a rain barrel or shoreline buffer, or *non-structural*, such as picking up after your pet or washing your car on the grass.

Bioretention – A water quality practice that utilizes landscaping and soils to treat stormwater by collecting it in shallow depressions and then filtering it through a planting soil media.

Buffer – A vegetated strip immediately adjacent to a water body. The primary function of the buffer is to protect the receiving waterbody from sediment and pollutants derived from upstream areas.

Benthic- Relating to or occurring at the bottom of an aquatic ecosystem.

Biochemical Oxygen Demand (BOD) – is a measure of the quantity of oxygen used by microorganisms in the oxidation of organic matter.

Buffer - An area of trees, shrubs and plants next to a waterbody designed to protect the receiving waterbody from sediment and pollutants contained in storm water runoff. Buffers also function as habitat for migratory birds and aquatic and terrestrial wildlife.

Check dam - A small barrier built across the direction of water flow in a swale to retain excess water during heavy rains and to slow the speed of runoff traveling through the swale.

Deciduous plant - A plant that sheds or loses its foliage at the end of each growing season.

Designated use – Uses specified in water quality standards for a waterbody. For instance, Greenfield Lake is classified “c” by the NC Division of Water Quality, meaning its main use is aquatic life propagation, general use, fishing and non-body contact recreation like canoeing.

Dissolved oxygen (DO) – The amount of oxygen that is dissolved in water. It also refers to a measure of the amount of oxygen available for biochemical activity in a waterbody and as indicator of the quality of that water.

Domestic wastewater –is wastewater discharged from residences and from commercial, institutional and similar facilities; also known as wastewater or sanitary wastewater.

Ecosystem – An interactive system that includes the organisms of a natural community together with their abiotic, physical, chemical and geochemical environment.

Easement - A right, such as a right-of-way, afforded a person to make limited use of another's real property.

Estuary – Brackish-water area influenced by the tides where the mouth of the river meets the sea.

Eutrophication - Having waters rich in mineral and organic nutrients that promote a proliferation of plant life, especially algae, which reduces the dissolved oxygen content and often causes the extinction of other organisms. Used of a lake or pond.

Evergreen plant - A plant that remains green and retains its foliage throughout the year.

Fecal coliform bacteria – Bacteria that are present in the intestines or feces of warm-blooded animals. Often used as indicators of water quality.

Floodplain – Areas that are periodically flooded by lateral overflow, such as river.

Forebay – Stormwater design feature that uses a small basin to settle out incoming sediment delivered in runoff to a stormwater BMP.

Geographic information systems (GIS) – A computer system for capturing, storing, checking, integrating, manipulating, analyzing and displaying data related to positions on the Earth's surface. Typically, GIS is used for handling maps of one kind or another. These might be represented as several different layers where each layer holds data about a particular kind of feature (ie roads, waterbodies, etc). Each feature is linked to a position on the graphical image of a map.

Groundwater - Water below the earth's surface, often between saturated soil and rock, that supplies drinking wells and springs. Runoff can seep into the soil and recharge groundwater supplies.

Habitat - The specific area or environment where a plant or animal lives. A habitat must provide all of the basic requirements for life (food, water, shelter) and should be free of harmful contaminants and pollution.

Hydrology – The science of dealing with properties, distribution and circulation of water.

Hydrosphere - The whole body of water that exists on or close to the surface of the Earth. This includes the oceans, seas, lakes, and the water in the atmosphere (water vapor).

Impervious surface - Any surface that water cannot penetrate into (i.e. parking lots, streets, sidewalks, rooftops).

Native plant – A plant that naturally occurred in an area before disturbance by humans. Native plants are adapted to the weather, temperature and soil conditions of this region. Native plants require less (if any) fertilizers, pesticides or irrigation and tend to be disease and drought-tolerant.

Nonpoint source pollution (NPS) - Pollution that comes from many different sources in a watershed and is carried by storm water runoff into local waterways. Sources of NPS pollution are difficult to identify and control. Typical NPS pollutants are pet waste, lawn fertilizer, pesticides, car washing detergents, litter and sediment.

NPDES (National Pollutant Discharge Elimination System) – A permit issued by the US EPA or a state regulatory agency that sets specific limits on the type and amount of pollutants that a municipality or industry can discharge to a receiving water; it also includes a compliance schedule for achieving those limits. The permit process was established under provisions of the federal Clean Water Act.

Nutrient – A primary element necessary for the growth of living organisms. For example, nitrogen and phosphorous, are nutrients required for phytoplankton (algae) growth.

Outfall – Point where water flow from (i.e. conduit, stream, pipe, drain).

Oxygen depletion – Deficit of dissolved oxygen in a water system due to oxidation of organic matter.

Perennial plant - A plant that grows and persists for more than one year. Perennial plants persist as vegetation from year to year or resprout from their rootstock annually.

Pervious materials - Pervious materials allow water to soak into the surface by virtue of their porous nature or by “void” spaces in the material.

Point source pollution - Water pollution entering the environment from a single point (i.e. factory pipe).

Pollution - Any substance that exists in the environment that is undesirable or harmful for that environment.

Receiving waters – Creeks, streams, rivers,, lakes, estuaries and other bodies of water into which stormwater flows into.

River Basin - A river basin is the land that water flows across or under on its way to a river. As a bathtub catches all the water that falls within its sides, a river basin sends all the water falling on the surrounding land into a central river and out to an estuary or the sea.

The landscape is made up of many inter-connected basins, or smaller watersheds. For instance, large river basins such as the Cape Fear River Basin are made up of many smaller watersheds. Within each watershed, all water runs to the lowest point—such as a creek or lake. On its way, water travels over the surface and across farm fields, forestland, suburban lawns and city streets, or it seeps into the soil and travels as groundwater.

Sediment - Soil or dirt that washes into a body of water and contributes additional nutrients to the water. Sediment often comes from construction sites or bare lawns. North Carolina’s #1 pollutant.

Sanitary sewer system - The system that collects and transports sanitary wastewater from building plumbing systems to a wastewater treatment plant for treatment (i.e. wastewater from toilets, showers, sinks, water fountains).

Storm drainage system - The system built to collect and transport runoff to prevent flooding. This system consists of storm drains, drainage ditches, pipes and culverts. Anything that flows into the storm drainage system flows directly into local creeks and waterways. (Storm water runoff is not treated.) Storm drainage systems are completely separate from those that carry domestic and commercial wastewater (sanitary sewer system).

Storm water runoff - Water from rain, melted snow or landscaping irrigation that flows over land and into local creeks, streams and waterways. Runoff carries pollutants in it.

Surface water – The water that rests on top of the earth in streams, lakes, rivers, oceans and reservoirs and is open to the atmosphere (i.e. rivers, lakes, creeks, streams, etc).

Toxic substances – Those chemical substances, such as pesticides, plastics, heavy metals, detergents, solvents, or any other harmful materials, which are poisonous, carcinogenic, or otherwise directly harmful to human health and the environment.

Toxicant – A poisonous agent that kills or injures animal or plant life.

Tributary - A stream that flows into a larger stream or other body of water.

Turbidity – Having sediment or foreign particles stirred up or suspended in water; muddy.

Wastewater – Usually refers to effluent from a sewage treatment plant.

Watershed - The land area that drains water to a particular stream, lake or river. For instance, if you live in the Burnt Mill Creek Watershed, runoff from your property will flow into Burnt Mill Creek and then into the Cape Fear River.

Water quality – The biological, chemical and physical conditions of a waterbody; a measure of the ability of a waterbody to support beneficial uses.

Wetland - Land whose soil is saturated with moisture either permanently or seasonally. They are generally distinguished from other water bodies or landforms based on their water level and on the types of plants that thrive within them. Specifically, wetlands are characterized as having a water table that stands at or near the land surface for a long enough season each year to support aquatic plants.

**Sources for this section include: Tools for Watershed Assessment and TMDL Development and Dictionary.com*