

Glossary of Terms

chlorophyll-a – used to measure the amount of algae in water bodies. Sampling for and measuring all the types and amounts of algae in any given waterbody is costly and technically impossible. Instead, water experts measure the concentration of **chlorophyll-a**. This provides a reasonable estimate of algal biomass. Chlorophyll-a is the green pigment that is responsible for a plant's ability to convert sunlight into the chemical energy needed to change CO₂ into carbohydrates.

non point source pollution: Water runoff without a single point of origin that flows over the surface of the ground by irrigation water or stormwater and is then introduced to surface or ground waters. NPSs include atmospheric deposition and runoff or leaching from agricultural lands, urban areas, unvegetated lands, onsite sewage treatment and disposal systems, and construction sites.

NPDES (National Pollutant Discharge Elimination System): In 1972, the National Pollutant Discharge Elimination System program was established under the authority of the Clean Water Act. It is a national system for issuing, modifying, revoking, monitoring and enforcing permits. NPDES permits regulate point sources of pollution. The system also imposes and enforces pretreatment requirements.

NPDES Phase I: Phase I of the NPDES stormwater program was established in 1990 and required NPDES permit coverage for large or medium municipalities that had populations of 100,000 or more. The City of Greensboro was among the six communities identified in Phase I.

NPDES Phase II: Phase II of the NPDES Stormwater program was signed into law in December 1999. This regulation requires that smaller communities, also known as small municipal separate storm sewer systems (MS4s), be permitted. Regulated small MS4s applied for permit coverage by March 2003. Those communities permitted under Phase II are required to develop and implement a comprehensive stormwater management program that includes six minimum measures: (1) public education and outreach on stormwater impacts; (2) public involvement/participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post-construction stormwater management for new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations.

nutrient—An element or compound essential for animal and plant growth. Common nutrients in fertilizer include nitrogen, phosphorus, and potassium.

residence time: The length of time that a pollutant remains within a section of a stream or river. The residence time is determined by the streamflow and the volume of the river reach or the average stream velocity and the length of the river reach.

TMDL (total maximum daily load) - defines the total pollutant loading a water body can receive and still meet the applicable water quality standards. A TMDL is developed from a study that identifies the sources of a particular pollutant in a watershed, the pollutant contribution from each source, and the pollutant reduction required from those sources to attain and maintain water quality standards.

turbidity - how clear the water is. The greater the amount of total suspended solids (TSS) in the water, the murkier it appears and the higher the measured turbidity. A major source of turbidity is clays and silts from shoreline erosion and resuspended bottom sediments.

watershed: Also called a drainage basin. This is an area of land that allows rainwater to flow into creeks, streams and rivers. Watersheds range in size from a few acres to large areas of the country. Large watersheds are sometimes referred to as river basins or sub basins.