

# Definitions

**Adhesion** – forces of attraction between unlike molecules, e.g., water and solids.

**Adsorption** – the process by which atoms, molecules, or ions are taken up from the soil solution or soil atmosphere and retained on the surfaces of solids by chemical or physical binding.

**Aggregation** – the process whereby primary soil particles (sand, silt, clay) are bound together, usually by natural forces and substances derived from root exudates and microbial activity.

**Anticline** – the term used for a geologic feature where the bedrock has a fold that is convex upward like an arch and where the bedrock dips away the center of the fold axis.

**Aquiclude** – an impermeable body of rock or stratum of sediment that acts as a barrier to the flow of water or a solid, impermeable area underlying or overlying an aquifer. (Source: The American Heritage®, 2024).

**Aquifer** – a saturated, permeable unit of soil, sediment or bedrock that can transmit significant quantities of water under ordinary hydraulic gradients to wells or springs. (Freeze, et al., 1979).

**Aquitard** – a body of soil, sediment, or bedrock that retards but does not prevent the flow of water to or from an adjacent aquifer. It does not readily yield water to wells or springs but may serve as a storage unit for groundwater (Jackson, 1997).

**Artesian Well** – the occurrence of the water level in a well rising above the top of the confined aquifer or, in special occasions, above the soil surface.

**Artifact** – an object produced or shaped by human craft, especially a tool, weapon, or ornament of archaeological or historical interest that is commonly larger than 2 mm in diameter (Source: The American Heritage®, 2024).

**Available Water** (capacity) – the amount of water released between in situ field capacity and the permanent wilting point (usually estimated by water content at soil matric potential of -1.5 MPa). In other words, available water capacity is the amount of water that can be stored in a soil profile and be available for growing crops.

**Base Flow** – that part of stream flow derived from the groundwater component of the hydrological system.

**Bedrock** – a term used to describe solid rock that includes sedimentary, igneous, and metamorphic rock and/or (in soils terminology) the R Master Horizon.

**Bentonite** – a type of clay mostly composed of the mineral montmorillonite. It is notorious for expanding when wet and shrinking when dry.

**Borrow Pit** – an area that has been excavated where all or a portion of the solum and regolith has been removed.

**Cohesion** – forces of attraction between like molecules, e.g., water and water.

**Colloid** – a particle, which may be a molecular aggregate, with a diameter of 0.1 to 0.001  $\mu\text{m}$ . Soil clays and soil organic matter are often called soil colloids because they have particle sizes that are within, or approach, colloidal dimensions.

**Colluvium** – unconsolidated material/sediments that consists of a mixture of rock fabric and the three soil separates (sand, silt, and clay) that has been deposited or transported via mass movements under the influence of gravity, such as landslides.

**Coprogenous Earth** (L layer or horizon) – sediment deposits that are organic or mineral, such as: diatomaceous earth, marl, and sedimentary peat, and limnic material is either deposited by precipitation or a by-product of aquatic organisms (plant or animals).

**Consistency** – the manifestations of the forces of cohesion and adhesion acting within the soil at various water contents, as expressed by the relative ease with which a soil can be deformed or ruptured. This characteristic can be described under dry, moist, and near-saturated conditions.

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## Dispersion –

(a) a term used in relation to solute movement.

(b) The breakdown of soil aggregates into individual component particles.

**Drainable Water** – water that readily drains from soil under the influence of gravity.

**Duff** – a generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus. Duff or litter is an organic soil material that is also one of the USDA textures of muck (sapric soil material), mucky peat (hemic soil material), or peat (fibric soil material).

**Eluviation** – the removal of soil material in suspension (or in solution) from a layer or layers of a soil. Usually, the loss of material in solution is described by the term “leaching.” This may be related to the loss of color or the fine portion of the soil separates (sand, silt, clay).