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Glossary

The definitions in this manual are solely for explanatory purposes and do not convey legal definitions of such terms or phrases.

Adventitious roots: Roots found on plant stems in positions where they normally do not occur.

Aerenchymous tissue: A type of plant tissue in which cells are unusually large and arranged in a manner that results in air spaces in the plant organ. Such tissues are often referred to as spongy and usually provide increased buoyancy.

Aerobic: A situation in which molecular oxygen is a part of the environment.

Anaerobic: A situation in which molecular oxygen is absent (or effectively so) from the environment.

Aquic moisture regime: A reducing regime in a soil that is nearly free of dissolved oxygen due to saturation by water.

Basal area: The cross-sectional area of a tree trunk in square inches, square centimeters, etc. Basal area is normally measured at 4.5 feet above the ground level and is used as a measure of dominance. The most easily used tool for measuring basal area is a tape marked in square inches. When plotless methods are used, an angle gauge or prism will provide a means for rapidly determining basal area. The term is also applicable to the cross-sectional area of a clumped herbaceous plant, measured at 1.0 inch above the soil surface.

Capillary fringe: A zone immediately above the water table (zero gauge pressure) in which water is drawn upward from the water table by capillary action.

Chemical reduction: Any process by which one compound or ion acts as an electron donor. In such cases, the valence state of the electron donor is decreased.

Chroma: The relative purity or saturation of a color; intensity of distinctive hue as related to grayness; one of the three variables of color.

Detritus: Minute fragments of plant parts found on the soil surface. When fused together by algae or soil particles, this is an indicator that surface water was recently present.

Diameter at breast height (DBH): The width of a plant stem as measured at 4.5 feet above the ground surface.

Dike: A bank (usually earthen) constructed to control or confine water.

Drift line: An accumulation of debris along a contour (parallel to the water flow) that represents the height of an inundation event.

Evapotranspiration: The water that vaporizes from water or soil in a wetland (evaporation) along with moisture that passes through vascular plants to the atmosphere (transpiration).

Fill material: Soil, rocks, sand, waste of any kind, or any other material which displaces soil or water or reduces water retention potential.

Flooded: A condition in which the soil surface is temporarily covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources.

Gleyed: A soil condition resulting from prolonged soil saturation, which is manifested by the presence of bluish or greenish colors through the soil mass or in mottles (spots or streaks) among other colors. Gleying occurs under reducing soil conditions resulting from soil saturation by which iron is reduced predominantly to the ferrous state.

Groundwater: That portion of the water below the ground surface that is under greater pressure than atmospheric pressure.

Growing season: The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5 degrees Centigrade) (U.S. Department of Agriculture - Soil Conservation Service, 1985). For ease of determination, this period can be approximated by the number of frost-free days (U.S. Department of the Interior, 1970).

Herb: A nonwoody individual of a macrophytic species. Also referred to as a herbaceous plant.

Herbaceous layer: A vegetative stratum that is composed of herbs and woody seedlings less than 3.2 feet in height. Also referred to as understory layer.

Hue: A characteristic of color that denotes a color in relation to red, yellow, blue, etc.; one of the three variables of color.

Hydraulic conductivity: A coefficient describing the rate at which water can move through a permeable medium. See 'permeability.'

Hydric soil: A soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture, Natural Resources Conservation Service, 1994).

Hydrophyte: Any **macrophyte** that grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats.

Hydrophytic vegetation: The sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

Hypertrophied lenticels: An exaggerated (oversized) pore on the surface of stems of woody plants through which gases are exchanged between the plant and the atmosphere.

The enlarged lenticels serve as a mechanism for increasing oxygen to plant roots during periods of inundation and/or saturated soils.

Inundation: A condition in which water from any source temporarily or permanently covers a land surface.

Levee: A natural or man-made feature of the landscape that restricts movement of water into or through an area.

Limit of biological activity: With reference to soils, the zone where conditions preclude normal growth of soil organisms. This term often is used to refer to temperatures (5 degrees Celsius) in a soil below which metabolic processes of soil microorganisms, plant roots, and animals are negligible.

Macrophyte: A term referring to a plant species that can be readily observed without the aid of optical magnification. This includes all vascular plant species and mosses (e.g. *Spagnum* spp.) as well as large algae (e.g. *Cara* spp., kelp).

Major portion of the root zone: The portion of the soil profile in which more than 50 percent of the plant roots occur. In wetlands, this usually constitutes the upper 12 inches of the profile.

Mesophytic: Any plant species growing where soil moisture and aeration conditions lie between extremes. These species are typically found in habitats with average moisture conditions, neither very dry nor very wet.

Mineral soil: A soil consisting predominantly of, and having its properties determined predominantly by, mineral matter usually containing less than 20 percent organic matter.

Morphological adaptation: A feature of structure and form that aids in fitting a species to its particular environment (e.g., buttressed base, adventitious roots, aerenchymous tissue).

Mottles: Spots or blotches of different color or shades of color interspersed within the dominant color in a soil layer.

Muck: Highly decomposed organic material in which the original plant parts are not recognizable.

Multitrunk: A situation in which a single individual of woody plant species has several stems.

Organic pan: A layer usually occurring at 12 to 30 inches below the soil surface in coarse-textured soils, in which organic matter and aluminum (with or without iron) accumulate at the point where the top of the water table most often occurs. Cementing of the organic matter slightly reduces permeability of this layer.

Oxidation-reduction process: A complex of biochemical reactions in soil that influences the valence state of component elements and their ions. Prolonged soil saturation during the growing season elicits anaerobic conditions that shift the overall process to a reducing condition.

Oxygen pathway: The sequence of cells, intercellular spaces, tissues, and organs, through which molecular oxygen is transported in plants. Plant species having pathways for oxygen transport to the root system are often adapted for life in saturated soils.

Parameter: A characteristic component of a unit that can be defined. Two parameters (wetland hydrology or hydric soils and wetland vegetation or aquatic life) are used to identify wetlands in this manual.

Parent material: The unconsolidated organic and mineral materials in which soils form.

Ped: A unit of soil structure (e.g. aggregate, crumb, prism, block, or granule) formed by natural processes.

Peraquic moisture regime: A soil condition in which a reducing environment always occurs due to the presence of groundwater at or near the soil surface.

Permeability: A soil characteristic that enables water or air to move through the profile, measured as the number of inches per hour that water moves downward through the saturated soil. The rate at which water moves through the least permeable layer governs soil permeability.

Physiological adaptation - A feature of the basic physical and chemical activities that occur in cells and tissues of a species and result in it being better fitted to its environment (e.g. the ability to absorb nutrients under low oxygen tensions).

Plant community: All of the plant populations occurring in a shared habitat or environment.

Pneumatophore: Modified roots that may function as a respiratory organ in species subjected to frequent inundation or soil saturation.

Ponded: A condition in which water stands in a closed depression. Water may be removed only by percolation, evaporation, and/or transpiration.

Redox concentration: Bodies of apparent accumulation of Iron/Manganese oxides. Redox concentrations include soft masses, pore linings, nodules, and concretions.

Redox depletion: Bodies of low chroma (2 or less) having value 4 or more where Iron/Manganese oxides have been stripped or where both Iron/Manganese and clay have been stripped. Redox deletions contrast distinctly or prominently with the matrix.

Redox potential: A measure of the tendency of a system to donate or accept electrons, which is governed by the nature and proportions of the oxidizing and reducing substances contained in the system.

Redoximorphic features: Features formed by the processes of reduction, translocation, and/or oxidation of Iron and Manganese oxides.

Reduced matrix: Soil matrices that have low chroma and high value, but whose color changes in hue or chroma when exposed to air.

Reducing environment: An environment conducive to the removal of oxygen and chemical reduction of ions in the soils.

Relief: The change in elevation of a land surface between two points; collectively, the configuration of the earth's surface, including such features as hills and valleys.

Reproductive adaptation: A feature of the reproductive mechanism of a species that results in it being better fitted to its environment (e.g. the ability for seed germination under water).

Respiration: The sum total of metabolic processes associated with conversion of stored (chemical) energy into kinetic (physical) energy for use by an organism.

Rhizosphere: The zone of soil in which interaction between living plant roots and microorganisms occurs.

Root zone: The portion of a soil profile in which plant roots occur.

Sapling/shrub layer: A vegetative stratum composed of woody plants less than 3.0 inches in diameter at breast height but greater than 3.2 inches in height.

Seiche: A wave that oscillates in lakes, bays, or gulfs from a few minutes to a few hours as a result of seismic or atmospheric disturbances.

Soil: Unconsolidated natural material at the earth's surface that supports, or is capable of supporting, plants and which has identifiable properties due to the integrated effects of climate and living organisms acting upon parent material, as conditioned by **relief** over time.

Soil horizon: A layer of soil approximately parallel to the land surface and differing from adjacent layers by physical, chemical, and biological characteristics (e.g., color, structure, texture, etc.).

Soil matrix: The portion of a given soil having the dominant color. In most cases, the matrix will be the portion of the soil having more than 50 percent of the same color.

Soil pore: An area within soil occupied by either air or water, resulting from the arrangement of individual soil particles or peds.

Soil profile: A vertical column of a soil through all of its horizons and extending to the parent material.

Soil saturation: A condition in which all easily drained pores between soil particles are temporarily or permanently filled with water.

Soil series: A group of soils having horizons similar in differentiating characteristics and arrangement in the soil profile, except for texture of the surface horizon.

Soil structure: The combination or arrangement of primary soil particles into secondary particles, units, or peds.

Soil texture: The relative proportions of sand, silt, and clay sized particles present within a soil.

Stooling: A form of asexual reproduction in which new shoots are produced at the base of senescing stems, often resulting in a multitrunk growth habit.

Topography: The configuration of a surface, including its relief and the position of its natural and man-made features.

Transect: A line on the ground along which observations are made at some interval.

Transition zone: The area in which a change from wetlands to non-wetlands occurs. The transition zone may be narrow or broad.

Transpiration: The process in plants by which water vapor is released into the gaseous environment, primarily through stomata.

Tree layer: A vegetative stratum composed of woody plants more than 3.0 inches in diameter at breast height, regardless of height. Also referred to as the overstory layer.

Typically adapted: A term that refers to a species being normally or commonly suited to a given set of environmental conditions, due to some feature of its morphology, physiology, or reproduction.

Value (soil color): The relative intensity or lightness of a color; approximately a function of the square root of the total amount of light reflected from a surface; one of the three variables of color.

Vegetation: The sum total of plants that are growing within a certain area.

Vegetation layer: A subunit of a plant community in which all component species exhibit the same growth form (e.g. trees, sapling/shrub, herbaceous).

Watermark: A line on a tree or other upright structure that represents the maximum static water level reached during an inundation event.

Water table: The upper surface of groundwater or that level below which the soil is saturated with water.

Wetland: Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh. (Section 324.30301(d), Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.)

Wetland boundary: The point on the ground at which a shift from wetland to non-wetlands occurs.

Wetland hydrology: The inflow and outflow of water through a wetland and its interaction with other site factors.

Wetland identification: The procedure by which an area is evaluated for the presence or absence of wetlands.

Wetland soil: See 'hydric soil.'

Wetland vegetation: Plants that exhibit adaptations to allow, under normal conditions, germination or propagation and to allow growth with at least their root systems in water or saturated soil. (Administrative Rule R 281.921(1)(g) for Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.) See 'hydrophytic vegetation.'

