

Appendix A Glossary and Acronyms

A horizon. A mineral soil horizon that formed at the surface or below a O horizon where organic material is accumulating. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Abiotic. Not living. Deposition of suspended sediments on floodplains is an abiotic process. *Source: Technical Report WRP-DE-4*

Nonliving (usually refers to substances or environmental factors). *Source: NAP, Wetlands*

Absolute cover. In vegetation sampling, the percentage of the ground surface that is covered by the aerial portions (leaves and stems) of a plant species when viewed from above. Due to overlapping plant canopies, the sum of absolute cover values for all species in a community or stratum may exceed 100 percent. In contrast, "relative cover" is the absolute cover of a species divided by the total coverage of all species in that stratum, expressed as a percent. Relative cover cannot be used to calculate the prevalence index. *Source: ERDC/EL TR-10-16*

Abutting. For a wetland, it abuts a tributary if it is not separated from the tributary by uplands, a berm, dike, or similar feature. *Source: JD Guidebook*

Accreting areas. Landscape positions in which soil material accumulates through deposition from higher elevations or upstream positions more rapidly than the rate at which soil material is being lost through erosion. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Accretion. Vertical accumulation of sediments or organic matter. If organic matter is accumulating as a result of photosynthesis, the process is biotic and may result in biogenic landscapes such as peat bogs. *Source: Technical Report WRP-DE-4*

Active water table. A condition in which the zone of soil saturation fluctuates, resulting in periodic anaerobic soil conditions. Soils with an active water table often contain bright mottles and matrix chromas of 2 or less. *Source: USACE WRPTR Y-87-1*

Adaptation. A modification of a species that makes it more fit for existence under the conditions of its environment. *Source: USACE WRPTR Y-87-1*

Adjacent. Bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands." *Source: 33 CFR 328.3 (c)*

Adventitious roots. Roots found on plant stems in positions where they normally do not occur. *Source: USACE WRPTR Y-87-1*

Root that grows from plant parts other than the primary root. Often developed in flood-tolerant and flood-intolerant plants just above the anaerobic zone when the plants are flooded; can develop when plants are engulfed by sediment or moss. *Source: NAP, Wetlands*

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. *Source: USACE WRPTR Y-87-1*

Aerobic. A situation in which molecular oxygen is a part of the environment. *Source: USACE WRPTR Y-87-1*

Occurring in the presence of free molecular oxygen. Obligate aerobic bacteria cannot be active in the absence of oxygen. *Source: Technical Report WRP-DE-4*

Growing or proceeding only in the presence of free oxygen, as in aerobic respiration. Living, active, or occurring only in the presence of oxygen. *Source: NAP, Wetlands*

Aggradation. Deposition of alluvial materials resulting in increased elevations. *Source: NAP, Wetlands*

Alkalinity. The capacity of water to buffer changes in pH. The carbonate buffering system is the most common. See buffered water end hardness. *Source: Technical Report WRP-DE-4*

Alluvial. Pertaining to alluvium, or material transported by flowing water. *Source: Technical Report WRP-DE-4*

Alluvial swamp. A forested floodplain wetland with soils consisting generally of fine-grained sediments that have been deposited by overbank transport of sediments from a stream. *Source: Technical Report WRP-DE-4*

Alluvium. Sediment deposited by flowing water, as in a river bed, flood plain, or delta. *Source: NAP, Wetlands*

Altered wetland. Area affected by anthropogenic or natural events, such that one or more indicators of relative wetland character is absent, obscured, or provides information no longer representative of original condition. *Source: NAP, Wetlands*

Anaerobic. A situation in which molecular oxygen is absent (or effectively so) from the environment. *Source: USACE WRPTR Y-87-1*

A condition in which molecular oxygen is virtually absent from the soil. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Anoxic. Absence of molecular oxygen. *Source: NAP, Wetlands*

Aquic soil. Soil that currently experiences continuous or periodic saturation and reduction. Presence indicated by redoximorphic features and verified by measuring saturation and reduction, except in artificially drained soils. *Source: NAP, Wetlands*

Aquifer, confined. An aquifer that is overlain by an aquiclude or aquitard, and thus does not have a water surface in direct contact with the atmosphere. *Source: Technical Report WRP-DE-4*

Aquifer, perched. A region in the unsaturated zone where the soil may be locally saturated because it overlies a low-permeability unit. *Source: Technical Report WRP-DE-4*

Aquifer, phreatic. The zone that contains unfrozen fresh water.

Source: Technical Report WRP-DE-4

Aquifer, surficial. The uppermost region of the aquifer that is near the land surface.

Source: Technical Report WRP-DE-4

Aquifer, unconfined. An aquifer that is in direct vertical contact with the atmosphere through open pores. Synonymous with water-table aquifer.

Source: Technical Report WRP-DE-4

Aquitard. A layer of soil or rock that retards the downward flow of water and is capable of perching water above it. For the purposes of this supplement, the term aquitard also includes the term aquiclude, which is a soil or rock layer that is incapable of transmitting significant quantities of water under ordinary hydraulic gradients.

Source: ERDC/EL TR-10-16

Aquatic environment and aquatic ecosystem. Waters of the United States, including wetlands, which serve as habitat for interrelated and interacting communities and populations of plants and animals.

Source: 40 CFR §230.3 (b)

Aquatic roots. Roots that develop on stems above the normal position occupied by roots in response to prolonged inundation.

Source: USACE WRPTR Y-87-1

Aquatic moisture regime. A moist reducing soil moisture regime nearly free of dissolved oxygen due to saturation by ground water or its capillary fringe and occurring at periods when the soil temperature at 19.7 in. is greater than 5° C

Source: USACE WRPTR Y-87-1

Aquic conditions. Conditions in the soil represented by depth of saturation, occurrence of reduction, and redoximorphic features.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Arched roots. Roots produced on plant stems in a position above the normal position of roots, which serve to brace the plant during and following periods of prolonged inundation.

Source: USACE WRPTR Y-87-1

Areal cover. A measure of dominance that defines the degree to which above-ground portions of plants (not limited to those rooted in a sample plot) cover the ground surface. It is possible for the total areal cover in a community to exceed 100 percent because (a) most plant communities consist of two or more vegetative strata; (b) areal cover is estimated by vegetative layer; and (c) foliage within a single layer may overlap.

Source: USACE WRPTR Y-87-1

Artesian. The condition of water flowing freely from uncapped wells because it originates from a confined or semiconfined aquifer for which the potentiometric surface is above the ground surface.

Source: Technical Report WRP-DE-4

Artificial drainage. The use of human efforts and devices to remove free water from the soil surface or from the soil profile. The hydrology may also be modified by levees and dams, which keep water from entering a site.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Removal of free water from soil by surface mounding, ditches or subsurface tiles to the extent that water table levels are changed significantly in connection with specific land uses.

Source: NAP, Wetlands

Atypical situation. Areas in which one or more parameters (vegetation, soil, and/or hydrology) have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators of the parameter. *Source: USACE WRPTR Y-87-1*

Backwater flooding. Situations in which the source of inundation is overbank flooding from a nearby stream. *Source: USACE WRPTR Y-87-1*

Bank. The ground that borders or slopes upward from the bed of a waterway and that confines water to the channel during the normal course of flow. *Source: 312 IAC 10-2-4*

Bankfull. The water level, or state, at which a stream, river or lake is at the top of its banks and any further rise would result in water moving into the flood plain. It may be identified by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. *Source: <http://www.swg.usace.army.mil/Portals/26/docs/regulatory/Streams/Terminology%20June%202013.pdf> [*]*

Bankfull discharge. The dominant channel forming flow with a recurrence interval seldom outside the one to two year range. *Source: **

Bankfull width. Channel width at bankfull discharge. *Source: **

Basal area. The cross-sectional area of a tree trunk measured in square inches, square centimeters, etc. Basal area is normally measured at 4.5 ft 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. This term is also applicable to the cross-sectional area of a clumped herbaceous plant, measured at 1.0 in. above the soil surface. *Source: USACE WRPTR Y-87-1*

Bed. The surface rock or soil underlying a waterway. *Source: 312 IAC 10-2-6*

Bedload, sediment. Sediments that move along the bottom of a stream channel. *Source: Technical Report WRP-DE-4*

Bedrock confined channel. A stream channel that has as its bottom the bedrock that is normally undergoing erosive downcutting. *Source: Technical Report WRP-DE-4*

Bench mark. A fixed, more or less permanent reference point or object, the elevation of which is known. The U.S. Geological Survey (USGS) installs brass caps in bridge abutments or otherwise permanently sets bench marks at convenient locations nationwide. The elevations on these marks are referenced to the National Geodetic Vertical Datum (NGVD), also commonly known as mean sea level (MSL). Locations of these bench marks on USGS quadrangle maps are shown as small triangles. However, the marks are sometimes destroyed by construction or vandalism. The existence of any bench mark should be field verified before planning work that relies on a particular reference point. The USGS and/or local state surveyor's office can provide information on the existence, exact location, and exact elevation of bench marks. *Source: USACE WRPTR Y-87-1*

Biotic. Refers to living processes or entities. *Source: Technical Report WRP-DE-4*

Bog. A peatland that is nutrient poor because it lacks access to substantial quantities of mineral-rich water. *Source: Technical Report WRP-DE-4*

Bottomland. General term that refers to floodplain wetlands. *Source: Technical Report WRP-DE-4*

Buffered water. Water that is resistant to changes in pH. See alkalinity and hardness. *Source: Technical Report WRP-DE-4*

Buried soil. A once-exposed soil now covered by an alluvial, loessal, or other deposit (including man-made). *Source: USACE WRPTR Y-87-1*

Canopy layer. The uppermost layer of vegetation in a plant community. In forested areas, mature trees comprise the canopy layer, while the tallest herbaceous species constitute the canopy layer in a marsh. *Source: USACE WRPTR Y-87-1*

Capillarity. The phenomenon of adhesive forces between water and solids that results in matrix potential in soil-water systems. *Source: Technical Report WRP-DE-4*

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. *Source: USACE WRPTR Y-87-1*

The saturated zone in soils above the water table as a result of capillarity. *Source: Technical Report WRP-DE-4*

Catchment. A term similar to watershed, which consists of all of the land upstream from a point where rainfall may potentially flow. *Source: Technical Report WRP-DE-4*

Channel. An open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water. *Source: FGDC, Classification of Wetlands and Deepwater Habitats of the United States*

The natural and artificial channel of a waterway. *Source: 312 IAC 10-2-10*

Channel capacity. The discharge of a stream just prior to overbank flow. *Source: Technical Report WRP-DE-4*

Channelized flow. Flow that is confined to a channel in contrast to unchannelized (nonchannelized) flow or overland flow. *Source: Technical Report WRP-DE-4*

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. *Source: USACE WRPTR Y-87-1*

Chroma. The relative purity or saturation of a color; intensity of distinctive hue as related to grayness; one of the three variables of color. *Source: USACE WRPTR Y-87-1*

Circumneutral. Water with a pH of around 7. *Source: Technical Report WRP-DE-4*

Class I Wetland. An isolated wetland described by one (1) or both of the following:

(A) At least 50 percent (50%) of the wetland has been disturbed or affected by human activity or development by one (1) or more of the following:

- (i) Removal or replacement of the natural vegetation.
- (ii) Modification of the natural hydrology.

(B) The wetland supports only minimal wildlife or aquatic habitat or hydrologic function because the wetland does not provide critical habitat for threatened or endangered species listed in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and the wetland is characterized by at least one (1) of the following:

- (i) The wetland is typified by low species diversity.
- (ii) The wetland contains greater than 50 percent (50%) areal coverage of nonnative invasive species of vegetation.
- (iii) The wetland does not support significant wildlife or aquatic habitat.
- (iv) The wetland does not possess significant hydrologic function.

Source: 327 IAC 17-1-3 (1)

Class II Wetland. Means either of the following:

(A) An isolated wetland that is not a Class I or Class III wetland.

(B) A type of wetland listed in [327 IAC 17-1-3 (3)] that would meet the definition of Class I wetland if the wetland were not a rare or ecologically important type. *Source: 327 IAC 17-1-3 (2)*

Class III Wetland. An isolated wetland:

(A) that:

(i) is located in a setting undisturbed or minimally disturbed by human activity or development; and

(ii) supports more than minimal wildlife or aquatic habitat or hydrologic function; or

(B) unless classified as a Class II wetland under subdivision (2)(B), that is of one (1) of the following rare and ecologically important types:

- (i) Acid bog.
- (ii) Acid seep.
- (iii) Circumneutral bog.
- (iv) Circumneutral seep.
- (v) Cypress swamp.
- (vi) Dune and swale.
- (vii) Fen.
- (viii) Forested fen.
- (ix) Forested swamp.
- (x) Marl beach.
- (xi) Muck flat.
- (xii) Panne.
- (xiii) Sand flat.
- (xiv) Sedge meadow.
- (xv) Shrub swamp.
- (xvi) Sinkhole pond.
- (xvii) Sinkhole swamp.
- (xviii) Wet floodplain forest.
- (xix) Wet prairie.
- (xx) Wet sand prairie.

Source: 327 IAC 17-1-3 (3)

Closed depressions. Low-lying areas that are surrounded by higher ground and have no natural outlet for surface drainage. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

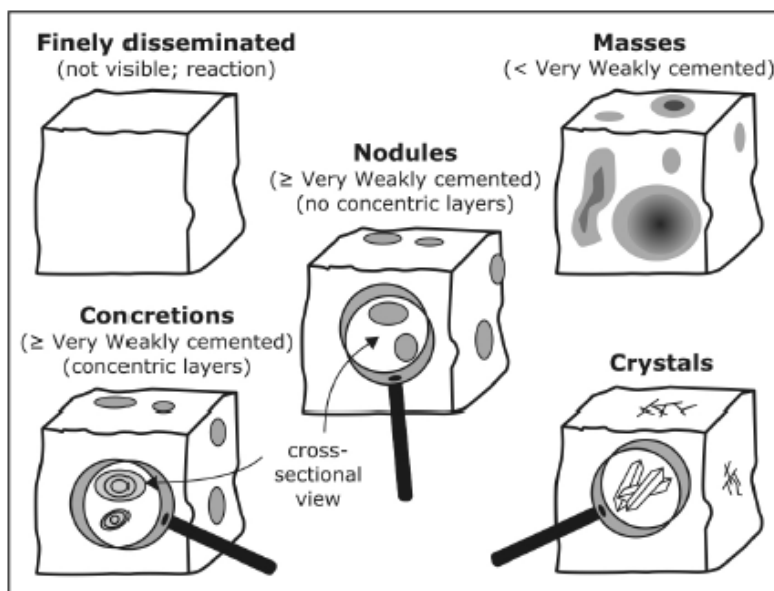
Common. When referring to redox concentrations and/or depletions, "common" represents 2 to 20 percent of the observed surface. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Concave landscapes. Landscapes in which the surface curves downward. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Comprehensive wetland determination. A type of wetland determination that is based on the strongest possible evidence, requiring the collection of quantitative data. *Source: USACE WRPTR Y-87-1*

Concretion. A local concentration of chemical compounds (e.g., calcium carbonate, iron oxide) in the form of a grain or nodule of varying size, shape, hardness, and color. Concretions of significance in hydric soils are usually iron and/or manganese oxides occurring at or near the soil surface, which develop under conditions of prolonged soil saturation. *Source: USACE WRPTR Y-87-1*

Concentrations. Soil features that form by accumulation of material during the process of soil formation. Dominant processes are chemical dissolution/precipitation; oxidation and reduction; and physical and/or biological removal, transport, and accrual. Types of concentrations includes; masses, nodules, concretions, crystals and biological concentrations such as root sheaths and worm casts. *Source: USDA-NRCS, Field Book for Describing and Sampling Soils.*



Contrast. The color difference between a redox concentration and the dominant matrix color. Differences are classified as faint, distinct, or prominent. *Source: USDA-NRCS, Field Book for Describing and Sampling Soils.*

Contour. An imaginary line of constant elevation on the ground surface. The corresponding line on a map is called a "contour line." *Source: USACE WRPTR Y-87-1*

Cowardin classification. A system developed by the USFWS to support the classification, inventory and monitoring of wetland habitats. There are three freshwater systems: lucastrine, palustrine and riverine. These systems are further described by subsystem, class and modifiers. *Source: FWS/OBS-79/31*

Cumulative rise in water table. The sum of increases in water table over a specified period of time, normally as a consequence of influxes of water because of precipitation and lateral surface transport. *Source: Technical Report WRP-DE-4*

Cutbank. The outside meander of a stream channel that is undergoing erosion by lateral migration of the channel. *Source: Technical Report WRP-DE-4*

Cypress strands. Shallow drainages dominated by cypress trees. Channels are poorly defined such that overbank flow is quickly exceeded with minor increases in discharge.

Source: Technical Report WRP-DE-4

Deepwater aquatic habitat. Any open water area that has a mean annual water depth >6.6 ft, lacks soil, and/or is either unvegetated or supports only floating or submersed macrophytes.

Source: USACE WRPTR Y-87-1

Permanently flooded lands lying below the deepwater boundary of wetlands. Deepwater habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live, whether or not they are rooted in, or attached to, the substrate.

Source: FGDC, Classification of Wetlands and Deepwater Habitats of the United States

Denitrification. The microbially mediated heterotrophic process of converting nitrate or nitrite to either nitrous oxide or dinitrogen gas.

Source: Technical Report WRP-DE-4

Density. The number of individuals of a species per unit area.

Source: USACE WRPTR Y-87-1

Depressional. A wetland geomorphic setting that occurs in depressions, but usually at the headwaters of a local drainage. Consequently, surface flows are restricted.

Source: Technical Report WRP-DE-4

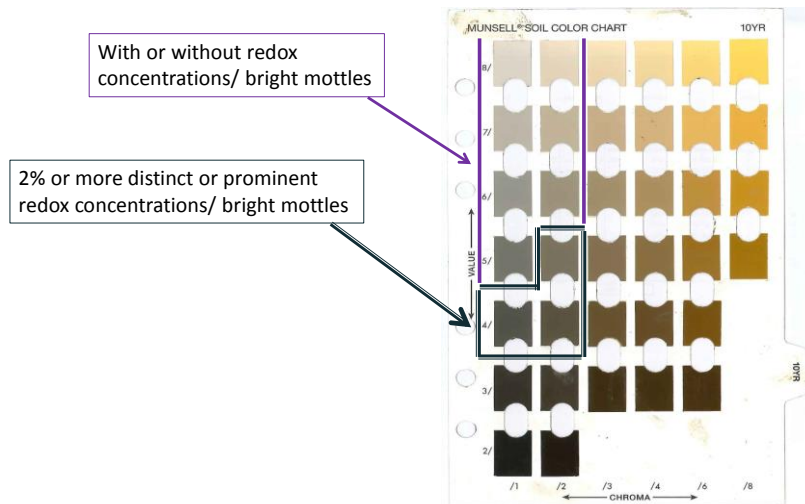
Depressional wetland. A wetland located in a depression in the land-scape so that the catchment area for surface runoff is generally small.

Source: Technical Report WRP-DE-4

Depleted matrix. For loamy and clayey material (and sandy material in areas of indicators A 11 and A12), a depleted matrix refers to the volume of a soil horizon or subhorizon in which the processes of reduction and translocation have removed or transformed iron, creating colors of low chroma and high value. A, E, and calcic horizons may have low chromas and high values and may therefore be mistaken for a depleted matrix; however, they are excluded from the concept of depleted matrix unless the soil has common or many distinct or prominent redox concentrations occurring as soft masses or pore linings. In some areas the depleted matrix may change color upon exposure to air (see Reduced matrix); this phenomenon is included in the concept of depleted matrix. The following combinations of value and chroma identify a depleted matrix:

1. Matrix value of 5 or more and chroma of 1 or less with or without redox concentrations occurring as soft masses and/or pore linings; or
2. Matrix value of 6 or more and chroma of 2 or less with or without redox concentrations occurring as soft masses and/or pore linings; or
3. Matrix value of 4 or 5 and chroma of 2 and 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings; or
4. Matrix value of 4 and chroma of 1 and 2 percent or more distinct or prominent redox concentrations occurring as soft masses and/or pore linings.

Source: USDA, Field Indicators of Hydric Soils in the U.S



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.

Source: USACE WRPTR Y-87-1

Organic matter undergoing decomposition, with the attendant protists, protozoans, and other organisms that serve as food for detritus feeders.

Source: Technical Report WRP-DE-4

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

Source: USACE WRPTR Y-87-1

Diapause. A period during which growth or development is suspended and physiological activity is diminished, as in certain aquatic invertebrates in response to drying of temporary wetlands.

Source: ERDC/EL TR-10-16

Diffuse boundary. Used to describe redoximorphic features that grade gradually from one color to another. The color grade is commonly more than 2 mm wide. "Clear" is used to describe boundary color gradations intermediate between sharp and diffuse.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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

Source: USACE WRPTR Y-87-1

Distinct¹. Readily seen but contrasting only moderately with the color to which compared. The contrast is distinct if:

1. Delta hue = 0, then
 - a) Delta value ≤ 2 and delta chroma > 1 to < 4 , or
 - b) Delta value > 2 to < 4 and delta chroma < 4 .
2. Delta hue = 1, then

- a) Delta value ≤ 1 and delta chroma > 1 to < 3 , or
- b) Delta value > 1 to < 3 and delta chroma < 3 .
- 3. Delta hue = 2, then
 - a) Delta value = 0 and delta chroma > 0 to < 2 , or
 - b) Delta value > 0 to < 2 and delta chroma < 2 .

¹Regardless of the magnitude of hue difference, where both colors have value ≤ 3 and chroma ≤ 2 , the contrast is faint. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Disturbed area. Area where vegetation, soil, or hydrology have been significantly altered, making a wetland determination difficult. *Source: NAP, Wetlands*

Ditch. A feature that includes roadside ditches that are excavated wholly in and draining only uplands and do not carry a relatively permanent flow of water, *Source: JD Guidebook*

Dominance. A descriptor of vegetation that is related to the standing crop of a species in an area, usually measured by height, areal cover, or basal area (for trees). *Source: USACE WRPTR Y-87-1*

Dominance test. Hydrophytic vegetation is present when more than 50 percent of the dominant plant species across all strata are rated OBL, FACW, or FAC.

Source: ERDC/EL TR-10-16

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across all Strata:	0	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	0.00%	(A/B)

Dominant species. A plant species that exerts a controlling influence on or defines the character of a community. *Source: USACE WRPTR Y-87-1*

Drainage area. The total land area measured in a horizontal plane and enclosed by a topographic divide from which surface run-off from precipitation normally drains by gravity into a waterway above a specified location. The term includes an area that is ineffective due to karst topography, subsurface drains, or diversions. *Source: 312 IAC 10-2-20*

Drained. A condition in which ground or surface water has been reduced or eliminated from an area by artificial means. *Source: USACE WRPTR Y-87-1*

Drawdown of water table. The phenomenon of a natural decrease in water table usually as a result of evapotranspiration, or unnatural decrease as a result of consumptive withdrawal of groundwater. *Source: Technical Report WRP-DE-4*

Drift line. An accumulation of debris along a contour (parallel to the water flow) that represents the height of an inundation event. *Source: USACE WRPTR Y-87-1*

Duration (inundation/soil saturation). The length of time during which water stands at or above the soil surface (inundation), or during which the soil is saturated. As used herein, duration refers to a period during the growing season. *Source: USACE WRPTR Y-87-1*

Ecological tolerance. The range of environmental conditions in which a plant species can grow. *Source: USACE WRPTR Y-87-1*

Edaphic (control). The controls on plant-species distribution or function as a result of conditions in the soil in contrast to atmospheric controls. *Source: Technical Report WRP-DE-4*

Eluvial. The removal of soil material in suspension from a layer or layers of soil. *Source: NAP, Wetlands*

Embeddedness. The degree that cobble, gravel and boulder substrates are surrounded, impacted in, or covered by fine materials (sand and silt). Substrates are considered embedded if >50% of surface of the substrates are embedded in fine material. Embedded substrates cannot be easily removed. *Source: OhioEPA QHEI*

Emergent plant. A rooted herbaceous plant species that has parts extending above a water surface. *Source: USACE WRPTR Y-87-1*

Ephemeral stream. An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow. *Source: USACE NWP*

Epipedon. A horizon that has developed at the soil surface. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Episaturation. Condition in which the soil is saturated with water at or near the surface, but also has one or more unsaturated layers below the saturated zone. The zone of saturation is perched on top of a relatively impermeable layer. *Source: ERDC/EL TR-10-16*

Evapotranspiration. The combination of evaporation and transpiration expressed in the same units as precipitation. *Source: Technical Report WRP-DE-4*

Exempt isolated wetland.

- (A) An isolated wetland that is a voluntarily created wetland unless:
 - (i) the wetland is:
 - (AA) approved by the department for compensatory mitigation purposes in accordance with a permit issued under Section 404 of the Clean Water Act or IC 13-18-22; or
 - (BB) reclassified as an SRW [State Regulated Wetland] under IC 13-18-22-6(c); or
 - (ii) the owner of the wetland declares, by a written instrument:
 - (AA) recorded in the office of the recorder of the county or counties in which the wetland is located; and
 - (BB) filed with the department; that the wetland is to be considered in all respects to be an SRW.
- (B) An isolated wetland that exists as an incidental feature in or on any of the following:
 - (i) A residential lawn.
 - (ii) A lawn or landscaped area of a commercial or governmental complex.
 - (iii) Agricultural land.
 - (iv) A roadside ditch.
 - (v) An irrigation ditch.
 - (vi) A manmade drainage control structure.
- (C) An isolated wetland that is a fringe wetland associated with a private pond.

- (D) An isolated wetland that is, or is associated with, a manmade body of surface water of any size created by:
- (i) excavating;
 - (ii) diking; or
 - (iii) excavating and diking;
- dry land to collect and retain water for or incidental to agricultural, commercial, industrial, or aesthetic purposes.
- (E) An isolated wetland that is a Class I wetland with an area, as delineated, of one-half ($\frac{1}{2}$) acre or less.
- (F) An isolated wetland that is a Class II wetland with an area, as delineated, of one-fourth ($\frac{1}{4}$) acre or less.
- (G) An isolated wetland that is located on land:
- (i) subject to regulation under the United States Department of Agriculture wetland conservation rules, also known as Swampbuster (16 U.S.C. 3801-3862), because of voluntary enrollment in a federal farm program; and
 - (ii) used for agricultural or associated purposes allowed under the rules referred to in this clause.
- (H) For purposes of clause (B), an isolated wetland exists as an incidental feature:
- (i) if:
 - (AA) the owner or operator of the property or facility described in clause (B) does not intend the isolated wetland to be a wetland;
 - (BB) the isolated wetland is not essential to the function or use of the property or facility; and
 - (CC) the isolated wetland arises spontaneously as a result of damp soil conditions incidental to the function or use of the property or facility; and
 - (ii) if the isolated wetland satisfies any other factors or criteria established in rules that are:
 - (AA) adopted by the water pollution control board; and
 - (BB) not inconsistent with the factors and criteria described in this clause.
- (I) The total acreage of Class I wetlands on a tract to which the exemption described in clause (E) may apply is limited to the larger of the following:
- (i) The acreage of the largest individual isolated wetland on the tract that qualifies for the exemption described in clause (E).
 - (ii) Fifty percent (50%) of the cumulative acreage of all individual isolated wetlands on the tract that would qualify for the exemption described in clause (E) but for the limitation of this subdivision.
- (J) The total acreage of Class II wetlands on a tract to which the exemption described in clause (F) may apply is limited to the larger of the following:
- (i) The acreage of the largest individual isolated wetland on the tract that qualifies for the exemption described in clause (F).
 - (ii) Thirty-three and one-third percent ($33\frac{1}{3}\%$) of the cumulative acreage of all individual isolated wetlands on the tract that would qualify for the exemption described in clause (F) but for the limitation of this subdivision.
- (K) An isolated wetland described in clause (E) or (F) does not include an isolated wetland on a tract that contains more than one (1) of the same class of wetland until the owner of the tract notifies the department that the owner has selected the isolated wetland to be an exempt isolated wetland under clause (E) or (F) consistent with the applicable limitations described in clauses (I) and (J).

Source: 327 IAC 17-1-3 (7)

Faint. Evident only on close examination. The contrast is faint if:

1. Delta hue = 0, then delta value ≤ 2 and delta chroma ≤ 1 , or
2. Delta hue = 1, then delta value ≤ 1 and delta chroma ≤ 1 , or
3. Delta hue = 2, then delta value = 0 and delta chroma = 0, or

Any delta hue if both colors have value ≤ 3 and chroma ≤ 2 .

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Farmed wetland. Area in which farming is compatible with wetland status. *Source: NAP, Wetlands*

Fe·Mn concretions. Firm to extremely firm, irregularly shaped bodies with sharp to diffuse boundaries. When broken in half, concretions have concentric layers.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Fe-Mn nodules. Firm to extremely firm, irregularly shaped bodies with sharp to diffuse boundaries. When broken in half, nodules do not have visibly organized internal structure.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Fen. A peatland that is fed by groundwater. Poor fen - A peatland that receives groundwater flow and achieves productivity intermediate between that of a rich fen and an ombrotrophic bog. Rich fen - A highly productive peatland often dominated by grasses or trees in contrast with shrubs and mosses.

Source: Technical Report WRP-DE-4

Few. When referring to redox concentrations and/or depletions, "few" represents less than 2 percent of the observed surface.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Fibers. Pieces of plant tissue in organic soil materials (excluding live roots) that: 1. Are large enough to be retained on a 100-mesh sieve (openings 0.15 mm across) when the materials are screened; and 2. Show evidence of the cellular structure of the plants from which they are derived; and 3. Either are 2 cm or less in their smallest dimension or are decomposed enough to be crushed and shredded with the fingers. Pieces of wood that are larger than 2 cm in cross section are so undecomposed that they cannot be crushed and shredded with the fingers, such as large branches, logs and stumps are not considered fibers but are considered coarse fragments. In highly decomposed organic material fibers are nearly absent. In moderately decomposed organic material the fibers may be largely preserved but are easily broken down by rubbing between the thumb and finger. If the organic materials are moderately decomposed, the fibers more of the volume, exclusive of coarse fragments, normally consists of fibers.

Source: USDA, Soil Taxonomy

Fibric soil materials. The least decomposed of all of the organic soil materials. They contain large amounts of fibers that are well preserved and can be linked to botanical origin. They have a low bulk density and a high water content when saturated. They are commonly light yellowish brown, dark brown, or reddish brown. They are organic soil materials that either: 1. Contain three-fourths or more (by volume) fibers after rubbing, excluding coarse fragments; or 2. Contain two-fifths or more (by volume) fibers after rubbing, excluding coarse fragments, and yield color values and chromas of 7/1, 7/2, 8/1, 8/2, or 8/3. See peat.

Source: USDA, Soil Taxonomy

Field capacity. The percentage of water remaining in a soil after it has been saturated and after free drainage is negligible. *Source: USACE WRPTR Y-87-1*

Fill material. Any material placed in an area to increase surface elevation. *Source: USACE WRPTR Y-87-1*

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. *Source: USACE WRPTR Y-87-1*

Floodplain. The land beside a river that receives overbank flooding when discharge exceeds channel capacity. *Source: Technical Report WRP-DE-4*

Flora. A list of all plant species that occur in an area. *Source: USACE WRPTR Y-87-1*

Flow, groundwater. Water that flows below the land surface through a porous medium normally under saturated conditions. *Source: Technical Report WRP-DE-4*

Flow, near-surface. Flow that occurs just below the surface of a wetland in a layer that is often more permeable than the more consolidated sediments just below. *Source: Technical Report WRP-DE-4*

Flow, surface. Nonchannelized flow (unchannelized) that occurs above the surface. Overland flow. *Source: Technical Report WRP-DE-4*

Fragmental soil material. Soil material that consists of 90 percent or more rock fragments; less than 10 percent of the soil consists of particles 2 mm or smaller. *Source: ERDC/EL TR-10-16*

Frequency (inundation or soil saturation). The periodicity of coverage of an area by surface water or soil saturation. It is usually expressed as the number of years (e.g., 50 years) the soil is inundated or saturated at least once each year during part of the growing season per 100 years or as a 1-, 2-, 5- year, etc., inundation frequency. *Source: USACE WRPTR Y-87-1*

Frequency (vegetation). The distribution of individuals of a species in an area. It is quantitatively expressed as

$$(\text{Number of samples containing species A} / \text{Total number of samples}) \times 100$$

More than one species may have a frequency of 100 percent within the same area. *Source: USACE WRPTR Y-87-1*

Frequently flooded. A flooding class in which flooding is likely to occur often under normal weather conditions (more than 50 percent chance of flooding in any year or more than 50 times in 100 years). *Source: USACE WRPTR Y-87-1*

Frequently flooded or ponded. A frequency class in which flooding or ponding is likely to occur often under usual weather conditions (a chance of more than 50 percent in any year, or more than 50 times in 100 years). *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Function (ecosystem). Processes that are necessary for the self-maintenance of an ecosystem such as primary production, nutrient cycling, decomposition, etc. The term is used primarily as a distinction from values. The term "values" is associated with society's perception of ecosystem functions. Functions occur in ecosystems regardless of whether or not they have values.

Source: Technical Report WRP-DE-4

Functional profile. Narrative or quantitative information on a wetland being assessed that describes the ecological significance of properties of water source, hydrodynamics, etc.

Source: Technical Report WRP-DE-4

Geomorphic. A term that refers to the shape of the land surface. *Source: Technical Report WRP-DE-4*

Geomorphic setting. The location in a landscape, such as stream head-water locations, valley bottom depression, and coastal position.

Source: Technical Report WRP-DE-4

Glaucous. A mineral aggregate that contains a micaceous mineral resulting in a characteristic green color.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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.

Source: USACE WRPTR Y-87-1

Gleyed matrix. A gleyed matrix has one of the following combinations of hue, value, and chroma and the soil is not glauconitic:

1. 10Y, 5GY, 10GY, 10G, 5BG, 10BG, 5B, 10B, or 5PB with value of 4 or more and chroma of 1; or
2. 5G with value of 4 or more and chroma of 1 or 2; or
3. N with value of 4 or more.

Source: ERDC/EL TR-10-16

Glide. An area common to most modified stream channels that do not have distinguishable pool, run, and riffle habitats; the current and flow is similar to that of a canal; the water surface gradient is nearly zero.

Source: OhioEPA QHEI

Gravity flow. Flow of water controlled by gravity instead of strictly piezometric head differences.

Source: Technical Report WRP-DE-4

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

Source: USACE WRPTR Y-87-1

Ground water discharge. Flow originating from an aquifer that flows to the surface.

Source: Technical Report WRP-DE-4

Ground water inflows. Flow of water received by a wetland or some other area as a result of groundwater discharge via lateral seepage or upward movement.

Source: Technical Report WRP-DE-4

Ground water recharge. Flow of water from an area that contributes to an aquifer. Most upland areas contribute to groundwater recharge.

Growing season. The portion of the year when soil temperatures at 1 9.7 in. below the soil surface are higher than biologic zero (5 °C) (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). *Source: USACE WRPTR Y-87-1*

In the Midwest Region, growing season dates are determined through onsite observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/ or (2) soil temperature (see Chapter 4 for details). If onsite data gathering is not practical, growing season dates may be approximated by using WETS tables available from the NRCS National Water and Climate Center to determine the median dates of 28 °F (-2.2 °C) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station. *Source: ERDC/EL TR-10-16*

Habitat. The environment occupied by individuals of a particular species, population, or community. *Source: USACE WRPTR Y-87-1*

Hardness. A property of water that is roughly proportional to the ion concentration. Water from calcareous aquifers is often hard because of the calcium carbonate content. Such waters are very resistant to fluctuations in pH. *Source: Technical Report WRP-DE-4*

Headwater flooding. A situation in which an area becomes inundated directly by surface runoff from upland areas. *Source: USACE WRPTR Y-87-1*

Hemic soil materials. Are intermediate in their degree of decomposition and have intermediate values for fiber content, bulk density and water content. They are partly altered both physically and biochemically. Colors are commonly dark grayish brown to dark reddish brown. Fibers are largely destroyed when the wet organic material is rubbed. See mucky peat. *Source: USDA, Soil Taxonomy*

Herb. A nonwoody individual of a macrophytic species. In this manual, seedlings of woody plants (including vines) that are less than 3.2 ft in height are considered to be herbs. *Source: USACE WRPTR Y-87-1*

Herbaceous layer. Any vegetative stratum of a plant community that is composed predominantly of herbs. *Source: USACE WRPTR Y-87-1*

High pH. pH of 7.9 or higher. Includes moderately alkaline, strongly alkaline, and very strongly alkaline. *Source: ERDC/EL TR-10-16*

Histic epipedon. An 8- to 16-inch soil layer at or near the surface that is saturated for 30 consecutive days or more during the growing season in most years and contains a minimum of 20 percent organic matter when no clay is present or a minimum of 30 percent organic matter when 60 percent or greater clay is present. *Source: USACE WRPTR Y-87-1*

Histosols. An order in soil taxonomy composed of organic soils that have organic soil materials in more than half of the upper 32 in (80 cm) or that are of any thickness if directly overlying bedrock.
Source: USACE WRPTR Y-87-1

Homogeneous vegetation. A situation in which the same plant species association occurs throughout an area.
Source: USACE WRPTR Y-87-1

Horizon. A layer, approximately parallel to the surface of the soil, distinguishable from adjacent layers by a distinctive set of properties produced by soil-forming processes.
Source: USDA, Field Indicators of Hydric Soils in the U.S.

Hue. A characteristic of color that denotes a color in relation to red, yellow, blue, etc; one of the three variables of color. Each color chart in the Munsell Color Book (Munsell Color 1975) consists of a specific hue.
Source: USACE WRPTR Y-87-1

Hydrarch succession. The sequence of community changes that occurs as an aquatic ecosystem fills with sediment and eventually, through mostly extrinsic factors, develops into a terrestrial ecosystem.
Source: Technical Report WRP-DE-4

Hydraulic conductivity. A coefficient describing the rate at which water can move through a permeable medium.
Source: Technical Report WRP-DE-4

Hydraulic gradient. The change in total head with a change in distance in a given direction. The direction is that which yields a maximum rate of decrease in head.
Source: Technical Report WRP-DE-4

Hydric soil. A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation (U.S. Department of Agriculture-Soil Conservation Service 1985). Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils.
Source: USACE WRPTR Y-87-1

Soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part (1991 National Technical Committee on Hydric Soils definition).
Source: NAP, Wetlands

Hydric soil condition. A situation in which characteristics exist that are associated with soil development under reducing conditions.
Source: USACE WRPTR Y-87-1

Hydrodynamics. The motion of water that generally corresponds to its capacity to do work such as transport sediments, erode soils, flush pore waters in sediments, fluctuate vertically, etc. Velocities can vary within each of three flow types: primarily vertical, primarily bidirectional and horizontal, and primarily unidirectional and horizontal. Vertical fluxes are driven by evapotranspiration and precipitation. Bidirectional flows are driven by astronomic tides and wind-driven seiches. Unidirectional flows are downslope movement that occurs from seepage slopes and on floodplains.
Source: Source: Technical Report WRP-DE-4

Hydrogen sulfide odor. An odor similar to the smell of rotten eggs.
Source: USDA, Field Indicators of Hydric Soils in the U.S.

Hydrogeomorphic. Of or pertaining to a synthesis of the geomorphic setting, the water source and its transport, and hydrodynamics. *Source: NAP, Wetlands*

Hydrologic regime. The sum total of water that occurs in an area on average during a given period. *Source: USACE WRPTR Y-87-1*

Hydrologic zone. An area that is inundated or has saturated soils within a specified range of frequency and duration of inundation and soil saturation. *Source: USACE WRPTR Y-87-1*

Hydrology. The science dealing with the properties, distribution, and circulation of water. *Source: USACE WRPTR Y-87-1*

Hydromorphic. Used to describe a wetland classification method based on position in the landscape, water sources, and factors that control the velocity of the water as it passes through the wetland. *Source: NAP, Wetlands*

Hydromorphic features. Features in the soil caused or formed by water. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Hydroperiod. The depth, duration, seasonality, and frequency of flooding. *Source: Technical Report WRP-DE-4*

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. *Source: USACE WRPTR Y-87-1*

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. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation. *Source: USACE WRPTR Y-87-1*

Hydrostatic head. A position of higher water table stand relative to a lower one. Water flows toward decreasing hydro-static heads, and not necessarily to lower elevations. See hydraulic gradient. *Source: Technical Report WRP-DE-4*

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. *Source: USACE WRPTR Y-87-1*

Importance value. A quantitative term describing the relative influence of a plant species in a plant community, obtained by summing any combination of relative frequency, relative density, and relative dominance. *Source: USACE WRPTR Y-87-1*

Indicator. An event, entity, or condition that typically characterizes a prescribed environment or situation; indicators determine or aid in determining whether or not certain stated circumstances exist. *Source: USACE WRPTR Y-87-1*

Water chemistry, species composition, soil characteristics, or some other feature that allows one to refer or predict certain ecosystem functions or other conditions.

Source: Technical Report WRP-DE-4

Organism, ecological community, or structural feature so strictly associated with a particular environmental condition that its presence indicates the existence of the condition.

Source: NAP, Wetlands

Indicator status. One of the five categories that describes the estimated probability of a plant species occurring in wetlands.

Source: USACE WRPTR Y-87-1

OBL - > 99%	obligate wetland plant
FACW - 67-99%	facultative wetland plant
FAC - 34-66%	facultative plant
FACU - 1-33%	facultative upland plant
UPL - < 1%	upland plant

Intercellular air space. A cavity between cells in plant tissues, resulting from variations in cell shape and configuration. Aerenchymous tissue (a morphological adaptation found in many hydrophytes) often has large intercellular air spaces.

Source: USACE WRPTR Y-87-1

Intermittent Stream. An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Source: USEPA

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

Source: USACE WRPTR Y-87-1

Isolated waters (including wetlands) - Geographically isolated features that lack a link to interstate commerce sufficient to serve as a basis for jurisdiction.

Source: JD Guidebook

Isolated Wetland. A wetland that is not subject to regulation under Section 404(a) of the Clean Water Act.

Source: 327 IAC 17-1-3 (8)

Kettles. Deep depressions in glaciated areas that resulted from the melting of an ice block that had been buried previously by glacial outwash. These small lakes may undergo hydrarch succession and fill with peat and become forested wetlands.

Source: Technical Report WRP-DE-4

Lacustrine System. Includes wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergent, emergent mosses or lichens with 30 or greater aerial coverage; and (3) total area of at least 8 hectares (ha) (20 acres)

Source: FGDC-STD-004-2013

Land resource region (LRR). LRRs are geographic areas characterized by a particular pattern of soils, climate, water resources, and land use. Each LRR is assigned a different letter of the alphabet (A-Z). LRRs are defined in U.S. Department of Agriculture Handbook 296 (USDA, NRCS, 2006b).

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Landform. Discrete, natural, individual earth-surface features mappable at common survey scales.

Source: USDA-NRCS, Field Book for Describing and Sampling Soils

Layer(s). A horizon, subhorizon, or combination of contiguous horizons or subhorizons sharing at least one property referred to in the indicators.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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

Source: USACE WRPTR Y-87-1

Liana. A layer of vegetation in forested plant communities that consists of woody vines. The term may also be applied to a given species.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

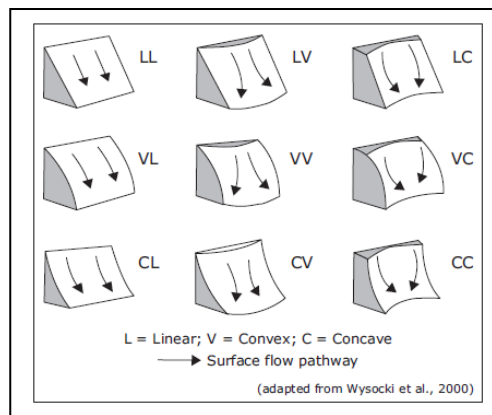
Local relief. The topographic variation in an area. Concave refers to a surface that curves inward and convex describes a surface that curves outward.

Long duration (flooding). A flooding class in which the period of inundation for a single event ranges from 7 days to 1 month.

Source: USACE WRPTR Y-87-1

Lotic. Pertaining to or living in flowing water.

Source: NAP, Wetlands



Macrophyte. Any plant species that can be readily observed without the aid of optical magnification. This includes all vascular plant species and mosses (e.g., Sphagnum spp.), as well as large algae (e.g., Cara spp., kelp).

Source: USACE WRPTR Y-87-1

Major land resource areas (MLRA). Major land resources areas are geographically associated divisions of land resource regions. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

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

Source: USACE WRPTR Y-87-1

Man-induced wetland. Any area that develops wetland characteristics due to some activity (e.g., irrigation) of man.

Source: USACE WRPTR Y-87-1

Many. When referring to redox concentrations and/or depletions, "many" represents more than 20 percent of the observed surface. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Mapping unit. As used in this manual, some common characteristic of soil, vegetation, and/or hydrology that can be shown at the scale of mapping for the defined purpose and objectives of a survey.

Source: USACE WRPTR Y-87-1

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Marsh. A wetland with emergent, herbaceous vegetation. *Source: Technical Report WRP-DE-4*

Masked. Through redoximorphic processes, the color of soil particles is hidden by organic material, silicate clay, iron, aluminum, or some combination of these.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Matrix. The dominant soil volume that is continuous in appearance and envelops microsites. When three colors occur, such as when a matrix, depletions, and concentrations are present, the matrix may represent less than 50 percent of the total soil volume.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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.

Source: USACE WRPTR Y-87-1

Metabolic processes. The complex of internal chemical reactions associated with life-sustaining functions of an organism.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Morphological adaptation. A feature of structure and form that aids in fitting a species to its particular environment. Examples include: buttressed tree trunks, pneumatophores, adventitious roots, shallow root systems, inflated leaves, stems or roots, polymorphic leaves (produce different types of leaves depending on the water level at the time of formation), floating leaves, floating stems, hypertrophied lenticels, multi-trunks or stooling, and oxygen pathways to roots.

Source: USACE WRPTR Y-87-1

Mottles. Spots or blotches of different color or shades of color interspersed within the dominant color in a soil layer, usually resulting from the presence of periodic reducing soil conditions.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Sapric organic soil material in which virtually all of the organic material is so decomposed that identification of plant forms is not possible. Bulk density is normally 0.2 or more. Muck has less than one-sixth fibers after rubbing, and its sodium pyrophosphate solution extract color has lower value and chroma than 5/1, 6/2, and 7/3.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Mucky modified mineral soil material. A USDA soil texture modifier, e.g., mucky sand. Mucky modified mineral soil material that has zero percent clay has between 5 and 12 percent organic carbon. Mucky modified mineral soil material that has 60 percent clay has between 12 and 18 percent organic carbon. Soils with an intermediate amount of clay have intermediate amounts of organic carbon. Where the organic component is peat (fibric material) or mucky peat (hemic material), mucky mineral soil material does not occur.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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

Source: USACE WRPTR Y-87-1

Mucky peat. Hemic organic material, which is characterized by decomposition that is intermediate between that of fibric material and that of sapric material. Bulk density is normally between 0.1 and 0.2 g/cm³. Mucky peat does not meet the fiber content (after rubbing) or sodium pyrophosphate solution extract color requirements for either fibric or sapric soil material.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

National Wetland Inventory (NWI). A program of the Fish and Wildlife Service that maps and categorizes wetlands of the United States. The categories used are those developed in the "Classification of Wetlands and Deep Water Habitats of the United States."

Source: Technical Report WRP-DE-4

Navigable. See traditional navigable waterway.

Near-surface flow. Flow that occurs just below the surface. It often occurs in the rhizosphere where hydraulic permeability is high. See Seepage.

Source: Technical Report WRP-DE-4

Nodules and concretions. Irregularly shaped, firm to extremely firm accumulations of iron and manganese oxides. When broken open, nodules have uniform internal structure whereas concretions have concentric layers.

Source: ERDC/EL TR-10-16

Nonchannelized flow. Normally reserved for surface flow that is diffuse and thus not confined to a channel. Also unchannelized and overland flow.

Source: Technical Report WRP-DE-4

Nonhydric soil. A soil that has developed under predominantly aerobic soil conditions. These soils normally support mesophytic or xerophytic species.

Source: USACE WRPTR Y-87-1

Nonwetland. Any area that has sufficiently dry conditions that indicators of hydrophytic vegetation, hydric soils, and/or wetland hydrology are lacking. As used in this manual, any area that is neither a wetland, a deepwater aquatic habitat, nor other special aquatic site.

Source: USACE WRPTR Y-87-1

Normal circumstances. The soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed. The determination of whether normal circumstances exist in a disturbed area involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation and consideration of the purpose and cause of the physical alterations to hydrology and vegetation.

Source: USACE WRPTR Y-87-1

Ombrotrophic bog. A peatland that receives precipitation as the sole source of water. Generally peat has accumulated enough to isolate the plants from acquiring nutrients from the underlying mineral strata. The elevated surface is indicative of tertiary mires. *Source: Technical Report WRP-DE-4*

Open Water. For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds. *Source: USACE NWP*

Ordinary High Water Mark. The line on the shore of a waterway established by the fluctuations of water and indicated by physical characteristics. Examples of these physical characteristics include the following: (1) a clear and natural line impressed on the bank; (2) shelving; (3) changes in the character of the soil; (4) the destruction of terrestrial vegetation, and; (5) the presence of litter or debris. *Source: 312 IAC 1-1-26 (1)*

That line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Source: 33 CFR 328.3 (e)

A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Source: USACE NWP

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Organic pan. A layer usually occurring at 12 to 30 in. 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. *Source: USACE WRPTR Y-87-1*

Organic soil. A soil is classified as an organic soil when it is: (1) saturated for prolonged periods (unless artificially drained) and has more than 30 percent organic matter if the mineral fraction is more than 50 percent clay, or more than 20 percent organic matter if the mineral fraction has no clay; or (2) never saturated with water for more than a few days and having more than 34 percent organic matter. *Source: USACE WRPTR Y-87-1*

Organic soil material. Soil material that is saturated with water for long periods or artificially drained and, excluding live roots, has 18 percent or more organic carbon with 60 percent or more clay or 12 percent or more organic carbon with 0 percent clay. Soils with an intermediate amount of clay have an intermediate amount of organic carbon. If the soil is never saturated for more than a few days, it contains 20 percent or more organic carbon. Organic soil material includes muck, mucky peat, and peat. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Overbank flooding. Any situation in which inundation occurs as a result of the water level of a stream rising above bank level. *Source: USACE WRPTR Y-87-1*

Excess flow to a floodplain when the discharge of a stream exceeds channel capacity.

Source: Technical Report WRP-DE-4

Overbank transport. Movement of water from the channel to the floodplain surface.

Source: Technical Report WRP-DE-4

Overland flow. Water movement parallel with the soil surface. *Source: Technical Report WRP-DE-4*

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.

Source: USACE WRPTR Y-87-1

Oxidized rhizosphere. Precipitation of yellowish-red ferric compounds around the roots and rhizomes of plants growing in frequently saturated soils that otherwise exhibit a reduced matrix. Caused by the transport of oxygen from leaves to roots and rhizomes through a system of air-filled pore space in plant tissue (aerenchyma).

Source: NAP, Wetlands

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.

Source: USACE WRPTR Y-87-1

Palustrine. Includes all nontidal wetlands dominated by trees, shrubs, persistent emergent, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2.5, (8.2) ft) at low water; and salinity due to ocean derived salts less than 0.5 ppt.

Source: FGDC-STD-004-2013

Parameter. A characteristic component of a unit that can be defined. Vegetation, soil, and hydrology are three parameters that may be used to define wetlands.

Source: USACE WRPTR Y-87-1

Parent material. The unconsolidated and more or less weathered mineral or organic matter from which a soil profile develops.

Source: USACE WRPTR Y-87-1

Peat. Fibric organic soil material. The plant forms can be identified in virtually all of the organic material. Bulk density is normally <0.1. Peat has three-fourths or more fibers after rubbing, or it has two-fifths or more fibers after rubbing and has sodium pyrophosphate solution extract color of 7/1, 7/2, 8/2, or 8/3.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Perched. Describes an aquifer that is underlain by an unsaturated zone.

Source: Technical Report WRP-DE-4

Periodically. Used to define detectable regular or irregular saturated soil conditions or inundation, resulting from ponding of ground water, precipitation, overland flow, stream flooding, or tidal influences that occur(s) with hours, days, weeks, months, or even years between events.

Source: USACE WRPTR Y-87-1

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.

Source: USACE WRPTR Y-87-1

Perennial stream. A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Source: USACE NWP

Physiognomy. A term used to describe a plant community based on the growth habit (e.g., trees, herbs, lianas) of the dominant species.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Pipe flow. Flow of groundwater that results from secondary porosity (macropores) often formed by decayed root channels or animal burrows.

Source: Technical Report WRP-DE-4

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

Source: USACE WRPTR Y-87-1

Pneumatophore. Modified roots that may function as a respiratory organ in species subjected to frequent inundation or soil saturation (e.g., cypress knees).

Source: USACE WRPTR Y-87-1

Specialized root formed on several species of plants occurring in frequently inundated habitats. The root is erect and protrudes above the soil surface. In some species promote root aeration in water-logged habitats.

Source: NAP, Wetlands

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

Source: USACE WRPTR Y-87-1

Ponding. Standing water in a closed depression that is removed only by percolation, evaporation, or transpiration. The ponding lasts for more than seven days.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Pool. An area of the stream with slow current velocity and a depth greater than riffle and run areas; the stream bed is often concave and stream width frequently is the greatest; the water slope is nearly zero.

Source: OhioEPA QHEI

Poorly drained. Soils that commonly are wet at or near the surface during a sufficient part of the year that field crops cannot be grown under natural conditions. Poorly drained conditions are caused

by a saturated zone, a layer with low hydraulic conductivity, seepage, or a combination of these conditions. *Source: USACE WRPTR Y-87-1*

Population. A group of individuals of the same species that occurs in a given area. *Source: USACE WRPTR Y-87-1*

Pore linings. Zones of accumulation that may be either coatings on a ped or pore surface or impregnations of the matrix adjacent to the pore or ped. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Poor water. Water that fills the interstices of soil or sediment. *Source: Technical Report WRP-DE-4*

Positive wetland indicator. Any evidence of the presence of hydrophytic vegetation, hydric soil, and/or wetland hydrology in an area. *Source: USACE WRPTR Y-87-1*

Prevalence index. A single number that summarizes quantitative data about a large number of species within a community and gives weight to each species' contribution to the final number in terms of an assigned value. Hydrophytic vegetation is present when the prevalence index is 3.0 or less. *Source: NAP, Wetlands and ERDC/EL TR-10-16*

Total % cover of:		
OBL species	_____	x 1 = _____
FACW species	_____	x 2 = _____
FAC species	_____	x 3 = _____
FACU species	_____	x 4 = _____
UPL species	_____	x 5 = _____
Column totals	_____	(A) = _____ (B)
Prevalence Index = B/A = _____		

Prevalent vegetation. The plant community or communities that occur in an area during a given period. The prevalent vegetation is characterized by the dominant macrophytic species that comprise the plant community. *Source: USACE WRPTR Y-87-1*

Prominent. Contrasts strongly in color. Color contrasts more contrasting than faint and distinct are prominent. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Range. The geographical area in which a plant species is known to occur. *Source: USACE WRPTR Y-87-1*

Rapid test. All dominant species across all strata are rated OBL or FACW, or combination of these two categories, based on visual assessment. *Source: ERDC/EL TR-10-16*

Redox concentrations. Bodies of apparent accumulation of Fe-Mn oxides. Redox concentrations include soft masses, pore linings, nodules, and concretions. For the purposes of the indicators, nodules and concretions are excluded from the concept of redox concentrations unless otherwise specified by specific indicators. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Redox depletions. Bodies of low chroma (2 or less) having value of 4 or more where Fe-Mn oxides have been stripped or where both Fe-Mn oxides and clay have been stripped. Redox depletions contrast distinctly or prominently with the matrix. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

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.

Source: USACE WRPTR Y-87-1

Oxygen-reduction potential. A measure of the electron pressure (or availability) in a solution. Often used to quantify the degree of electrochemical reduction of wetland soils under anoxic conditions.

Source: NAP, Wetlands

Redoximorphic features. Features formed by the processes of reduction, translocation, and/or oxidation of Fe and Mn oxides; formerly called mottles and low-chroma colors.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Reduced matrix. A soil matrix that has low chroma and high value, but in which the color changes in hue or chroma when the soil is exposed to air.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Soil matrix that has a low chroma in situ due to the presence of reduced iron, but whose color changes in hue or chroma when exposed to air as Fe²⁺ is oxidized to Fe³⁺.

Source: ERDC/EL TR-10-16

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

Source: USACE WRPTR Y-87-1

Reduction. For the purpose of the indicators, reduction occurs when the redox potential (Eh) is below the ferric-ferrous iron threshold as adjusted for pH. In hydric soils, this is the point when the transformation of ferric iron (Fe³⁺) to ferrous iron (Fe²⁺) occurs.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Reference wetland. A wetland or one of a group of wetlands within a relatively homogeneous biogeographical region that represents typical, representative, or common examples of a particular hydrogeomorphic wetland type, or examples of altered states.

Source: Technical Report WRP-DE-4

Relative density. A quantitative descriptor, expressed as a percent, of the relative number of individuals of a species in an area; it is calculated by

$$(\text{Number of individuals of species A} / \text{Total number of individuals of all species}) \times 100$$

Source: USACE WRPTR Y-87-1

Relative dominance. A quantitative descriptor, expressed as a percent, of the relative size or cover of individuals of a species in an area; it is calculated by

$$(\text{Amount of species A} / \text{Total Frequency of all species}) \times 100$$

The “amount” of a species may be based on percent areal cover, basal area, or height.

Source: USACE WRPTR Y-87-1

Relative frequency. A quantitative descriptor, expressed as a percent, of the relative distribution of individuals of a species in an area; it is calculated by

(Frequency of species A / Total Frequency of all species) x 100

Source: USACE WRPTR Y-87-1

Relatively permanent waters (RPW). Flow directly or indirectly into TNWs where the flow through the tributary (a natural, man-altered, or man-made water body) is year-round or continual at least “seasonally.”

Source: JD Guidebook

Relict features. Soil morphological features that reflect past hydrologic conditions of saturation and anaerobiosis.

Source: USDA, Field Indicators of Hydric Soils in the U.S.

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.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Restrictive layer. A nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers.

Source: <http://www1.udel.edu/FREC/spatlab/oldpix/nrcssoilde/Descriptions/soilfea.htm>

Rhizosphere. The zone of soil in which interactions between living plant roots and microorganisms occur.

Source: USACE WRPTR Y-87-1

Riffle. Areas of the stream with fast current velocity and shallow depth; the water surface is visibly broken.

Source: OhioEPA QHEI

Riffle and pool complex. Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Source: USACE NWP

Riparian areas. Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.

Source: USACE NWP

Riparian ecosystem. Ecosystem that has a high water table because of proximity to an aquatic ecosystem or to subsurface water. Usually occurs as an ecotone between aquatic and upland ecosystems, but with distinctive vegetation or soils. Aridity, topographic relief, and presence of depositional soil

most strongly influence the extent of high water tables and associated riparian ecosystems. Most commonly recognized as bottomland hardwood and floodplain forests in the eastern and central United States. Characterized by the combination of high species diversity, density and productivity. Continuous interactions occur between riparian, aquatic, and upland terrestrial ecosystems through exchanges of energy, nutrients, and species. *Source: NAP, Wetlands*

Riparian transport. Movement of water from upland regions to floodplains either by groundwater discharge at the slope face or toe, and by direct precipitation and overland flow. *Source: Technical Report WRP-DE-4*

Riparian vegetation. Vegetation growing close enough to a lake or river that its annual evapotranspiration is a factor in the lake or river regimen. *Source: NAP, Wetlands*

Riverine System. Includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean derived salts of 0.5 ppt or greater. *Source: FGDC-STD-004-2013*

Riverine wetland. Wetland system of less than 0.5 ppt ocean salts, exposed to channelized flow regimes. Categorized according to flow regimes such as tidal waters, slow-moving waters with well-developed flood plains, fast-moving waters with little floodplain, and intermittent streams. *Source: NAP, Wetlands*

Root zone. The portion of a soil profile in which plant roots occur. *Source: USACE WRPTR Y-87-1*

Routine wetland determination. A type of wetland determination in which office data and/or relatively simple, rapidly applied onsite methods are employed to determine whether or not an area is a wetland. Most wetland determinations are of this type, which usually does not require collection of quantitative data. *Source: USACE WRPTR Y-87-1*

Run. Areas of the stream that have a rapid non-turbulent flow; runs are deeper than riffles with a faster current velocity than pools and are generally located downstream from riffles where the stream narrows; the stream bed is often flat beneath a run and the water surface is not visibly broken. *Source: OhioEPA QHEI*

Sample plot. An area of land used for measuring or observing existing conditions. *Source: USACE WRPTR Y-87-1*

Sapling/shrub. A layer of vegetation composed of woody plants <3.0 in. in diameter at breast height but greater than 3.2ft in height, exclusive of woody vines. *Source: USACE WRPTR Y-87-1*

Sapric soil materials. The most highly decomposed organic soil material. They have the smallest amount of plant fiber, the highest bulk density, and the lowest water content on a dry-weight basis at saturation. They are commonly very dark grey to black. They are relatively stable, changing very little physically and chemically with time in comparison to other organic soil materials. They have been exposed to aerobic decomposition either naturally or because of artificial drainage. See Muck. *Source: USDA, Soil Taxonomy*

Saturated soil conditions. A condition in which all easily drained voids (pores) between soil particles in the root zone are temporarily or permanently filled with water to the soil surface at pressures greater than atmospheric. *Source: USACE WRPTR Y-87-1*

Saturation. Wetness characterized by zero or positive pressure of the soil water. Almost all of the soil pores are filled with water. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Condition in which all pore spaces are filled with water to the exclusion of the gaseous phase. *Source: NAP, Wetlands*

Saturation. For wetland delineation purposes, a soil layer is saturated if virtually all pores between soil particles are filled with water. This definition includes part of the capillary fringe above the water table (i.e., the tension-saturated zone) in which soil water content is approximately equal to that below the water table. *Source: ERDC/EL TR-10-16*

Seepage. A site where groundwater of a surficial aquifer discharges to the surface, often at the toe of a slope. *Source: Technical Report WRP-DE-4*

Sharp boundary. Used to describe redoximorphic features that grade sharply from one color to another. The color grade is commonly less than 0.1 mm wide. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Soft masses. Noncemented redox concentrations, frequently within the soil matrix, that are of various shapes and cannot be removed as discrete units. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Soil matrix. The portion of a given soil that has the dominant color. In most cases, the portion of the soil that has more than 50 percent of the same color. *Source: NAP, Wetlands*

Soil texture. The relative proportions, by weight, of sand, silt, and clay particles in the soil material less than 2 mm in size. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

State regulated wetland. An isolated wetland located in Indiana that is not an exempt isolated wetland. See **exempt isolated wetland** and **isolated wetland** definitions. *Source: 327 IAC 17-1-3 (8)*

Sheet flow. Flow that occurs overland in places where there are no defined channels, the flood water spreads out over a large area at a uniform depth. This also referred to as overland flow. *Source: http://www.nws.noaa.gov/om/hod/SHManual/SHMan014_glossary.htm*

An overland flow or downslope movement of water taking the form of a thin, continuous film over relatively smooth soil or rock surfaces and not concentrated into channels larger than rills. *Source: McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, Copyright © 2003 by The McGraw-Hill Companies, Inc.*

Significant nexus. A waterbody is considered to have a significant nexus with a traditional navigable waterway if its flow characteristics and functions in combination with the functions performed by any wetlands adjacent to the tributary, have more than an insubstantial or speculative effect on the

chemical, physical and/or biological integrity of the traditional navigable waterway.

Source: JD Guidebook

Soil. Unconsolidated mineral and organic material that supports, or is capable of supporting, plants, and which has recognizable properties due to the integrated effect of climate and living matter acting upon parent material, as conditioned by relief over time. *Source: USACE WRPTR Y-87-1*

Soil horizon. A layer of soil or soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, and biological properties or characteristics (e.g., color, structure, texture, etc.). *Source: USACE WRPTR Y-87-1*

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. *Source: USACE WRPTR Y-87-1*

Soil permeability. The ease with which gases, liquids, or plant roots penetrate or pass through a layer of soil. *Source: USACE WRPTR Y-87-1*

Soil phase. A subdivision of a soil series having features (e.g., slope, surface texture, and stoniness) that affect the use and management of the soil, but which do not vary sufficiently to differentiate it as a separate series. These are usually the basic mapping units on detailed soil maps produced by the Soil Conservation Service. *Source: USACE WRPTR Y-87-1*

Soil pore. An area within soil occupied by either air or water, resulting from the arrangement of individual soil particles or peds. *Source: USACE WRPTR Y-87-1*

Soil profile. A vertical section of a soil through all its horizons and extending into the parent material. *Source: USACE WRPTR Y-87-1*

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. *Source: USACE WRPTR Y-87-1*

Soil structure. The combination or arrangement of primary soil particles into secondary particles, units, or peds. *Source: USACE WRPTR Y-87-1*

Soil surface. The upper limits of the soil profile. For mineral soils, this is the upper limit of the highest (AI) mineral horizon. For organic soils, it is the upper limit of undecomposed, dead organic matter. *Source: USACE WRPTR Y-87-1*

Soil texture. The relative proportions of the various sizes of particles in a soil. *Source: USACE WRPTR Y-87-1*

Somewhat poorly drained. Soils that are wet near enough to the surface or long enough that planting or harvesting operations or crop growth is markedly restricted unless artificial drainage is provided. Somewhat poorly drained soils commonly have a layer with low hydraulic conductivity, wet conditions high in the profile, additions of water through seepage, or a combination of these conditions. *Source: USACE WRPTR Y-87-1*

Special aquatic sites. Geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region.

Source: 40 CFR §230.3 (b)

State regulated wetland (SRW). An isolated wetland located in Indiana that is not an exempt isolated wetland.

Source: 327 IAC 17-3-3 (1)

Stilted roots. Aerial roots arising from stems (e.g., trunk and branches), presumably providing plant support (e.g., *Rhizophora mangle*).

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Stratigraphy. Features of geology dealing with the origin, composition, distribution, and succession of geologic strata (layers).

Source: USACE WRPTR Y-87-1

The vertical layering of sediments or other materials often as a consequence of the chronological sequence in which they were deposited.

Source: Technical Report WRP-DE-4

Stratum. The four vegetation stratum or layers are **herb, sapling/shrub, tree** and **woody vine**.

Stream. A drainage feature that has an **ordinary high water mark**. They are classified as **perennial, intermittent** and **ephemeral**.

Stream Bed. The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Source: USACE NWP

Stream Channelization. The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Source: USACE NWP

Stress. The condition of diverting potentially useful energy from an eco-system or organism.

Source: Technical Report WRP-DE-4

Structure. An object that is arranged in a definite pattern of organization. Includes riprap or any other manmade obstacle or obstruction.

Source: USACE NWP

Substrate. The base or substance on which an attached species is growing.

Source: USACE WRPTR Y-87-1

Substrate origin. The "parent" material that the stream substrate is derived from.

Source: OhioEPA QHEI

Succession. The predictable and orderly change in species composition over time at a particular location. Succession is sometimes called ecosystem development which places additional emphasis on abiotic components of change. *Source: Technical Report WRP-DE-4*

Surface water. Water present above the substrate or soil surface. *Source: USACE WRPTR Y-87-1*

All water occurring on the surface of the ground. The term includes the following: (1) water in a stream; (2) natural and artificial lakes; (3) ponds; (4) swales; (5) marshes, and; (6) diffused surface water. *Source: 312 IAC 1-1-28*

Swale. A shallow feature in the landscape that may convey water across upland areas during and following storm events. They usually occur on nearly flat slopes and typically have grass or other low-lying vegetation throughout the swale. *Source: JD Guidebook*

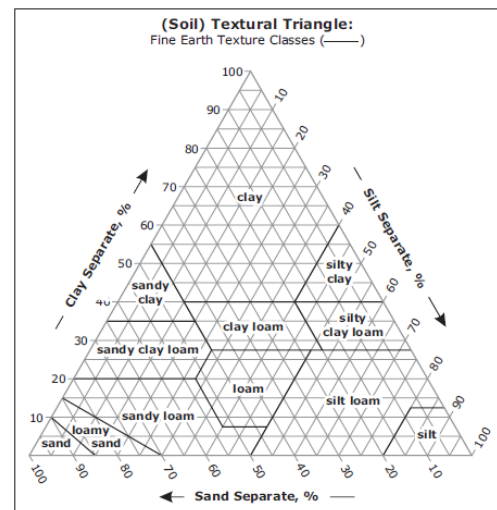
Swamp. An emergent wetland in which the uppermost stratum of vegetation is composed primarily of trees. *Source: Technical Report WRP-DE-4*

System. A complex of wetlands and deepwater habitats that share the influence of similar hydrologic, geomorphic, chemical or biological factors. *Source: FGDC-STD-004-2013*

Texture. The numerical proportion (weight percentage) of the sand, silt, and clay separates in the fine-earth fraction of the soil. Soil texture is field estimated by hand. *Source: USDS-NRCS, Field Book for Describing and Sampling Soils*

Throughflow. Lateral movement of groundwater in saturated substrates, such as on sloping terrain. *Source: ERDC/EL TR-10-16*

Tiled drain. A tiled channel that: (1) carries surplus water; and (2) was established under or made subject to any drainage statute. *Source: IC 36-9-27-2*



Topography. The configuration of a surface, including its relief and the position of its natural and man-made features. *Source: USACE WRPTR Y-87-1*

Traditional navigable waterway (TNW). Includes all the waters described in 33 CF 328.3(a)(1) and 40 CR 230.3(s)(1). All water which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide.

The "(a)(1)" waters include all of the "navigable waters of the United States," defined in 33 C.F.R. Part 329 and by numerous decisions of the federal courts, plus all other waters that are navigable-in-fact (e.g., the Great Salt Lake, UT and Lake Minnetonka MN). For purposes of CWA jurisdiction and this guidance, waters will be considered traditional navigable waters if:

- They are subject to Section 9 or 10 of the Rivers and Harbors Act, or

- A federal court has determined that the water body is navigable-in-fact under federal law, or
- They are waters currently being used for commercial navigation, including commercial water-borne recreation (e.g., boat rentals, guided fishing trips, water ski tournaments, etc.); or
- They have historically been used for commercial navigation, including commercial water-borne recreation; or
- They are susceptible to being used in the future for commercial navigation, including commercial water-borne recreation. Susceptibility for future use may be determined by examining a number of factors, including the physical characteristics and capacity of the water (e.g., size, depth, and flow velocity, etc.) to be used in commercial navigation, including commercial recreational navigation, and the likelihood of future commercial navigation or commercial water-borne recreation. Evidence of future commercial navigation use, including commercial water-borne recreation (e.g., development plans, plans for water dependent events, etc.), must be clearly documented. Susceptibility to future commercial navigation, including commercial water-borne recreation, will not be supported when the evidence is insubstantial or speculative. Use of average flow statistics may not accurately represent streams with "flashy" flow characteristics. In such circumstances, daily gage data is more representative of flow characteristics.

Source: [https://www.epa.gov/sites/production/files/2016-](https://www.epa.gov/sites/production/files/2016-02/documents/cwa_jurisdiction_following_rapanos120208.pdf)

02/documents/cwa_jurisdiction_following_rapanos120208.pdf

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

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Transmissivity. The capacity of a porous medium to conduct water. It is a function of properties of the liquid, the porous media, and the thickness of the porous media.

Source: Technical Report WRP-DE-4

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

Source: USACE WRPTR Y-87-1

Transport, overbank. Movement of water from the channel to the floodplain surface.

Source: Technical Report WRP-DE-4

Transport, riparian. Movement of water from upland regions to floodplains either by groundwater discharge at the slope face or toe or by surface-water (overland) transport.

Source: Technical Report WRP-DE-4

Tree. A woody plant >3.0 in. in diameter at breast height, regardless of height (exclusive of woody vines).

Source: USACE WRPTR Y-87-1

Tributary. A natural, man-altered, or man-made water body. Examples include rivers, streams, and lakes that flow directly or indirectly into TNWs.

Source: JD Guidebook

Turbidity. Low water clarity principally because of suspended sediments.

Source: Technical Report WRP-DE-4

Typical. That which normally, usually, or commonly occurs.

Source: USACE WRPTR Y-87-1

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

Source: USACE WRPTR Y-87-1

Unchannelized flow. Normally reserved for surface flow that is diffuse and thus not confined to a channel. Also nonchannelized flow.

Source: Technical Report WRP-DE-4

Unconsolidated parent material. Material from which a soil develops, usually formed by weathering of rock or placement in an area by natural forces (e.g., water, wind, or gravity).

Source: USACE WRPTR Y-87-1

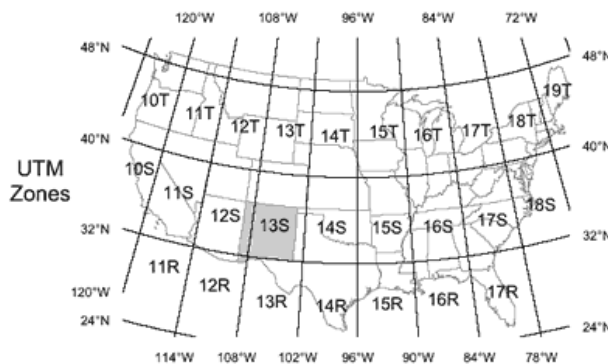
Under normal circumstances. As used in the definition of wetlands, this term refers to situations in which the vegetation has not been substantially altered by man's activities.

Source: USACE WRPTR Y-87-1

Uniform vegetation. A situation in which the same group of dominant species generally occurs throughout a given area.

Source: USACE WRPTR Y-87-1

Universal Transverse Mercator (UTM) Rectangular Coordinate System. A coordinate system that is an international reference that depicts the earth's three-dimensional surface in a relatively accurate, two-dimensional, flat plane and uses Cartesian coordinates (meters) for location. The UTM grid spans from 80° S through 84° N latitude. The UTM system divides the earth into 60



http://geoinfo.nmt.edu/publications/maps/gps/UTM_zones.gif
accessed 11/4/2016

equally spaced, vertically arranged planes know as zones. Each zone spans 6 degrees of longitude. The zones are sequentially numbered 1 through 60 west to east. Numbering begins at 180 degrees longitude, the International Date Line. The UTM grid system divides the earth into 20 equally spaced east-west rows. Each row circles the globe and spans exactly 8 latitude degrees, except for the 12-degree-wide row between 72 and 82 degrees north latitude. The 20 UTM rows are lettered C through X (omitting I and O) from south to north beginning at 80 beginning at 80 degrees south latitude.

Upland. Any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands. Such areas occurring within floodplains are more appropriately termed nonwetlands.

Source: USACE WRPTR Y-87-1

Value (soil color). The relative lightness or intensity of 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.

Source: USACE WRPTR Y-87-1

Vegetated shallows. Special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Source: USACE NWP

Vegetation. The sum total of macrophytes that occupy a given area.

Source: USACE WRPTR Y-87-1

Vegetation layer. A subunit of a plant community in which all component species exhibit the same growth form (e.g., trees, saplings/shrubs, herbs).

Source: USACE WRPTR Y-87-1

Very long duration (flooding). A duration class in which the length of a single inundation event is greater than 1 month.

Source: USACE WRPTR Y-87-1

Very poorly drained. Soils that are wet to the surface most of the time. These soils are wet enough to prevent the growth of important crops (except rice) unless artificially drained.

Source: USACE WRPTR Y-87-1

Water budget. Includes the water inputs (precipitation, run-on, groundwater discharge, and flooding), outputs (run-off, groundwater recharge, evapotranspiration, and surface flow) and water storage.

Water quality. Descriptive or quantitative conditions of water, usually in reference to the physical, chemical, and biological properties, and usually from the perspective of society's use.

Source: Technical Report WRP-DE-4

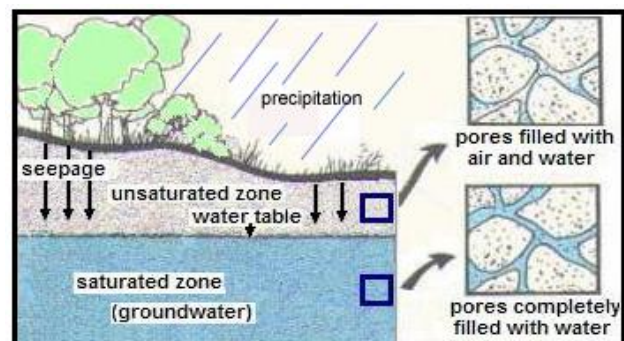
Water stress. A water-deficit condition of plants that develops because plants are losing water by transpiration faster than they can take up water through their roots.

Source: Technical Report WRP-DE-4

Water table. The upper surface of ground water or that level below which the soil is saturated with water. It is at least 6 in. thick and persists in the soil for more than a few weeks.

Source: USACE WRPTR Y-87-1

Upper surface of the subsurface zone where all openings of the rock are filled with water (zone of saturation). The zone of aeration is located between the water table and the ground surface. It is the top of an unconfined aquifer and indicates the level below which soil and rock are saturated with water.



Waterbody. For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR

328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands.

Source: USACE NWP

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

Source: USACE WRPTR Y-87-1

Waters. The accumulations of water, surface and underground, natural and artificial, public and private, or a part of the accumulations of water that are wholly or partially within, flow through, or border upon Indiana. The term does not include any of the following:

- (A) An exempt isolated wetland.
- (B) A private pond.
- (C) An off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge.

The term includes all waters of the United States, as defined in Section 502(7) of the federal Clean Water Act (33 U.S.C. 1362(7)), that are located in Indiana. *Source: 327 IAC 17-1-3 (13)*

Waters of the U. S.

(o)(1) For purposes of the Clean Water Act, 33 U.S.C. 1251 *et seq.* and its implementing regulations, subject to the exclusions in paragraph (o)(2) of this section, the term “waters of the United States” means:

(i) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) All interstate waters, including interstate wetlands;

(iii) The territorial seas;

(iv) All impoundments of waters otherwise identified as waters of the United States under this section;

(v) All tributaries, as defined in paragraph (o)(3)(iii) of this section, of waters identified in paragraphs (o)(1)(i) through (iii) of this section;

(vi) All waters adjacent to a water identified in paragraphs (o)(1)(i) through (v) of this section, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters;

(vii) All waters in paragraphs (o)(1)(vii)(A) through (E) of this section where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (o)(1)(i) through (iii) of this section. The waters identified in each of paragraphs (o)(1)(vii)(A) through (E) of this section are similarly situated and shall be combined, for purposes of a significant nexus analysis, in the watershed that drains to the nearest water identified in paragraphs (o)(1)(i) through (iii) of this section. Waters identified in this paragraph shall not be combined with waters identified in paragraph (o)(1)(vi) of this section when performing a significant nexus analysis. If waters identified in this paragraph are also an adjacent water under paragraph (o)(1)(vi), they are an adjacent water and no case-specific significant nexus analysis is required. ...

(viii) All waters located within the 100-year floodplain of a water identified in paragraphs (o)(1)(i) through (iii) of this section and all waters located within 4,000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (o)(1)(i) through (v) of this section where they are determined on a case-specific basis to have a significant nexus to a water identified in paragraphs (o)(1)(i) through (iii) of this section. For waters determined to have a significant nexus, the entire water is a water of the United States if a portion is located within the 100-year floodplain of a water identified in paragraphs (o)(1)(i) through (iii) of this section or

within 4,000 feet of the high tide line or ordinary high water mark. Waters identified in this paragraph shall not be combined with waters identified in paragraph (o)(1)(vi) of this section when performing a significant nexus analysis. If waters identified in this paragraph are also an adjacent water under paragraph (o)(1)(vi), they are an adjacent water and no case-specific significant nexus analysis is required.

(2) The following are not “waters of the United States” even where they otherwise meet the terms of paragraphs (o)(1)(iv) through (viii) of this section.

(i) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act are not waters of the United States.

(ii) Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

(iii) The following ditches:

(A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.

(B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.

(C) Ditches that do not flow, either directly or through another water, into a water identified in paragraphs (o)(1)(i) through (iii) of this section.

(iv) The following features:

(A) Artificially irrigated areas that would revert to dry land should application of water to that area cease;

(B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;

(C) Artificial reflecting pools or swimming pools created in dry land;

(D) Small ornamental waters created in dry land;

(E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;

(F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of tributary, non-wetland swales, and lawfully constructed grassed waterways; and

(G) Puddles.

(v) Groundwater, including groundwater drained through subsurface drainage systems.

(vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

(vii) Wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

(3) In this paragraph (o), the following definitions apply:

(i) **Adjacent.** The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (o)(1)(i) through (v) of this section, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like. For purposes of adjacency, an open water such as a pond or lake includes any wetlands within or abutting its ordinary high water mark. Adjacency is not limited to waters located laterally to a water identified in paragraphs (o)(1)(i) through (v) of this section. Adjacent waters also include all waters that connect segments of a water identified in paragraphs (o)(1)(i) through (v) or are located at the head of a water identified in paragraphs (o)(1)(i) through (v) of this section and are bordering, contiguous, or neighboring such water. Waters being used for established normal farming, ranching, and silviculture activities (33 U.S.C. 1344(f)) are not adjacent.

(ii) **Neighboring.** The term *neighboring* means:

(A) All waters located within 100 feet of the ordinary high water mark of a water identified in paragraphs (o)(1)(i) through (v) of this section. The entire water is neighboring if a portion is located within 100 feet of the ordinary high water mark;

(B) All waters located within the 100-year floodplain of a water identified in paragraphs (o)(1)(i) through (v) of this section and not more than 1,500 feet from the ordinary high water mark of such water. The entire water is neighboring if a portion is located within 1,500 feet of the ordinary high water mark and within the 100-year floodplain;

(C) All waters located within 1,500 feet of the high tide line of a water identified in paragraphs (o)(1)(i) or (iii) of this section, and all waters within 1,500 feet of the ordinary high water mark of the Great Lakes. The entire water is neighboring if a portion is located within 1,500 feet of the high tide line or within 1,500 feet of the ordinary high water mark of the Great Lakes.

(iii) **Tributary and tributaries.** The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (o)(1)(iv) of this section), to a water identified in paragraphs (o)(1)(i) through (iii) of this section that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark. These physical indicators demonstrate there is volume, frequency, and duration of flow sufficient to create a bed and banks and an ordinary high water mark, and thus to qualify as a tributary. A tributary can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, canals, and ditches not excluded under paragraph (o)(2) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more constructed breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if it contributes flow through a water of the United States that does not meet the definition of tributary or through a non-jurisdictional water to a water identified in paragraphs (o)(1)(i) through (iii) of this section.

(iv) **Wetlands.** The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(v) **Significant nexus.** The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (o)(1)(i) through (iii) of this section. The term “in the region” means the watershed that drains to the nearest water identified in paragraphs (o)(1)(i) through (iii) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Waters are similarly situated when they function alike and are sufficiently close to function together in affecting downstream waters. For purposes of determining whether or not a water has a significant nexus, the water's effect on downstream (o)(1)(i) through (iii) waters shall be assessed by evaluating the aquatic functions identified in paragraphs (o)(3)(v)(A) through (I) of this section. A water has a significant nexus when any single function or combination of functions performed by the water, alone or together with similarly situated waters in the region, contributes significantly to the chemical, physical, or biological integrity of the nearest water identified in paragraphs (o)(1)(i) through (iii) of this section. Functions relevant to the significant nexus evaluation are the following:

- (A) Sediment trapping,
- (B) Nutrient recycling,
- (C) Pollutant trapping, transformation, filtering, and transport,
- (D) Retention and attenuation of flood waters,

- (E) Runoff storage,
- (F) Contribution of flow,
- (G) Export of organic matter,
- (H) Export of food resources, and
- (I) Provision of life cycle dependent aquatic habitat (such as foraging, feeding, nesting, breeding, spawning, or use as a nursery area) for species located in a water identified in paragraphs (o)(1) through (3) of this section.

(vi) **Ordinary high water mark.** The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. *Source: 40 CFR §230.3 (o)*

Watershed. An area of land from which all runoff water drains to a given point or that is affected by a small lake. *Source: IC 36-9-27-2*

Waterway. A river, stream, creek, run, channel, ditch, lake, reservoir or an embayment. *Source: 312 IAC 1-1-29.5*

Wetland. A transitional area between a terrestrial and deep water habitat (but not necessarily adjacent to a deep water habitat) where at most times the area is either covered by shallow water or the water table is at or near the surface and under normal circumstances any of the following conditions are met: (1) the area predominantly supports hydrophytes, at least periodically, or the substrate is predominantly undrained hydric soil, for example peat or muck. (2) The substrate is not a soil but is instead saturated with water or covered by shallow water some time during the growing season, for example, marl beaches or sand bars. *Source: 312 IAC 10-2-24*

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. *Source: 33 CFR 328.3 (b)*

Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. The term generally includes the following:

- (A) Swamps.
- (B) Marshes.
- (C) Bogs.
- (D) Similar areas.

Source: 327 IAC 17-1-3 (16)

An area that has hydrophytic vegetation, hydric soils, and wetland hydrology, as per the "National Food Security Act Manual" and the 1987 *Corps of Engineers Wetlands Delineation Manual* (United States Army Corps of Engineers, 1987).

Source: USDA, Field Indicators of Hydric Soils in the U.S.

Wetland boundary. The point on the ground at which a shift from wetlands to nonwetlands or aquatic habitats occurs. These boundaries usually follow contours. *Source: USACE WRPTR Y-87-1*

Wetland determination. The process or procedure by which an area is adjudged a wetland or nonwetland. *Source: USACE WRPTR Y-87-1*

Wetland hydrology. The sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation. *Source: USACE WRPTR Y-87-1*

Wetland plant association. Any grouping of plant species that recurs wherever certain wetland conditions occur. *Source: USACE WRPTR Y-87-1*

Wetland soil. A soil that has characteristics developed in a reducing atmosphere, which exists when periods of prolonged soil saturation result in anaerobic conditions. Hydric soils that are sufficiently wet to support hydrophytic vegetation are wetland soils. *Source: USACE WRPTR Y-87-1*

Wetland vegetation. The sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. As used herein, hydrophytic vegetation occurring in areas that also have hydric soils and wetland hydrology may be properly referred to as wetland vegetation. *Source: USACE WRPTR Y-87-1*

Wetlands. Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. *Source: USACE WRPTR Y-87-1*

Lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Source: FGDC, Classification of Wetlands and Deepwater Habitats of the United States

Wetlands delineation. A technical assessment of:

(A) whether a wetland exists on an area of land; and

(B) if so, the type and quality of the wetland based on the presence or absence of wetlands characteristics, as determined consistently with the Wetlands Delineation Manual, Technical Report Y-87-1 of the United States Army Corps of Engineers. *Source: 327 IAC 17-1-3 (17)*

Within. When referring to specific indicator depth requirements, "within" means not beyond in depth. "Within a depth of 15 cm;" for example, indicates that the depth is less than or equal to 15 cm. *Source: USDA, Field Indicators of Hydric Soils in the U.S.*

Woody vine. See liana. *Source: USACE WRPTR Y-87-1*

Xerophytic. A plant species that is typically adapted for life in conditions where a lack of water is a limiting factor for growth and/or reproduction. These species are capable of growth in extremely

dry conditions as a result of morphological, physiological, and/or reproductive adaptation.

Source: USACE WRPTR Y-87-1

Zonation. State or condition of being marked with bands, as of color or texture. Wetland vegetation often exhibits distinct zones characterized by plant communities composed of different species.

Source: NAP, Wetlands

Acronyms

C	Concentration
CWA	Clean Water Act
D	Depletion
DBH	Diameter Breast High
FAC	Facultative plant
FACU	Facultative upland plant
FACW	Facultative wetland plant
Fe	Iron
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HHEI	Headwaters Habitat Evaluation Index
HUC	Hydrologic Unit Code
IDEM	Indiana Department of Environmental Management
JD	Jurisdictional Determination
LPA	Local Public Agency
LRR	Land resource region
M	Matrix
MBR	Migratory Bird Rule
Mn	Manganese
MLRA	Major land resource area
MS	Masked sand grains
NEPA	National Environmental Policy Act
NI	No Indicator
NRCS	USDA, Natural Resources and Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetland Inventory
OBL	Obligate wetland plant
OHWM	Ordinary high water mark
PHWH	Primary headwater habitat
PI	Prevalence Index
PL	Poor lining
QHEI	Qualitative Habitat Evaluation Index
RGP	Regional General Permit
RHA	Rivers and Harbors Act
ROW	Right of Way
RPW	Relatively Permanent Waters
RM	Reduced matrix
SSURGO	Soil Survey Geographic Database
TNW	Traditional navigable waterways
UNT	Unnamed Tributary
UPL	Upland plant
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
WOTUS	Waters of the United States
WOUS	Waters of the United States