

# Glossary of Terms for United States National Vegetation Classification

\*Signifies a land cover unit

**Agricultural Vegetation\*:** A class of vegetation that exhibits rapid turnover in structure, typically at least on an annual basis, either through comprehensive manipulation of physiognomy and floristics; by harvesting and/or planting; or by continual removal of above ground structure (e.g., cutting, haying), or by showing strong linear (planted) features. The herbaceous layer may be bare at various times of the year.

**Alliance:** This is the seventh category level of the classification system and considered a lower unit. An alliance is a vegetation classification unit containing one or more associations, defined by a characteristic range of species composition, habitat conditions, physiognomy, and diagnostic species, typically at least one of which is found in the upper most or dominant stratum of the vegetation.

**Annual:** Plant species that complete their life-cycle from seed within a single growing season.

**Annual Forbland\*:** A class of herbaceous vegetation where annual forbs (including ferns and biennials) generally contributing to greater than 60 percent of total herbaceous canopy cover, exclusive of drought years when annual vegetation expression is greatly diminished. Annual forblands are generally a minor land cover component.

**Annual Grassland\*:** A class of herbaceous vegetation dominated by annual grasses. Annual grasses generally contribute to greater than 60 percent of total herbaceous canopy cover, exclusive of drought years when annual vegetation expression is greatly diminished. See also definitions for Annual Vegetation, Grassland and Herbaceous Vegetation.

**Association:** This is the eighth and finest category level of the classification system. An association is a vegetation classification unit defined on the basis of a characteristic range of species composition, diagnostic species occurrence, habitat conditions, and physiognomy.

**Bedrock, Scree, Cliff & Canyon:** Consolidated bare areas often characterized by the presence of bedrock or large rock materials, scree or ice fields (the latter are generally covering large rock materials).

**Class:** This is the first level category of the classification system and is considered an upper level. A class is defined by broad combinations of dominant general growth forms adapted to basic moisture, temperature, and/or substrate or aquatic conditions: The eight classes are: 1. Forest & Woodland; 2. Shrubland & Grassland; 3. Semi-Desert; 4. Polar and High Montane Vegetation; 5. Aquatic Vegetation; 6. Non-vascular and Sparse Vascular Rock Vegetation; 7. Agricultural Vegetation; and 8. Developed Vegetation.

**Communication/Energy Lines & Pipelines\*:** Land cover is characterized by thin linear features situated above ground. Examples are telephone lines, electric power transmission lines, above-ground natural gas pipelines, etc.

**Cover:** The area of ground covered by the vertical projection of the aerial parts of plants of one or more species. The line point intercept transect, (an AIM core method) measures foliar cover - the exposed plant area.

**Crops:** Agricultural land cover type that exhibits a) rapid turnover in structure, typically at least on an annual basis, either through comprehensive manipulation of physiognomy and floristics by harvesting and/or planting, or b) showing strong linear (planted) features. The herbaceous layer may be bare at various times of the year. This category includes tree plantations and orchards.

**Cultural Vegetation:** Vegetation with a distinctive structure, composition, and development determined by regular human activity.

**Deciduous Plant:** A plant whose parts, particularly leaves, are shed at regular intervals or a given stage of development and becomes temporarily bare-stemmed.

**Deciduous Vegetation:** Associations in which deciduous plants (generally contribute 75 percent or more to total dominant plant cover).

**Desert:** Extremely dry landscape, sparsely vegetated by widely spaced herbs, shrubs, or succulent tree-like plants; relatively barren substrate tends to dominate the aspect of the habitat.

**Division:** This is the fourth category level of classification system and is considered a mid-level group. For natural and semi-natural system, this category is defined by combinations of dominant and diagnostic growth forms that reflect biogeographical differences in mesoclimate, geology, substrates, hydrology and disturbance regimes (e.g., evergreen forest versus deciduous forest, mesic perennial grassland versus herbaceous wetland versus annual grassland).

**Ecological Systems:** A working classification of terrestrial ecological systems in the coterminous United States, southern Alaska, and adjacent portions of Mexico and Canada completed by NatureServe and its Natural Heritage Programs with funding from *The Nature Conservancy*. It is not a category in the USNVC but can be cross-walked to the USNVC.

**Evergreen Plant:** A plant that has green leaves all year round and sheds them more or less regularly through all seasons, commonly on a two to three year cycle; or a plant that in xeric habitats has green stems or trunks and never produces leaves.

**Evergreen Vegetation:** Associations in which evergreen woody plants generally contribute 75 percent or more to total dominant plant cover; vegetation canopy is never without green foliage.

**Existing Vegetation:** Vegetation found at a given location at the time of observation.

**Extraction Areas:** Areas where rock or earthy materials are removed by human activity or machinery.

**Floristics:** The study of the geography of plants, the branch of botany that deals with the kinds and numbers of plant species in particular areas and their distribution. Floristics is most important in the descriptions of the Lower levels in the classification.

**Forb:** Forbs and herbs may be annual, biennial, or perennial but always lack significant thickening by secondary woody growth and have perennating buds borne at or below the ground surface. Graminoids are excluded but flowering plants and spore-bearing ferns, horsetails, lycopods, and whisk-ferns are included.

**Forbland:** Forbs (including ferns and biennials) generally contributing to greater than 50 percent of total herbaceous canopy cover.

**Forest:** Trees with their crowns overlapping (generally forming 60 to 100 percent cover).

**Forest and Woodland** [Mesomorphic Tree Vegetation]: Includes natural vegetation dominated or characterized by tree species requiring environmental conditions of moderate moisture and temperature or which are only partially protected against desiccation. It is used in this classification when tree canopy cover is greater than 10 percent of the total canopy cover.

**Formation:** Considered an upper level, this is the third level of the classification system. For natural and semi-natural systems, formation is defined by combinations of dominant and diagnostic growth forms based on canopy cover of trees, shrubs and herbaceous vegetation within the classes.

**Graminoid:** A non-aquatic, flowering herb with relatively long, narrow leaves and inconspicuous flowers with parts reduced to bracts. This includes grasses, sedges, rushes, arrowgrasses and quillworts.

**Grassland:** Vegetation dominated by graminoid vegetation greater than 50 percent of total herbaceous canopy cover). Trees and shrubs, if present, are generally widely scattered. See also definition for Herbaceous Vegetation.

**Group:** The sixth level of the classification, in which each vegetation unit is defined by a group of plant communities with a common set of growth forms and diagnostic species or taxa (including several character species of the dominant growth forms), preferentially sharing a similar set of regional edaphic, topographic, and disturbance factors.

**Herbaceous Vegetation:** Vegetation in which herbs (mostly graminoids, forbs, and ferns) form at least 25 percent cover, and woody vegetation has less than 25 percent cover; herbaceous cover may be less than 25 percent in cases where the cover of each of the other life forms present is less than 25 percent and herbaceous cover exceeds the cover of the other life forms.

**Herbaceous Wetland:** Vegetated areas characterized by emergent herbaceous aquatic plants, excluding mosses and lichens.

**High Montane Vegetation** [Cryomorphic Shrub and Herb Vegetation]: Includes natural vegetation dominated or characterized by shrub and/or herb species having structural or functional adaptations to survive cold temperatures and resist frost damage.

**Industrial Areas:** Non-linear impervious surfaces are included in this class, which are related to trade, manufacturing, distribution and commerce.

**Land Cover:** The observed bio-physical cover of the Earth's surface.

**Land Use:** The arrangements, activities, and inputs people undertake in a certain land cover type to produce, change, or maintain it.

**Lower Levels:** The Alliance and the Association (the seventh and eighth levels of the classification, respectively) are the lower levels of the classification. Floristics play an important role and diagnostic species are identified.

**Macrogroup:** The fifth level of the classification is considered a mid-level between the Division and the Group in the hierarchy. Each vegetation unit is defined by a group of plant communities with a common set of growth forms and many diagnostic plant taxa, including many character taxa of the dominant

growth forms, preferentially sharing a broadly similar geographic region and regional climate, and disturbance.

**Mesic Grassland:** Vegetation dominated by perennial or annual herbaceous vegetation that require environmental conditions of moderate moisture and temperature or which are only partially protected against desiccation. This is generally graminoid plants but also includes vegetation dominated by forbs. Trees and shrubs are generally widely scattered, if present. See also definitions for Grassland and Herbaceous Vegetation.

**Mesic Shrubland:** A class of vegetation defined by areas dominated by shrubs with individuals or clumps not touching to interlocking that require environmental conditions of moderate moisture and temperature or which are only partially protected against desiccation. Shrub canopy cover is generally greater than 25 percent while tree cover is generally less than 25 percent. Shrub cover may be less than 25 percent in cases when the cover of each of the other life forms present is less than 25 percent and shrub cover exceeds the cover of the other life forms.

**Mesic Shrubland & Grassland** [Mesomorphic Shrub and Herb Vegetation]: Includes natural vegetation dominated or characterized by shrub and/or herb species requiring environmental conditions of moderate moisture and temperature or which are only partially protected against desiccation.

**Middle Levels:** The Division, Macrogroup and Group. The fourth, fifth and sixth levels of the classification, respectively) are considered the Middle Levels of the classification. Both floristics and physiognomy play roles in their determination.

**Mixed Evergreen-Deciduous Cover:** A class of vegetation types where trees (for forests and woodlands) or shrubs (for shrublands) are the dominant life form and neither deciduous nor evergreen species represent more than 75 percent of cover present.

**Montane:** The zone in mountainous regions where the influence of altitude (vertical relief) results in local climatic regimes that are sufficiently different from those in the adjacent lowlands as to cause a complex vertical climate-vegetation-soil zonation; includes vegetation at the base of a mountain when it is different from lowland vegetation.

**Natural Barren Areas:** Natural areas (undisturbed by man) where vegetation is generally less than one percent of the surface area.

**Natural / Semi-Natural Vegetation:** Vegetation where ecological processes primarily determine species and site characteristics; that is, vegetation comprised of a largely spontaneously growing set of plant species that are shaped by both site and biotic processes. Areas dominated by native or established vegetation that has not been cultivated or treated with any annual management or manipulation regime. In cases where it cannot be assessed whether the vegetation was planted or cultivated by humans, the vegetation is considered "Natural/Semi-Natural."

**Non-native Forbland\*:** Non-native forbs, typically invasive or weedy plant species (including ferns and biennials) generally contributing to greater than 50 percent of total herbaceous canopy cover. See definition for Herbaceous Vegetation also.

**Non-vascular Plant:** A plant or plant-like organism without specialized water or fluid conductive tissue (xylem and phloem). This includes mosses, liverworts, hornworts, lichens, and algae.

**Non-vascular Cover:** Non-vascular plants dominate with generally at least 25 percent canopy cover, while trees, shrubs and herbs generally make up less than 25 percent cover. In some cases, non-vascular cover may exceed trees, shrubs, dwarf shrubs, and herbs and be less than 25 percent of the total cover.

**Non-vegetated:** A category used to classify lands with limited capacity to support life and typically having less than one percent vegetative cover. For this classification system it relates to cultural land covers only and includes urban, industrial areas, extraction areas, transportation/energy features. Natural non-vegetation areas are considered “natural barren areas” and are included as part of the Sparse Vegetation and Natural Barren Areas category.

**Open Water\*:** Water body that is primarily unvegetated with herbaceous or woody vegetation. Submerged floating plants, algae, etc., may be present.

**Pasture:** Agricultural land cover that involves continual removal of above ground structure (e.g., cutting, haying) but are generally not continuously planted.

**Perennial:** Plant species with a life-cycle that characteristically lasts more than two growing seasons and persists for several to many years.

**Perennial Forbland\*:** Perennial forbs (including ferns and biennials) generally contributing to greater than 50 percent of total herbaceous canopy cover.

**Perennial Grassland\*:** Perennial graminoid vegetation (grasslands), native and non-native. Perennial graminoids generally contribute to greater 50 percent of total herbaceous canopy cover. Perennial forblands are also included in the perennial grassland category in this classification scheme since they are generally a minor land cover component.

**Perennial Non-native Forbland:** Non-native perennial forbs (including ferns and biennials) generally contributing to greater than 50 percent of total herbaceous canopy cover

**Perennial Non-native Grassland\*:** Perennial non-native graminoids generally contribute to greater than 50 percent of total graminoid canopy cover.

**Physiognomy:** The form and structure of natural plant communities.

**Plant Community:** A group of plant species living together and linked together by their effects on one another and their responses to the environment they share. Typically the plant species that co-occur in a plant community show a definite association or affinity with each other.

**Railway\*:** Land cover consists of a combination of materials to form a linear structure for the purpose of railroad transportation. Railway may or may not be operational.

**Roads\*:** A more or less uniform material forms a linear structure which covers the land surface over long distances (length is greater than width). It can be further subdivided into *Paved* and *Unpaved* roads.

**Scrub:** Vegetation dominated by shrubs, including thickets.

**Semi-Desert Grassland:** Vegetation dominated by perennial or annual herbaceous vegetation that have structural or functional adaptation to prevent water loss by evaporation. This is generally graminoid plants but also includes vegetation dominated by forbs. Trees and shrubs are generally widely scattered, if present. See definition for Herbaceous Vegetation also.

**Semi-Desert Shrubland:** A class of vegetation defined by areas dominated by shrubs with individuals or clumps not touching to interlocking that have structural or functional adaptation to prevent water loss by evaporation. Shrub canopy cover is generally at least 10 percent rather than the 25 percent as described for mesic shrublands.

**Semi-Desert Shrubland & Grassland [Xeromorphic Scrub and Herb Vegetation]:** Includes natural vegetation dominated or characterized by shrub and/or herb species having structural or functional adaptations to prevent water loss by evaporation.

**Semi-Natural Vegetation:** Vegetation in which past or present human activities significantly influence composition or structure, but do not eliminate or dominate spontaneous ecological processes.

**Shrub:** A woody plant that generally has several erect, spreading, or prostrate stems which give it a bushy appearance. In instances where growth form cannot be determined, woody plants less than five meters in height at maturity shall be considered shrubs. Includes dwarf shrubs and low or short woody vines.

**Shrubland:** A class of vegetation defined by areas dominated by shrubs with individuals or clumps not touching to interlocking. See definitions for Mesic and Semi-desert Shrublands.

**Sparse Vegetation:** Includes natural vegetation dominated or characterized by shrub, herb, or nonvascular plant species having structural or functional adaptations for living on rock surfaces or in rocky substrates. Vegetation is scattered or nearly absent; total vegetation cover, excluding crustose lichens, is generally one to ten percent at the peak of the growing season.

**Subalpine:** Upper mountain vegetation immediately below the cold limits of tree and tall shrub growth.

**Sub-class:** Considered to be an upper level, this is the second level of the hierarchy characterized by combinations of general dominant and diagnostic growth forms that reflect global macroclimatic factors driven primarily by latitude and continental position, or that reflect overriding substrate/aquatic conditions. There are 18 subclasses in the USNVC. Agricultural Vegetation and Developed Vegetation do not have subclasses.

**Subshrub:** A low growing shrub usually under one and a half feet tall and never exceeding three feet tall at maturity. Also defined as a dwarf shrub.

**Transportation & Energy Linear Features\*:** This category contains exclusively any transport, communication, or supply system that is built as a linear structure (length is greater than its width) in order to connect two locations. This includes roads, railroads, communication and energy lines and pipelines.

**Tree:** A woody plant that generally has a single main stem and a more or less definite crown. In instances where growth form cannot be determined, woody plants equal to or greater than five meters in height at maturity shall be considered trees.

**Unconsolidated Materials:** Area is covered with soil or rock materials that are neither solid nor firm. The surface can be penetrated with a hoe or a spade. Sand dunes, playas, washes would be included in this classification category.

**Upper Classes:** Within the revised 2008 classification, the first three levels, Class, Subclass and Formation are considered the upper levels of the classification and are based predominantly on physiognomy.

**Urban & Developed Lands\*:** See definitions for Urban/ Industrial/Extraction Areas and Transportation and Energy Linear Features formations.

**Urban Area:** Non-linear built-up areas covered by impervious structures adjacent to or connected by streets. This cover is related to human population centers.

**Urban/Industrial/Extraction Areas\*:** Includes areas where non-linear artificial constructions cover the surface and which have an impervious (e.g., concrete) surface. See additional individual category definitions. This category also includes small vegetated areas within the footprint of these urban / industrial areas.

**Vascular Plant:** Plant with water and fluid conductive tissue (xylem and phloem); includes seed plants, ferns, and fern allies.

**Vegetated:** Areas having equal to or greater than one percent or more of the land or water surface with live vegetation cover at the peak of the growing season.

**Vegetation Cover:** Vegetation that covers or is visible at or above the land or water surface. It is a sub-category of earth cover. It is the percentage of the ground covered by a vertical projection of the outermost perimeter of the natural spread of the foliage of plants.

**Volcanic Rock:** Barren or sparsely vegetated area that is covered with volcanic lava flow or cinder rocks.

**Woodland:** Open stands of trees with crowns not usually touching (generally forming 25 to 60 percent cover). Canopy tree cover may be less than 25 percent in cases when the cover of each of the other life forms present (i.e., shrub, herb, non-vascular) is less than 25 percent and tree cover exceeds the cover of the other life forms.

**Vegetation Types:** Named categories of plant community or vegetation defined on the basis of shared floristic and/or physiognomic characteristics that distinguish it from other kinds of plant communities or vegetation. At broad scales these types are based strongly on the shared growth forms that dominate the vegetation, and reflective of global patterns of climate, substrate and disturbances. At fine scales, these types are based on assemblages of plant species that co-occur in an area and are linked by their interactions with each other and their environment.

The National Vegetation Classification Standard contains a glossary of terms used in the classification. See [http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/NVCS\\_V2\\_FINAL\\_2008-02.pdf](http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/NVCS_V2_FINAL_2008-02.pdf).