

**APPENDIX C: KEY TO SYSTEMS AND SUBSYSTEMS**

The following key is a tool for identification of communities described in this book. This key is designed to help you find the appropriate system and subsystem in the classification for an unknown community. The key is arranged as a series of pairs of choices, and each pair is identified by a letter. Starting with the first pair (A and AA), read both choices of the pair, and select the description that most closely fits the community in question. At the end of each choice is the letter that identifies the next pair of choices to consider, or the name of the subsystem. Continue selecting from each subsequent pair of choices until you reach a subsystem.

After you have identified the system and subsystem using this key, read the community descriptions in the main text following the subsystem and select the description that most closely fits the community in question. Keep in mind that there are continuous ecological gradients in the landscape. If an unknown community does not fit well within any one community type described in this classification, it might be best described as intermediate between two community types.

- A.**      Underground communities that are never exposed to sunlight (SUBTERRANEAN SYSTEM) . . . . . **B**
- AA.**     Above-ground communities that are usually exposed to some sunlight . . . . . **C**
- B.**      Natural caves and cavities in which the structure and hydrology have not been substantially modified by human activities and native species are dominant . . . . . **NATURAL CAVES**
- BB.**     Artificial underground structures or cavities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical structure, hydrology, and species composition are substantially different from the structure, hydrology, and species composition of the site as it existed prior to human influence . . . . . **SUBTERRANEAN CULTURAL**
- C.**      Aquatic or wetland communities: communities that are in water all year; or have wet soils all year; or are regularly flooded every day (such as flooded by tidal waters); or are regularly flooded at one or more seasons of the year (such as flooded in spring) and have predominantly hydrophytic vegetation and hydric soils . . . . . **D**
- CC.**     Upland communities: communities on soils that are well-drained and never regularly flooded; or on soils that are usually well-drained and not hydric, lack predominantly hydrophytic vegetation, but may be regularly flooded for a short time each year (TERRESTRIAL SYSTEM) . . . . . **R**
- D.**      Tidal aquatic or wetland communities with some direct hydrological connection to the open ocean, and with regular, daily water level fluctuations caused by ocean tides . . . . . **E**
- DD.**     Non-tidal aquatic or wetland communities that are not directly connected to the open ocean, or if directly connected, then upstream from the influence of regular, daily water level fluctuations caused by ocean tides . . . . . **J**
- E.**      Marine communities: aquatic or wetland communities of the open ocean overlying the continental shelf, its associated high-energy coastline, and shallow coastal indentations or bays lacking significant inflow of fresh water, with water salinity exceeding 18.0 parts per thousand (ppt) ocean-derived salts (MARINE SYSTEM) . . . . . **F**
- EE.**     Estuarine communities: aquatic or wetland communities of deepwater tidal habitats and adjacent tidal wetlands that are usually semienclosed but have open, partly obstructed, or sporadic access to open ocean or tidal fresh waters, with water salinity usually less than 18.0 ppt ocean-derived salts (ESTUARINE SYSTEM) . . . . . **H**
- F.**      Natural marine communities in which the substrate, hydrology, and species composition have not been substantially modified by human activities, or where native species are dominant . . . . . **G**
- FF.**     Disturbed or artificial marine communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical structure, hydrology, and species composition are substantially different from the structure, hydrology, and species composition of the site as it existed prior to human influence . . . . . **MARINE CULTURAL**

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- G.** Aquatic marine communities of the subtidal zone, which is permanently flooded with tidal ocean waters, and occurs in the area below the lowest tide where the substrate is continuously submerged by ocean waters . . . . MARINE SUBTIDAL
- GG.** Marine communities of the intertidal zone, which is located between the highest tide level and the lowest tide level where the substrate is periodically exposed and flooded by semidiurnal tides (two high tides and two low tides per tidal day) . . . . . MARINE INTERTIDAL
- H.** Natural estuarine communities in which the substrate, hydrology, and species composition have not been substantially modified by human activities, or where native species are dominant . . . . . **I**
- HH.** Disturbed or artificial estuarine communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical structure, hydrology, and species composition are substantially different from the structure, hydrology, and species composition of the site as it existed prior to human influence . . . . . ESTUARINE CULTURAL
- I.** Aquatic estuarine communities of the subtidal zone, which is permanently flooded with tidal waters, and occurs in the area below the lowest tide where the substrate is continuously submerged by tidal waters . . . . . ESTUARINE SUBTIDAL
- II.** Estuarine communities of the intertidal zone, which is located between the highest tide level and the lowest tide level where the substrate is periodically exposed and flooded by semidiurnal tides (two high tides and two low tides per tidal day) . . . . . ESTUARINE INTERTIDAL
- J.** Aquatic communities of streams, lakes, or ponds, in those portions of the streams, lakes, or ponds that are characterized by lack of persistent emergent vegetation, although they may have submerged or floating-leaved aquatic vegetation . . . . **K**
- JJ.** Wetland communities that are characterized by persistent emergent vegetation, including wetlands that are permanently saturated by seepage, permanently flooded wetlands, and wetlands that are seasonally or intermittently flooded (these may be seasonally dry) if the vegetative cover is predominantly hydrophytic and soils are hydric (PALUSTRINE SYSTEM) . . . . . **N**
- K.** Aquatic communities of a flowing, non-tidal stream, in portions of the stream that lack persistent emergent vegetation, but may include areas with submerged or floating-leaved aquatic vegetation (RIVERINE SYSTEM) . . . . . **L**
- KK.** Aquatic communities of a lake or pond in a topographic depression or dammed river channel, in portions of the lake or pond that lack persistent emergent vegetation, but may include areas with submerged or floating-leaved aquatic vegetation (LACUSTRINE SYSTEM) . . . . . **M**
- L.** Aquatic communities of streams in which the stream flow, morphometry, and water chemistry have not been substantially modified by human activities, or native species are dominant . . . . . NATURAL STREAMS
- LL.** Aquatic communities of disturbed streams or artificial channels that are either created and maintained by human activities, or are modified by human influence to such a degree that the stream flow, morphometry, and water chemistry are substantially different from the flow, morphometry, and chemistry of the site as it existed prior to human influence . . . . . RIVERINE CULTURAL
- M.** Aquatic communities of lakes and ponds in which the trophic state, morphometry, and water chemistry have not been substantially modified by human activities, or native species are dominant . . . . . NATURAL LAKES AND PONDS
- MM.** Aquatic communities of disturbed or artificial lakes and ponds that are either created and maintained by human activities, or are modified by human influence to such a degree that the trophic state, morphometry, and water chemistry are substantially different from the trophic state, morphometry, and chemistry of the site as it existed prior to human influence . . . . . LACUSTRINE CULTURAL
- N.** Natural wetland communities in which the physical structure of the substrate, hydrology, or species composition is not substantially modified by human activities, or wetlands where native species are dominant . . . . . **O**
- NN.** Disturbed or artificial wetland communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical structure of the substrate, hydrology, and species composition are substantially different from the substrate, hydrology, and composition of the site as it existed prior to human influence; exotic species may be dominant . . . . . PALUSTRINE CULTURAL

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- O.** Peatlands: wetlands in which the substrate primarily consists of accumulated peat (partly decomposed plant material such as mosses, sedges, and shrubs) or marl (organically derived or chemically precipitated calcium carbonate deposits), with little or no mineral soil; characterized by continuous saturation of the peat (despite water table fluctuations) caused by either capillary action of the peat or constant water seepage; continuous saturation allows little aeration of the substrate, slowing decomposition of plant litter, and resulting in accumulation of peat or a mixture of peat and marl ..... **P**
- OO.** Wetlands in which the substrate primarily consists of mineral soil, bedrock, or fine-grained organic soils (muck or well-decomposed peat); fluctuating water levels allow enough aeration of the substrate to allow plant litter to decompose, so there is little or no accumulation of peat ..... **Q**
- P.** Peatlands with less than 50% canopy cover of trees; the dominant vegetation may include shrubs, herbs, or mosses ..... **OPEN PEATLANDS**
- PP.** Peatlands with at least 50% canopy cover of trees; the understory may include shrubs, herbs, and mosses ..... **FORESTED PEATLANDS**
- Q.** Wetlands with less than 50% canopy cover of trees; the dominant vegetation may include shrubs or herbs; substrates range from mineral soils or bedrock, to well-decomposed organic muck ..... **OPEN MINERAL SOIL WETLANDS**
- QQ.** Wetlands with at least 50% canopy cover of trees; the understory may include shrubs, herbs, and mosses; substrates range from mineral soils or bedrock, to well-decomposed organic muck ..... **FORESTED MINERAL SOIL WETLANDS**
- R.** Natural upland communities in which the physical structure of the substrate, or species composition have not been substantially modified by human activities, or where native species are dominant ..... **S**
- RR.** Disturbed or artificial upland communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical structure of the substrate, or species composition are substantially different from the substrate and composition of the site as it existed prior to human influence; exotic species may be dominant ..... **TERRESTRIAL CULTURAL**
- S.** Open communities with less than 25% canopy cover of trees; the dominant species are shrubs, herbs, or cryptogamic plants (mosses, lichens, etc.) ..... **OPEN UPLANDS**
- SS.** Wooded communities, with at least 25% canopy cover of trees ..... **T**
- T.** Forests: communities with more than 60% canopy cover of trees; substrates are deep to shallow soils that include less than 50% rock outcrop or very shallow soil over bedrock ..... **FORESTED UPLANDS**
- TT.** Wooded upland communities that are structurally intermediate between forested uplands and open canopy uplands; includes communities with a sparse canopy of trees (25 to 60% cover) and a groundlayer that is predominantly either grassy or shrubby; wooded communities dominated by stunted or dwarf trees (less than 16 ft or 4.9 m tall); and wooded communities with soils that include at least 50% rock outcrop or very shallow soil over bedrock ..... **BARRENS AND WOODLANDS**