Terrestrial Habitat Map for the Northeast US and Atlantic Canada: Updated Fields and Definitions

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The Terrestrial Habitat map for the Northeast US and Atlantic Canada is constructed based on NatureServe's Ecological System Classification (Comer et al. 2010) and the National Vegetation Classification (FGDC 2008), using a slightly modified version of the hierarchy:
CLASS
  FORMATION
    MACROGROUP
      HABITAT
        ECOSYSTEM (Ecological System)
We expect that most users will focus on the HABITAT field for which we provide descriptions and associated species information. The finer scale ECOSYSTEM field is very similar but contains geographic, ecologic and hydrologic variants of the various HABITATS. The MACROGROUP field is a coarser grouping of HABITATS into dominant forest types or edaphic complexes (i.e. cliffs and barrens, tidal marsh)

July 2015 Revision and Expansion: An expanded version of the map that incorporates the habitats of the Canadian Maritimes and southeastern Quebec was released in July 2015. The new habitat map is based on the October 2013 version but has a restructured value attribute table (VAT) for the map grid. The definition for each field is explained below. We hope users find this version easier to use.

October 2013 Revision: The original map, released in 2011, was revised **2013** with several improvements pertaining to floodplains, High Allegheny wetlands, Southern Appalachian grass balds, and the distribution of coastal systems. Additionally, a document detailing the methods used to create the map was released (Ferree and Anderson 2013). With help from the state agency staff, photos and descriptions of each habitat were compiled into a **Habitat Guide** (Anderson et al. 2013) that provides detail on associated species, condition, securement and on the NatureServe ecological system classification:
http://nature.ly/NEhabitatguide

Field Names and Definitions

VALUE: A unique identifier for the finest level of classification in the dataset's attribute table, and one-to-one with the "ECOSYSTEM" field. The code is related to (but not identical to) the CODE2008" field and also to the "COLOR_CODE" field used to symbolize the map units in a display.

COUNT: Total number of 30 meter cells for each ECOSYSTEM.

ACRES_TOT: Total number of acres for each ECOSYSTEM.

CLASS: Class indicates whether the habitat or ecosystem is "Upland" or "Wetland"

MACR_2015: Macrogroups are broad groupings of similar habitats. They represent a level of the National Vegetation Classification defined as "combinations of moderately broad sets of diagnostic plant species and diagnostic growth forms that reflect biogeographic differences in composition and sub-continental to regional differences in mesoclimate, geology, substrates, hydrology, and disturbance regimes" (FGDC 2008). The MACRO_2015 field is a slightly revised version of the MACR2008 field. MACR_2015 is the field that is used to display the habitat map with the ArcGIS layer file NE-Ca_hab615_macr2015.lyr, which downloads from the Conservation Gateway with the grid.

MACR_PROV : This field indicates that the Macrogroup name shown is provisional and under review by NatureServe. This field flags a number of systems mapped in Canada whose eventual Macrogroup assignment is pending.

HABITAT: Habitats are a classification unit slightly more general than "ECOSYSTEM" and created by combining the ecologic, hydrologic and geographic variants of the ECOSYSTEMs into a broader classification appropriate for many uses (Table 1). For example, the HABITAT named "Acidic Cliff and Talus" is comprised of four geographically separated cliff ECOSYSTEMS (e.g. Cumberland Acidic Cliff and Rockhouse, North-Central Appalachian Acidic Cliff and Talus, etc.).   Likewise, the HABITAT named "Laurentian-Acadian Northern Hardwood Forest" is split into three ecological types (high conifer, moist-cool, typic) at the ECOSYSTEM level. Wetland habitats are often broken out in the ECOSYSTEM field according to their hydrological character – whether it is isolated or associated with a stream, lake, or large river. Habitat names are usually a combination of a geographic area (such as Laurentian-Acadian) and a descriptive name (Northern Hardwood Forest). Names are based on Gawler (2008) (see the field GAWL2008 for the original version). HABITAT is the field that is used to display the habitat map with the ArcGIS layer file NE-Ca_hab615_habitat.lyr, which downloads from the Conservation Gateway with the grid.

PAGE_GUIDE: The page number in the Northeast Habitat Guide where users can find US based descriptions, ecology, securement status, associated species, and other information about each habitat. The guide can be found at: http://nature.ly/NEhabitatguide.

ECOSYSTEM: Short for "ecological system" this is the finest ecological units mapped out in the Terrestrial Habitat Map for the Northeast US and Atlantic Canada. Ecological systems are defined as "recurring groups of biological communities that are found in similar physical environments and are influenced by similar dynamic ecological processes, such as fire or flooding. They are intended to provide a classification unit that is readily mappable and readily identifiable by conservation and resource managers in the field." (Comer 2010). They are defined based on biogeographic region, landscape scale, dominant cover type, and disturbance regime.

ECOSYSTEM is synonymous with the HABITAT field but may present a finer split of the Habitat; a description of the basis for the finer split is included in the Ecosystem field (Table 1). Seven different Ecosystems that fall into the Laurentian-Acadian Wet Meadow-Shrub Swamp Habitat, for example, are split out on the basis of hydrological and regional differences. In the same way, the Laurentian-Acadian

Large River Floodplain habitat is split into six different ecosystems on the basis of the communities within the floodplain: acidic or alkaline coniferous and mixed woods, shrub swamps, marshes, and deciduous floodplain forests. Ecosystem names are related to the GAWL2008 field described below. ECOSYSTEM is the field that is used to display the habitat map with the ArcGIS layer file NE-Ca_hab615_ecosystem.lyr, which downloads from the Conservation Gateway with the grid.

MODIFIER: The modifier field contains information on the finer ECOSYSTEM splits made for some HABITATS. This information is also embedded in the Ecosystem field itself. More detail on modifiers can be found near the end of this document.

PATTERN: The pattern and scale of the habitat. Field values are: Matrix forming, Large or small patch, Wetland, Other.

FORMATION: The Formation is a broad grouping of similar Macrogroups developed by NatureServe

GRP2008: A grouping of habitats that we found useful as the mapping project developed.

MACR2008: The original Macrogroup name from 2008. The Macrogroup concept and structure continues to develop.

GAWL2008: The original name for the ecological systems in the NatureServe classification.

CODE2008: The original code for ecological systems in the NatureServe classification.

COMMENTS: Notes on the mapping of some systems.

HAB_CODE: A numeric identifier that is one-to-one with HABITAT.

COLOR_CODE: Values are used as the basis for symbolization and display, using the NE-Ca_hab615_ecosystem.lyr ArcGIS layer file that downloads with the systems grid.

Table 1a. Comparison of HABITATS and ECOSYSTEMS arranged by macrogroup.

Upland Macrogroups A-G

HABITAT	ECOSYSTEM
UPLAND	
Alpine	
Acadian-Appalachian Alpine Tundra	Acadian-Appalachian Alpine Tundra
Boreal Upland Forest	
Acadian Low Elevation Spruce-Fir-Hardwood Forest	Acadian Low Elevation Spruce-Fir-Hardwood Forest
Acadian Sub-boreal Spruce Flat	Acadian Sub-boreal Spruce Flat
Acadian-Appalachian Montane Spruce-Fir-Hardwood Forest	Acadian-Appalachian Montane Spruce-Fir-Hardwood Forest
Boreal Highland/Northern Balsam Fir Forest	Boreal Highland/Northern Balsam Fir Forest (Canada)
Central and Southern Appalachian Spruce-Fir Forest	Central and Southern Appalachian Spruce-Fir Forest
Central Oak-Pine	
Allegheny-Cumberland Dry Oak Forest and Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Central and Southern Appalachian Montane Oak Forest	Central and Southern Appalachian Montane Oak Forest
Central Appalachian Dry Oak-Pine Forest	Central Appalachian Dry Oak-Pine Forest
Central Appalachian Pine-Oak Rocky Woodland	Central Appalachian Pine-Oak Rocky Woodland
Glacial Marine & Lake Mesic Clayplain Forest	Glacial Marine & Lake Mesic Clayplain Forest
North Atlantic Coastal Plain Hardwood Forest	North Atlantic Coastal Plain Hardwood Forest
North Atlantic Coastal Plain Maritime Forest	North Atlantic Coastal Plain Maritime Forest
North Atlantic Coastal Plain Pitch Pine Barrens	North Atlantic Coastal Plain Pitch Pine Barrens
Northeastern Interior Dry-Mesic Oak Forest	Northeastern Interior Dry-Mesic Oak Forest: moist-cool
	Northeastern Interior Dry-Mesic Oak Forest: typic
Northeastern Interior Pine Barrens	Northeastern Interior Pine Barrens
Piedmont Hardpan Woodland and Forest	Piedmont Hardpan Woodland and Forest
Southern Appalachian Montane Pine Forest and Woodland	Southern Appalachian Montane Pine Forest and Woodland
Southern Appalachian Oak Forest	Southern Appalachian Oak Forest: moist-cool
	Southern Appalachian Oak Forest: typic
Southern Piedmont Dry Oak-Pine Forest	Southern Piedmont Dry Oak-Pine Forest
Southern Ridge and Valley / Cumberland Dry Calcareous Forest	Southern Ridge and Valley / Cumberland Dry Calcareous Forest
Central Oak-Pine/Longleaf Pne	
Southern Atlantic Coastal Plain Upland Longleaf Pine Woodland	Southern Atlantic Coastal Plain Upland Longleaf Pine Woodland
Cliff and Talus	
Acidic Cliff and Talus	Central Interior Acidic Cliff and Talus
	Cumberland Acidic Cliff and Rockhouse
	Laurentian-Acadian Acidic Cliff and Talus
	North-Central Appalachian Acidic Cliff and Talus
	Southern Appalachian Montane Cliff and Talus
Calcareous Cliff and Talus	Central Interior Calcareous Cliff and Talus
	Laurentian-Acadian Calcareous Cliff and Talus
	Southern Interior Calcareous Cliff
Circumneutral Cliff and Talus	North-Central Appalachian Circumneutral Cliff and Talus
Coastal Grassland & Shrubland	
Atlantic Coastal Plain Beach and Dune	Atlantic Coastal Plain Beach and Dune
Great Lakes Dune and Swale	Great Lakes Dune and Swale
North Atlantic Coastal Plain Heathland and Grassland	North Atlantic Coastal Plain Heathland and Grassland
Cold-temperate Upland Forest	
Cold Temperate Coastal Conifer Forest	Cold Temperate Coastal Conifer Forest (Canada)
Cold Temperate Northern/Higher Elevation Conifer Forest	Cold Temperate Northern/Higher Elevation Conifer Forest (Canada)
Glade, Barren and Savanna	
Appalachian Shale Barrens	Appalachian Shale Barrens
Central Appalachian Alkaline Glade and Woodland	Central Appalachian Alkaline Glade and Woodland
Eastern Serpentine Woodland	Eastern Serpentine Woodland
Great Lakes Alvar	Great Lakes Alvar
Southern and Central Appalachian Mafic Glade and Barrens	Southern and Central Appalachian Mafic Glade and Barrens
Southern Piedmont Glade and Barrens	Southern Piedmont Glade and Barrens
Southern Ridge and Valley Calcareous Glade and Woodland	Southern Ridge and Valley Calcareous Glade and Woodland

Table 1b. Comparison of HABITATS and ECOSTYEMS arranged by macrogroup

Upland Macrogroups N-Z plus Land Cover classes

HABITAT	ECOSYSTEM
UPLAND	
Northern Hardwood & Conifer	
Appalachian (Hemlock)-Northern Hardwood Forest	Appalachian (Hemlock)-Northern Hardwood Forest: drier
	Appalachian (Hemlock)-Northern Hardwood Forest: moist-cool
	Appalachian (Hemlock)-Northern Hardwood Forest: typic
Coniferous and Mixedwood Karst Forest	Coniferous and Mixedwood Karst Forest (Canada)
Deciduous Karst Forest	Deciduous Karst Forest (Canada)
Laurentian-Acadian Northern Hardwood Forest	Laurentian-Acadian Northern Hardwood Forest: high conifer
	Laurentian-Acadian Northern Hardwood Forest: moist-cool
	Laurentian-Acadian Northern Hardwood Forest: typic
Laurentian-Acadian Northern Pine-(Oak) Forest	Laurentian-Acadian Northern Pine-(Oak) Forest
Laurentian-Acadian Pine-Hemlock-Hardwood Forest	Laurentian-Acadian Pine-Hemlock-Hardwood Forest: moist-cool
	Laurentian-Acadian Pine-Hemlock-Hardwood Forest: typic
Laurentian-Acadian Red Oak-Northern Hardwood Forest	Laurentian-Acadian Red Oak-Northern Hardwood Forest
North-Central Interior Beech-Maple Forest	North-Central Interior Beech-Maple Forest
Northeastern Coastal and Interior Pine-Oak Forest	Northeastern Coastal and Interior Pine-Oak Forest
South-Central Interior Mesophytic Forest	South-Central Interior Mesophytic Forest
Southern and Central Appalachian Cove Forest	Southern and Central Appalachian Cove Forest: acidic
	Southern and Central Appalachian Cove Forest: calcareous
	Southern and Central Appalachian Cove Forest: circumneutral
Southern Appalachian Northern Hardwood Forest	Southern Appalachian Northern Hardwood Forest
Southern Atlantic Coastal Plain Mesic Hardwood Forest	Southern Atlantic Coastal Plain Mesic Hardwood Forest
Southern Piedmont Mesic Forest	Southern Piedmont Mesic Forest
Outcrop & Summit Scrub	
Acidic Rocky Outcrop	Laurentian Acidic Rocky Outcrop
	Northern Appalachian-Acadian Rocky Heath Outcrop
Calcareous Rocky Outcrop	Laurentian-Acadian Calcareous Rocky Outcrop
Northern Serpentine Barren and Woodland	Northern Serpentine Barren and Woodland (Canada)
Southern Appalachian Grass and Shrub Bald	Southern Appalachian Grass and Shrub Bald
Southern Piedmont Granite Flatrock and Outcrop	Southern Piedmont Granite Flatrock and Outcrop
Plantation and Ruderal Forest	
Early Seral (Intolerant) Conifer Forest	Early Seral (Intolerant) Conifer Forest (Canada)
Early Seral (Intolerant) Hardwood and Mixedwood Forest	Early Seral (Intolerant) Hardwood and Mixedwood Forest (Canada)
Early Seral (Intolerant) Unknown or Unclassified Forest	Early Seral (Intolerant) Unknown or Unclassified Forest (Canada)
Old Field Forest	Old Field Forest (Canada)
Pine plantation / Horticultural pines	Pine plantation / Horticultural pines
Plantation Forest	Plantation Forest (Canada)
Rocky Coast	
Acadian-North Atlantic Rocky Coast	Acadian-North Atlantic Rocky Coast
Ruderal Shrubland & Grassland	
Shrubland/grassland (NLCD 52/71); mostly ruderal shrublands, regenerating	Shrubland/grassland (NLCD 52/71); mostly ruderal shrublands, regenerating
Southern Oak-Pine	
Central Atlantic Coastal Plain Maritime Forest	Central Atlantic Coastal Plain Maritime Forest
Southern Appalachian Low Elevation Pine Forest	Southern Appalachian Low Elevation Pine Forest
Land Cover Classes	
Agricultural	
Agriculture	Agriculture
Urban/Suburban Built	
Developed	Developed
Water	
Open Water	Open Water

Table 1c. Comparison of HABITATS and ECOSTYEMS arranged by macrogroup

Wetland Macrogroups A-L

HABITAT	ECOSYSTEM
Wetland	
Boreal Forested Peatland	
Boreal Wet Conifer Forest	Boreal Wet Conifer Forest (Canada): Undifferentiated
Central Hardwood Swamp	
Central Interior Highlands and Appalachian Sinkhole and Depression Pond	Central Interior Highlands and Appalachian Sinkhole and Depression Pond: Isolated
	Central Interior Highlands and Appalachian Sinkhole and Depression Pond: Isolated; drain to the Midwest
Glacial Marine & Lake Wet Clayplain Forest	Glacial Marine & Lake Wet Clayplain Forest: Undifferentiated
North-Central Interior Wet Flatwoods	North-Central Interior Wet Flatwoods: Undifferentiated
	North-Central Interior Wet Flatwoods: Undifferentiated; drain to the Midwest
Piedmont Upland Depression Swamp	Piedmont Upland Depression Swamp: Isolated, -- bedrock not mafic
	Piedmont Upland Depression Swamp: Isolated, -- mafic bedrock
Coastal Plain Peat Swamp	
North Atlantic Coastal Plain Basin Peat Swamp	North Atlantic Coastal Plain Basin Peat Swamp: Isolated/headwater streams
	North Atlantic Coastal Plain Basin Peat Swamp: Lake/pond: any size
	North Atlantic Coastal Plain Basin Peat Swamp: Smaller river floodplain/riparian
Coastal Plain Peatland	
Atlantic Coastal Plain Northern Bog	Atlantic Coastal Plain Northern Bog: Isolated
	Atlantic Coastal Plain Northern Bog: Lake/pond: any size
	Atlantic Coastal Plain Northern Bog: Smaller river floodplain/riparian
Atlantic Coastal Plain Peatland Pocosin and Canebrake	Atlantic Coastal Plain Peatland Pocosin and Canebrake: Isolated
Coastal Plain Swamp	
Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Fore	Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Forest: Isolated -- conifer-dominated
	Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Forest: Isolated,-- oak-dominated
North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest	North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest: Isolated
	North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest: Lake/pond: any size
	North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest: Smaller river floodplain/riparian
North Atlantic Coastal Plain Pitch Pine Lowland	North Atlantic Coastal Plain Pitch Pine Lowland: Isolated
	North Atlantic Coastal Plain Pitch Pine Lowland: Lake/pond: any size
	North Atlantic Coastal Plain Pitch Pine Lowland: Smaller river floodplain/riparian
North Atlantic Coastal Plain Stream and River	North Atlantic Coastal Plain Stream and River: Smaller river floodplain/riparian
Cold-temperate Wet Forest	
Cold Temperate Northern Conifer Swamp	Cold Temperate Northern Conifer Swamp (Canada): Undifferentiated
Emergent Marsh	
Laurentian-Acadian Freshwater Marsh	Laurentian-Acadian Freshwater Marsh: Great Lakes
	Laurentian-Acadian Freshwater Marsh: Great Lakes; drain to the Midwest
	Laurentian-Acadian Freshwater Marsh: Isolated
	Laurentian-Acadian Freshwater Marsh: Isolated; drain to the Midwest
	Laurentian-Acadian Freshwater Marsh: Lake/pond: any size
	Laurentian-Acadian Freshwater Marsh: Lake/pond: any size; drain to the Midwest
	Laurentian-Acadian Freshwater Marsh: Smaller river floodplain/riparian
	Laurentian-Acadian Freshwater Marsh: Smaller river floodplain/riparian; drain to the Midwest
	Laurentian-Acadian Freshwater Marsh: Undifferentiated
Piedmont-Coastal Plain Freshwater Marsh	Piedmont-Coastal Plain Freshwater Marsh: Isolated
	Piedmont-Coastal Plain Freshwater Marsh: Lake/pond: any size
	Piedmont-Coastal Plain Freshwater Marsh: Smaller river floodplain/riparian
Large River Floodplain	
Atlantic Coastal Plain Northern Bog	Atlantic Coastal Plain Northern Bog: Floodplain
Laurentian-Acadian Large River Floodplain	Laurentian-Acadian Large River Floodplain: Acidic Swamp
	Laurentian-Acadian Large River Floodplain: Alkaline Conifer-Hardwood Swamp
	Laurentian-Acadian Large River Floodplain: Conifer-Hardwood Acidic Swamp
	Laurentian-Acadian Large River Floodplain: Floodplain Forest
	Laurentian-Acadian Large River Floodplain: Freshwater Marsh
	Laurentian-Acadian Large River Floodplain: Wet Meadow-Shrub Swamp
North Atlantic Coastal Plain Basin Peat Swamp	North Atlantic Coastal Plain Basin Peat Swamp: Floodplain
North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest	North Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest: Floodplain
North Atlantic Coastal Plain Pitch Pine Lowland	North Atlantic Coastal Plain Pitch Pine Lowland: Floodplain
North-Central Appalachian Large River Floodplain	North-Central Appalachian Large River Floodplain: Acidic Swamp
	North-Central Appalachian Large River Floodplain: Freshwater Marsh
	North-Central Appalachian Large River Floodplain: Rich Swamp
	North-Central Appalachian Large River Floodplain: Wet Meadow-Shrub Swamp
North-Central Interior Large River Floodplain	North-Central Interior Large River Floodplain: Acidic Swamp; drain to the Midwest
	North-Central Interior Large River Floodplain: Freshwater Marsh; drain to the Midwest
	North-Central Interior Large River Floodplain: Rich Swamp; drain to the Midwest
	North-Central Interior Large River Floodplain: Wet Meadow-Shrub Swamp; drain to the Midwest
Piedmont-Coastal Plain Large River Floodplain	Piedmont-Coastal Plain Large River Floodplain: Brownwater Floodplain Forest
	Piedmont-Coastal Plain Large River Floodplain: Floodplain Forest
	Piedmont-Coastal Plain Large River Floodplain: Freshwater Marsh
	Piedmont-Coastal Plain Large River Floodplain: Wet Meadow-Shrub Swamp

Table 1d. Comparison of HABITATS and ECOSTYEMS arranged by macrogroup

Wetland Macrogroups N-Z

HABITAT	ECOSYSTEM
Wetland	
Northern Peatland	
Acadian Maritime Bog	Acadian Maritime Bog: Isolated/small stream
Boreal-Laurentian Bog	Boreal-Laurentian Bog: Isolated/small stream
Boreal-Laurentian-Acadian Acidic Basin Fen	Boreal-Laurentian-Acadian Acidic Basin Fen: Undifferentiated
Laurentian-Acadian Alkaline Fen	Laurentian-Acadian Alkaline Fen: Isolated/headwater streams
North-Central Interior and Appalachian Acidic Peatland	North-Central Interior and Appalachian Acidic Peatland: Isolated/headwater streams
	North-Central Interior and Appalachian Acidic Peatland: Lake/pond: any size
	North-Central Interior and Appalachian Acidic Peatland: Smaller river floodplain/riparian
	North-Central Interior and Appalachian Acidic Peatland: Undifferentiated
	North-Central Interior and Appalachian Acidic Peatland: Undifferentiated; drain to the Midwest
Northern Swamp	
Central Appalachian Stream and Riparian	Central Appalachian Stream and Riparian: Smaller river floodplain/riparian
High Allegheny Headwater Wetland	High Allegheny Headwater Wetland: Headwater streams
	High Allegheny Headwater Wetland: Isolated/headwater streams; drain to the Midwest
Laurentian-Acadian Alkaline Conifer-Hardwood Swamp	Laurentian-Acadian Alkaline Conifer-Hardwood Swamp: Isolated
	Laurentian-Acadian Alkaline Conifer-Hardwood Swamp: Lake/pond: any size
	Laurentian-Acadian Alkaline Conifer-Hardwood Swamp: Smaller river floodplain/riparian
	Laurentian-Acadian Alkaline Conifer-Hardwood Swamp: Undifferentiated
North-Central Appalachian Acidic Swamp	North-Central Appalachian Acidic Swamp: Great Lakes
	North-Central Appalachian Acidic Swamp: Great Lakes; drain to the Midwest
	North-Central Appalachian Acidic Swamp: Isolated
	North-Central Appalachian Acidic Swamp: Isolated; drain to the Midwest
	North-Central Appalachian Acidic Swamp: Lake/pond: any size
	North-Central Appalachian Acidic Swamp: Lake/pond: any size; drain to the Midwest
	North-Central Appalachian Acidic Swamp: Smaller river floodplain/riparian
	North-Central Appalachian Acidic Swamp: Smaller river floodplain/riparian; drain to the Midwest
North-Central Interior and Appalachian Rich Swamp	North-Central Interior and Appalachian Rich Swamp: Great Lakes
	North-Central Interior and Appalachian Rich Swamp: Isolated
	North-Central Interior and Appalachian Rich Swamp: Isolated; drain to the Midwest
	North-Central Interior and Appalachian Rich Swamp: Lake/pond: any size
	North-Central Interior and Appalachian Rich Swamp: Lake/pond: any size; drain to the Midwest
	North-Central Interior and Appalachian Rich Swamp: Smaller river floodplain/riparian
	North-Central Interior and Appalachian Rich Swamp: Smaller river floodplain/riparian; drain to the Midwest
Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp	Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp: Isolated
	Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp: Lake/pond: any size
	Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp: Smaller river floodplain/riparian
	Northern Appalachian-Acadian Conifer-Hardwood Acidic Swamp: Undifferentiated
Unknown wetland type (Canada)	Unknown wetland type (Canada): Undifferentiated
Southern Bottomland Forest	
Atlantic Coastal Plain Blackwater/Brownwater Stream Floodplain Forest	Atlantic Coastal Plain Blackwater/Brownwater Stream Floodplain Forest: Smaller river floodplain/riparian
Southern Piedmont Lake Floodplain Forest	Southern Piedmont Lake Floodplain Forest: Lake/pond: any size
Southern Piedmont Small Floodplain and Riparian Forest	Southern Piedmont Small Floodplain and Riparian Forest: Smaller river floodplain/riparian
Tidal Marsh	
Acadian Coastal Salt and Estuary Marsh	Acadian Coastal Salt and Estuary Marsh: Tidal
Atlantic Coastal Plain Embayed Region Tidal Freshwater/Brackish Marsh	Atlantic Coastal Plain Embayed Region Tidal Freshwater/Brackish Marsh: Tidal
North Atlantic Coastal Plain Brackish/Fresh & Oligohaline Tidal Marsh	North Atlantic Coastal Plain Brackish/Fresh & Oligohaline Tidal Marsh: Tidal
North Atlantic Coastal Plain Tidal Salt Marsh	North Atlantic Coastal Plain Tidal Salt Marsh: Tidal, salt/brackish/oligohaline
Tidal Swamp	
North Atlantic Coastal Plain Tidal Swamp	North Atlantic Coastal Plain Tidal Swamp: Tidal
Southern Atlantic Coastal Plain Tidal Wooded Swamp	Southern Atlantic Coastal Plain Tidal Wooded Swamp: Tidal
Wet Meadow / Shrub Marsh	
Laurentian-Acadian Wet Meadow-Shrub Swamp	Laurentian-Acadian Wet Meadow-Shrub Swamp: Great Lakes
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Great Lakes; drain to the Midwest
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Isolated
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Isolated; drain to the Midwest
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Lake/pond: any size
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Lake/pond: any size; drain to the Midwest
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Smaller river floodplain/riparian
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Smaller river floodplain/riparian; drain to the Midwest
	Laurentian-Acadian Wet Meadow-Shrub Swamp: Undifferentiated
Piedmont-Coastal Plain Shrub Swamp	Piedmont-Coastal Plain Shrub Swamp: Isolated
	Piedmont-Coastal Plain Shrub Swamp: Lake/pond: any size
	Piedmont-Coastal Plain Shrub Swamp: Smaller river floodplain/riparian

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Detail on the Modifiers.
Modifiers are available for some habitats and allow users to divide an ecosystem into finer, ecologically-relevant units.   Here are some examples and definitions.

WETLAND MODIFIERS
Macrogroup = Large River Floodplain Forest
Modifiers-- These are components of a floodplain habitat that could be classified to a more detailed ecological system based on composition and structure of the resident vegetation associations. For example, an emergent marsh in a large river floodplain in the Laurentian-Acadian region (MACR2015 field: **Large River Floodplain)** is classified as a **Laurentian-Acadian Large River Floodplain** in the Northeast Terrestrial Habitat map (HABITAT field) with a MODIFIER of **Freshwater marsh**. The modifier is also embedded in the ECOSYSTEM field: **Laurentian-Acadian Large River Floodplain: Freshwater Marsh**.   The full set of floodplain modifiers are:
Floodplain: Acidic Swamp
Floodplain: Alkaline Conifer-Hardwood Swamp
Floodplain: Basin Peat Swamp
Floodplain: Basin Swamp and Wet Hardwood Forest
Floodplain: Brownwater Floodplain Forest
Floodplain: Conifer-Hardwood Acidic Swamp
Floodplain: Eastern Boreal Wet Forest
Floodplain: Floodplain Forest
Floodplain: Freshwater Marsh
Floodplain: Pitch Pine Lowland
Floodplain: Rich Swamp
Floodplain: Wet Meadow-Shrub Swamp

Macrogroups = Coastal Plain Peat Swamp, Coastal Plain Peatland, Coastal Plain Swamp, Emergent Marsh, Northern Peatland, Northern Swamp, Southern Bottomland Forest, Wet Meadow/Shrub Marsh

Modifiers: These indicate the context of the wetland--

Smaller river floodplain/riparian: Examples of habitats with this modifier are associated with a stream or small river as mapped in the National Hydrography (NHD) dataset.

Drain to the Midwest: wetland drains not to the Atlantic but to the Midwest

Lake/pond: Adjacent to small or large waterbody

Isolated: Not associated with a stream or river

Isolated-- oak-dominated: Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood Forest only

Isolated -- conifer-dominated: Central Atlantic Coastal Plain Non-riverine Swamp and Wet Hardwood only

Isolated -- mafic bedrock: Piedmont Upland Depression Swamp only

Isolated -- bedrock not mafic: Piedmont Upland Depression Swamp only

Isolated/headwater streams: Isolated or associated with a small headwater stream

Great Lakes: Associated with one of the Great Lakes

Macrogroup = Tidal Marsh, Tidal Swamp

Modifier

Tidal or Tidal/salt/brackish/oligohaline (i.e. tidally influenced)

Macrogroup = Central Hardwood Swamp, Northern Peatland

Modifier

Undifferentiated or Undifferentiated by hydrology: relationship to NHD stream or river not specified

UPLAND MODIFIERS

Macrogroup = Northern Hardwood & Conifer

Modifier: This modifier indicates the probable pH class based on bedrock

Acid: occurs on acidic bedrock (granite, sandstone, etc.) pH often less than 7

Calcareous: occurs on calcareous bedrock (limestone, dolomite, etc.) pH often greater than 7

Circumneutral: Occurs on neutral bedrock, pH around 7

Macrogroup = Central Oak-Pine, Northern Hardwood & Conifer

Modifiers

Drier-- Drier topographic settings: ridges, summits

Moist-cool-- Moister topographic settings: coves, foot slopes, basins

Typic-- Typical expression of the ecological system

High conifer-- Examples with strong conifer component