



Chapter 4

Maryland's Key Wildlife Habitats

APPENDICES



Chapter 4 Appendices

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Appendix 4a. Cross-reference for Key Wildlife Habitats and Species of Greatest Conservation Need

Numerical Legend:

| I. Upland Habitats | |
|------------------------------------|------------------------------------|
| Forests | |
| 1 | High Elevation Ridge Forest |
| 2 | Hemlock-Northern Hardwood Forest |
| 3 | Cove Forest |
| 4 | Montane - Piedmont Oak-Pine Forest |
| 5 | Oak-Hickory Forest |
| 6 | Basic Mesic Forest |
| 7 | Mesic Mixed Hardwood Forest |
| 8 | Coastal Plain Oak-Pine Forest |
| 9 | Coastal Plain Pitch Pine Forest |
| 10 | Maritime Forest and Shrubland |
| Glades, Barrens, and Rock Outcrops | |
| 11 | Serpentine Barren |
| 12 | Shale Barren |
| 13 | Acidic Glade and Barren |
| 14 | Basic Glade and Barren |
| 15 | Cliff and Rock Outcrop |
| 16 | Coastal Bluff |
| Coastal Beaches and Dunes | |
| 17 | Coastal Beach |
| 18 | Maritime Dune and Grassland |

| III. Aquatic Habitats | |
|-----------------------|-------------------------------------|
| Streams and Rivers | |
| 38 | Coldwater Stream |
| 39 | Limestone Stream |
| 40 | Highland Stream |
| 41 | Piedmont Stream |
| 42 | Coastal Plain Stream |
| 43 | Blackwater Stream |
| 44 | Highland River |
| 45 | Piedmont River |
| 46 | Coastal Plain River |
| Bay and Ocean | |
| 47 | Shellfish Bed |
| 48 | Hard bottom (Living and Non-living) |
| 49 | Submerged Aquatic Vegetation |
| 50 | Macroalgae |
| 51 | Pelagic-Open Water |

| IV. Subterranean Habitats | |
|---------------------------|----------------|
| 52 | Cave and Karst |

| II. Wetland Habitats | |
|----------------------|---|
| Floodplain Wetlands | |
| 19 | Montane - Piedmont Floodplain |
| 20 | Coastal Plain Floodplain |
| Groundwater Wetlands | |
| 21 | Montane Bog and Fen |
| 22 | Montane – Piedmont Acidic Seepage Wetland |
| 23 | Montane – Piedmont Basic Seepage Wetland |
| 24 | Piedmont Seepage Wetland |
| 25 | Piedmont Upland Depression Swamp |
| 26 | Coastal Plain Flatwood and Depression Swamp |
| 27 | Coastal Plain Seepage Swamp |
| 28 | Coastal Plain Seepage Bog and Fen |
| 29 | Delmarva Bay |
| 30 | Maritime Swamp |
| 31 | Vernal Pool |
| 32 | Spring |
| Tidal Wetlands | |
| 33 | Tidal Forest |
| 34 | Tidal Freshwater Marsh and Shrubland |
| 35 | Tidal Brackish Marsh and Shrubland |
| 36 | Tidal Salt Marsh and Shrubland |
| 37 | Intertidal Mudflat and Sand Flat |

| V. Other Habitats | |
|-------------------|---|
| 53 | Managed Montane Conifer Forest |
| 54 | Managed Successional Forest |
| 55 | Managed Grassland |
| 56 | Roadside and Utility Right-of-way |
| 57 | Artificial Impoundment and Wetland |
| 58 | Artificial Structure – Buildings and Other Structures |
| 59 | Artificial Structure – Mine and Tunnel |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|----------------|-----------------------------------|--|--|
| Mammals | | | |
| 1 | Allegheny woodrat | <i>Neotoma magister</i> | 1-7,12-15,52,59 |
| 2 | American mink | <i>Neovison vison</i> | 2-8,19-31,34-36,38-46,57 |
| 3 | Appalachian cottontail | <i>Sylvilagus obscurus</i> | 1-4,12,13,15 |
| 4 | Big brown bat | <i>Eptesicus fuscus</i> | 1-15, 18-31, 33-36, 38-46, 52, 54, 58, 59 |
| 5 | Blue whale | <i>Balaenoptera musculus</i> | 51 |
| 6 | Bobcat | <i>Lynx rufus</i> | 1-9, 11-15, 19-30, 33-36, 54-55 |
| 7 | Bottlenose dolphin | <i>Tursiops truncatus</i> | 51 |
| 8 | Cuvier's beaked whale | <i>Ziphius cavirostris</i> | 51 |
| 9 | Delmarva fox squirrel | <i>Sciurus niger cinereus</i> | 6-8, 10, 20, 26, 33 |
| 10 | Eastern harvest mouse | <i>Reithrodontomys humulis</i> | 8-9, 54-55 |
| 11 | Eastern red bat | <i>Lasiurus borealis</i> | 1-14, 18-31, 33-36, 38-46, 54-57 |
| 12 | Eastern small-footed myotis | <i>Myotis leibii</i> | 1-6, 12-15, 31, 38-40, 44, 52, 59 |
| 13 | Eastern spotted skunk | <i>Spilogale putorius</i> | 1-5, 13, 15 |
| 14 | Evening bat | <i>Nycticeius humeralis</i> | 4-9, 19-20, 22-27, 31, 38-39, 41, 45, 54-58 |
| 15 | Fin whale | <i>Balaenoptera physalus</i> | 51 |
| 16 | Gervais beaked whale | <i>Mesoplodon europaeus</i> | 51 |
| 17 | Hoary bat | <i>Lasiurus cinereus</i> | 1-14, 18-31, 33-36, 38-46, 54-57 |
| 18 | Humpback whale | <i>Megaptera novaeangliae</i> | 51 |
| 19 | Indiana myotis | <i>Myotis sodalis</i> | 1-7, 12-15, 19, 21-25, 31, 38-41, 44-45, 52, 54-59 |
| 20 | Least shrew | <i>Cryptotis parva</i> | 8-14, 19, 21-25, 34-36, 54-55 |
| 21 | Least weasel | <i>Mustela nivalis</i> | 1-5, 15, 19, 54-55 |
| 22 | Little brown myotis | <i>Myotis lucifugus</i> | 1-8, 11-15, 19, 21-25, 31, 36-42, 44-46, 52, 54-59 |
| 23 | Long-tailed shrew | <i>Sorex dispar</i> | 1-3, 15, |
| 24 | North American porcupine | <i>Erethizon dorsatum</i> | 1-5, 15, 21, 54 |
| 25 | Northern myotis | <i>Myotis septentrionalis</i> | 1-7, 12-15, 19, 21-25, 31, 38-41, 44-45, 52, 54, 56-59 |
| 26 | Northern right whale | <i>Eubalaena glacialis</i> | 51 |
| 27 | Sei whale | <i>Balaenoptera borealis</i> | 51 |
| 28 | Seminole bat | <i>Lasiurus seminolus</i> | 4-11, 18-20, 22-31, 33-36, 41-43, 45-46, 54-57 |
| 29 | Silver-haired bat | <i>Lasionycteris noctivagans</i> | 1-15, 18-31, 33-36, 38-46, 52, 54-59 |
| 30 | Smoky shrew | <i>Sorex fumeus</i> | 1-3, 5-7, 15, 21 |
| 31 | Southeastern myotis | <i>Myotis austroriparius</i> | 6-10, 20, 26-31, 33-35, 42-43, 46, 54-58 |
| 32 | Southeastern shrew | <i>Sorex longirostris</i> | 5-7, 19-20, 24-28, 54 |
| 33 | Southeastern star-nosed mole | <i>Condylura cristata parva</i> | 20, 26-31, 33, 42-43, 46 |
| 34 | Southern bog lemming | <i>Synaptomys cooperi</i> | 2-3,5-7, 19-29, 54 |
| 35 | Southern pygmy shrew | <i>Sorex hoyi winnemana</i> | 2-3,5-7, 19-21, 24-28 |
| 36 | Southern rock vole | <i>Microtus chrotorrhinus carolinensis</i> | 2, 22-23 |
| 37 | Southern water shrew | <i>Sorex palustris punctulatus</i> | 2-3, 19,21, 38 |
| 38 | Sperm whale | <i>Physeter catodon</i> | 51 |
| 39 | Tricolored bat | <i>Perimyotis subflavus</i> | 1-15, 18-31, 33-36, 38-46, 52, 54-59 |
| 40 | True's beaked whale | <i>Mesoplodon mirus</i> | 51 |
| 41 | Virginia northern flying squirrel | <i>Glaucomys sabrinus fuscus</i> | 2, 21 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|--------------|------------------------------|---------------------------------------|---|
| Birds | | | |
| 42 | Acadian flycatcher | <i>Empidonax virescens</i> | 1-9, 19-28, 33 |
| 43 | Alder flycatcher | <i>Empidonax alnorum</i> | 19, 21 |
| 44 | American bittern | <i>Botaurus lentiginosus</i> | 21, 34-36, 57 |
| 45 | American black duck | <i>Anas rubripes</i> | 19-21, 30, 34-37, 46, 49-50, 57 |
| 46 | American kestrel | <i>Falco sparverius</i> | 55 |
| 47 | American oystercatcher | <i>Haematopus palliatus</i> | 17-18, 36-37 |
| 48 | American peregrine falcon | <i>Falco peregrinus anatum</i> | 15, 35-37, 58 |
| 49 | American redstart | <i>Setophaga ruticilla</i> | 2-3, 5-7, 19-28, 33 |
| 50 | American woodcock | <i>Scolopax minor</i> | 2-10, 19-30, 33, 54-55 |
| 51 | Audubon's shearwater | <i>Puffinus lherminieri</i> | 51 |
| 52 | Bald eagle | <i>Haliaeetus leucocephalus</i> | 2, 4-7, 10, 19-20, 33-37, 44-46, 51, 57 |
| 53 | Bank swallow | <i>Riparia riparia</i> | 16, 19-20, 46 |
| 54 | Barn owl | <i>Tyto alba</i> | 34-36, 55, 58 |
| 55 | Bicknell's thrush | <i>Catharus bicknellii</i> | 6-9, 20, 26 |
| 56 | Black rail | <i>Laterallus jamaicensis</i> | 34-36, 57 |
| 57 | Black scoter | <i>Melanitta americana</i> | 46-48, 51, 57-58 |
| 58 | Black skimmer | <i>Rynchops niger</i> | 17-18, 36-37, 51 |
| 59 | Black-and-white warbler | <i>Mniotilta varia</i> | 1-9, 19-23, 25-27, 33 |
| 60 | Black-bellied plover | <i>Pluvialis squatarola</i> | 17, 37, 57 |
| 61 | Blackburnian warbler | <i>Setophaga fusca</i> | 2-3, 5, 19, 21-22, 53 |
| 62 | Black-crowned night-heron | <i>Nycticorax nycticorax</i> | 10, 19-20, 30, 34-37, 57 |
| 63 | Black-legged kittiwake | <i>Rissa tridactyla</i> | 51 |
| 64 | Black-throated blue warbler | <i>Setophaga caerulescens</i> | 1-3, 5, 19, 21-23 |
| 65 | Black-throated green warbler | <i>Setophaga virens</i> | 1-3, 5, 19, 21-23, 53 |
| 66 | Blue-winged teal | <i>Anas discors</i> | 34-37, 46, 57 |
| 67 | Blue-winged warbler | <i>Vermivora pinus</i> | 3, 5-7, 19-25, 54, 56 |
| 68 | Boat-tailed grackle | <i>Quiscalus major</i> | 10, 18, 35-36 |
| 69 | Bobolink | <i>Dolichonyx oryzivorus</i> | 55 |
| 70 | Brant | <i>Branta bernicla</i> | 17, 37, 49-51 |
| 71 | Broad-winged hawk | <i>Buteo platypterus</i> | 1-9, 19-20, 26 |
| 72 | Brown creeper | <i>Certhia americana</i> | 1-7, 19-21 |
| 73 | Brown pelican | <i>Pelecanus occidentalis</i> | 17, 34-37, 51 |
| 74 | Canada warbler | <i>Cardellina canadensis</i> | 1-3, 5, 19, 21-23 |
| 75 | Canvasback | <i>Aythya valisineria</i> | 46-51, 57-58 |
| 76 | Cerulean warbler | <i>Setophaga cerulea</i> | 3, 5-7, 19 |
| 77 | Chimney swift | <i>Chaetura pelagica</i> | 58 |
| 78 | Chuck-will's-widow | <i>Antrostomus carolinensis</i> | 7-10, 20, 26, 33 |
| 79 | Coastal Plain swamp sparrow | <i>Melospiza georgiana nigrescens</i> | 34-35 |
| 80 | Common gallinule | <i>Gallinula galeata</i> | 35-36, 57 |
| 81 | Common loon | <i>Gavia immer</i> | 46-48, 51, 57-58 |
| 82 | Common merganser | <i>Mergus merganser</i> | 19, 44-46, 51 |
| 83 | Common nighthawk | <i>Chordeiles minor</i> | 8, 10, 18, 35-36, 54-55, 58 |
| 84 | Common tern | <i>Sterna hirundo</i> | 17-18, 36-37, 51 |
| 85 | Cory's shearwater | <i>Calonectris diomedea</i> | 51 |
| 86 | Dark-eyed junco | <i>Junco hyemalis</i> | 1-3, 5, 15, 21-23 |
| 87 | Dickcissel | <i>Spiza americana</i> | 55 |
| 88 | Dunlin | <i>Calidris alpina</i> | 17, 34-37, 57 |
| 89 | Eastern meadowlark | <i>Sturnella magna</i> | 35-36, 55 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-----|------------------------|--------------------------------|--|
| 90 | Eastern whip-poor-will | <i>Antrostomus vociferus</i> | 1-9, 11-14, 26 |
| 91 | Forster's tern | <i>Sterna forsteri</i> | 17-18, 36-37, 46, 51 |
| 92 | Gadwall | <i>Anas strepera</i> | 34-37, 46, 49-50, 57 |
| 93 | Glossy ibis | <i>Plegadis falcinellus</i> | 10, 30, 34-37, 57 |
| 94 | Golden eagle | <i>Aquila chrysaetos</i> | 1-5, 15, 35-36, 55, 57 |
| 95 | Golden-crowned kinglet | <i>Regulus satrapa</i> | 2, 19, 21, 53 |
| 96 | Golden-winged warbler | <i>Vermivora chrysoptera</i> | 1-5, 19, 21-23, 54, 56 |
| 97 | Grasshopper sparrow | <i>Ammodramus savannarum</i> | 55 |
| 98 | Great blue heron | <i>Ardea herodias</i> | 7, 10, 19-20, 26, 30, 33-37, 42-46, 57 |
| 99 | Great egret | <i>Ardea alba</i> | 7, 10, 19-20, 26, 30, 33-37, 45-46, 57 |
| 100 | Greater yellowlegs | <i>Tringa melanoleuca</i> | 17-20, 34-37, 57 |
| 101 | Gull-billed tern | <i>Gelochelidon nilotica</i> | 17-18, 36-37, 51 |
| 102 | Henslow's sparrow | <i>Ammodramus henslowii</i> | 55 |
| 103 | Hooded warbler | <i>Setophaga citrina</i> | 2-3, 5-7, 19-23, 25-27, 33 |
| 104 | Horned grebe | <i>Podiceps auritus</i> | 35-36, 45-46, 51, 57 |
| 105 | Kentucky warbler | <i>Geothlypis formosa</i> | 2-3, 5-7, 19-23, 25-28, 33 |
| 106 | King rail | <i>Rallus elegans</i> | 34-35 |
| 107 | Laughing gull | <i>Leucophaeus atricilla</i> | 17-18, 36-37, 46, 51 |
| 108 | Leach's storm-petrel | <i>Oceanodroma leucorhoa</i> | 51 |
| 109 | Least bittern | <i>Ixobrychus exilis</i> | 34-36, 57 |
| 110 | Least flycatcher | <i>Empidonax minimus</i> | 2-3, 5, 54 |
| 111 | Least tern | <i>Sternula antillarum</i> | 17-18, 34-37, 46, 51, 58 |
| 112 | Lesser yellowlegs | <i>Tringa flavipes</i> | 17-21, 34-37, 57 |
| 113 | Little blue heron | <i>Egretta caerulea</i> | 10, 30, 34-37, 57 |
| 114 | Loggerhead shrike | <i>Lanius ludovicianus</i> | 55 |
| 115 | Long-eared owl | <i>Asio otus</i> | 10, 53, 55 |
| 116 | Long-tailed duck | <i>Clangula hyemalis</i> | 46-48, 51, 57-58 |
| 117 | Louisiana waterthrush | <i>Parkesia motacilla</i> | 19-23, 25-27, 33, 38-46 |
| 118 | Magnolia warbler | <i>Setophaga magnolia</i> | 1-2, 19, 21-22, 53 |
| 119 | Marsh wren | <i>Cistothorus palustris</i> | 34-36 |
| 120 | Mourning warbler | <i>Geothlypis philadelphia</i> | 1-2, 5, 54 |
| 121 | Nashville warbler | <i>Oreothlypis ruficapilla</i> | 20 |
| 122 | Nelson's sparrow | <i>Ammodramus nelsoni</i> | 35-36 |
| 123 | Northern bobwhite | <i>Colinus virginianus</i> | 4-10, 18, 26, 30, 54-55 |
| 124 | Northern gannet | <i>Morus bassanus</i> | 51 |
| 125 | Northern goshawk | <i>Accipiter gentilis</i> | 2, 53 |
| 126 | Northern harrier | <i>Circus cyaneus</i> | 18, 21, 34-36, 55 |
| 127 | Northern parula | <i>Setophaga americana</i> | 2-3, 5-7, 19-23, 25-27, 33 |
| 128 | Northern saw-whet owl | <i>Aegolius acadicus</i> | 2-4, 10, 21 |
| 129 | Northern waterthrush | <i>Parkesia noveboracensis</i> | 19, 21-23 |
| 130 | Olive-sided flycatcher | <i>Contopus cooperi</i> | 21 |
| 131 | Ovenbird | <i>Seiurus aurocapillus</i> | 1-14, 19-23, 25-27, 33 |
| 132 | Pied-billed grebe | <i>Podilymbus podiceps</i> | 34-36, 45-46, 51, 57 |
| 133 | Pine siskin | <i>Spinus pinus</i> | 2, 21, 53 |
| 134 | Piping plover | <i>Charadrius melodus</i> | 17-18, 37 |
| 135 | Prairie warbler | <i>Setophaga discolor</i> | 3-14, 33, 54, 56 |
| 136 | Prothonotary warbler | <i>Protonotaria citrea</i> | 19-20, 22-23, 25-28, 33 |
| 137 | Red knot | <i>Calidris canutus</i> | 17, 36-37, 57 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-----------------|--------------------------------------|-----------------------------------|-----------------------------------|
| 138 | Red phalarope | <i>Phalaropus fulicarius</i> | 51, 57 |
| 139 | Red-breasted nuthatch | <i>Sitta canadensis</i> | 2, 21, 53 |
| 140 | Red-cockaded woodpecker | <i>Picoides borealis</i> | 10, 25 |
| 141 | Redhead | <i>Aythya americana</i> | 46, 49-51, 57 |
| 142 | Red-headed woodpecker | <i>Melanerpes erythrocephalus</i> | 4-9, 19-20, 25, 33, 54 |
| 143 | Red-necked phalarope | <i>Phalaropus lobatus</i> | 51, 57 |
| 144 | Red-throated loon | <i>Gavia stellata</i> | 46, 51 |
| 145 | Roseate tern | <i>Sterna dougallii</i> | 17-18, 37, 51 |
| 146 | Royal tern | <i>Thalasseus maximus</i> | 17-18, 36-37, 51 |
| 147 | Ruddy duck | <i>Oxyura jamaicensis</i> | 34-36, 46, 49-51, 57 |
| 148 | Ruddy turnstone | <i>Arenaria interpres</i> | 17, 34-37, 57 |
| 149 | Ruffed grouse | <i>Bonasa umbellus</i> | 1-5, 12-13, 19, 21-23 |
| 150 | Rusty blackbird | <i>Euphagus carolinus</i> | 19-21, 33-34 |
| 151 | Saltmarsh sparrow | <i>Ammodramus caudacutus</i> | 35-36 |
| 152 | Sanderling | <i>Calidris alba</i> | 17, 34-37, 57 |
| 153 | Sandwich tern | <i>Thalasseus sandvicensis</i> | 17-18, 36-37, 51 |
| 154 | Savannah sparrow | <i>Passerculus sandwichensis</i> | 55 |
| 155 | Scarlet tanager | <i>Piranga olivacea</i> | 1-9, 19-23, 25-27, 33 |
| 156 | Seaside sparrow | <i>Ammodramus maritimus</i> | 35-36 |
| 157 | Sedge wren | <i>Cistothorus platensis</i> | 20, 34-36, 55 |
| 158 | Semipalmated sandpiper | <i>Calidris pusilla</i> | 17, 34-37, 57 |
| 159 | Sharp-shinned hawk | <i>Accipiter striatus</i> | 2-7, 9, 53 |
| 160 | Short-billed dowitcher | <i>Limnodromus griseus</i> | 35-37, 57 |
| 161 | Short-eared owl | <i>Asio flammeus</i> | 18, 34-36, 55 |
| 162 | Snowy egret | <i>Egretta thula</i> | 10, 30, 34-37, 57 |
| 163 | Sora | <i>Porzana carolina</i> | 21, 34-37, 57 |
| 164 | Spotted sandpiper | <i>Actitis macularius</i> | 17, 19-21, 34-37, 44-46, 57 |
| 165 | Surf scoter | <i>Melanitta perspicillata</i> | 46-48, 51, 57-58 |
| 166 | Swainson's thrush | <i>Catharus ustulatus</i> | 2, 21 |
| 167 | Swainson's warbler | <i>Limnothlypis swainsonii</i> | 20, 33 |
| 168 | Tricolored heron | <i>Egretta tricolor</i> | 10, 30, 34-37, 57 |
| 169 | Upland sandpiper | <i>Bartramia longicauda</i> | 55 |
| 170 | Veery | <i>Catharus fuscescens</i> | 2-3, 5-7, 19-23, 25 |
| 171 | Vesper sparrow | <i>Pooecetes gramineus</i> | 55 |
| 172 | Wayne's black-throated green warbler | <i>Setophaga virens waynei</i> | 20, 33 |
| 173 | Whimbrel | <i>Numenius phaeopus</i> | 17-18, 35-37 |
| 174 | White-winged scoter | <i>Melanitta fusca</i> | 46-48, 51, 57-58 |
| 175 | Willet | <i>Tringa semipalmata</i> | 17-18, 35-37, 57 |
| 176 | Willow flycatcher | <i>Empidonax traillii</i> | 19-25, 54, 56 |
| 177 | Wilson's plover | <i>Charadrius wilsonia</i> | 17-18, 37 |
| 178 | Winter wren | <i>Troglodytes troglodytes</i> | 1-3, 15, 19, 20-23 |
| 179 | Wood thrush | <i>Hylocichla mustelina</i> | 1-9, 19-23, 25-27, 33 |
| 180 | Worm-eating warbler | <i>Helmitheros vermivorus</i> | 1-10, 19-21, 25, 26, 33 |
| 181 | Yellow-bellied sapsucker | <i>Sphyrapicus varius</i> | 1-3, 5, 21 |
| 182 | Yellow-breasted chat | <i>Icteria virens</i> | 4-10, 19, 20, 25, 26, 33 |
| 183 | Yellow-crowned night-heron | <i>Nyctanassa violacea</i> | 10, 19, 20, 30, 34-37, 41, 42, 45 |
| 184 | Yellow-throated vireo | <i>Vireo flavifrons</i> | 3-7, 19, 20, 25, 26, 33 |
| Reptiles | | | |
| 185 | Atlantic hawksbill seaturtle | <i>Eretmochelys imbricata</i> | 48, 51, 58 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-------------------|----------------------------------|--|--|
| 186 | Bog turtle | <i>Glyptemys muhlenbergii</i> | 5-7, 19, 24, 41, 55 |
| 187 | Coastal Plain milksnake | <i>Lampropeltis triangulum elapsoides</i> <i>X triangulum</i> | 6-9, 20, 26, 33 |
| 188 | Eastern ribbonsnake | <i>Thamnophis sauritus</i> | 6, 7, 19, 20, 22-30, 33, 38-43 |
| 189 | Eastern box turtle | <i>Terrapene carolina</i> | 1-9, 19-24, 26-31, 33, 54, 55, 57 |
| 190 | Eastern kingsnake | <i>Lampropeltis getula</i> | 5-9, 20, 26-29, 31-35 |
| 191 | Eastern six-lined racerunner | <i>Aspidoscelis sexlineata</i> | 4, 8, 9, 12, 15, 17 |
| 192 | Eastern spiny softshell | <i>Apalone spinifera</i> | 19, 44, 57 |
| 193 | Green sea turtle | <i>Chelonia mydas</i> | 49-51 |
| 194 | Kemp's ridley sea turtle | <i>Lepidochelys kempii</i> | 47-51, 58 |
| 195 | Leatherback sea turtle | <i>Dermochelys coriacea</i> | 51 |
| 196 | Loggerhead sea turtle | <i>Caretta caretta</i> | 17, 47-51, 58 |
| 197 | Mole kingsnake | <i>Lampropeltis calligaster</i> <i>rhombo maculata</i> | 6-9, 20, 26, 33 |
| 198 | Mountain earthsnake | <i>Virginia valeriae pulchra</i> | 21, 56 |
| 199 | Northern coal skink | <i>Plestiodon anthracinus</i> | 4, 12, 21 |
| 200 | Northern diamond-backed terrapin | <i>Malaclemys terrapin terrapin</i> | 17, 18, 34-37, 46-51, 57, 58 |
| 201 | Northern map turtle | <i>Graptemys geographica</i> | 19, 20, 33, 45, 46 |
| 202 | Northern pinesnake | <i>Pituophis melanoleucus</i> | 6-9, 54, 56 |
| 203 | Northern scarletsnake | <i>Cemophora coccinea</i> | 6-9, 26, 54 |
| 204 | Plain-bellied watersnake | <i>Nerodia erythrogaster</i> | 20, 26, 30, 33-35, 42, 43, 46, 54 |
| 205 | Rainbow snake | <i>Farancia erythrogramma</i> | 20, 26-28, 31, 33, 34, 42, 46 |
| 206 | Red cornsnake | <i>Pantherophis guttatus</i> | 4, 5, 8, 9, 12, 15 |
| 207 | Smooth greensnake | <i>Opheodrys vernalis</i> | 2, 4, 5, 13-15, 19, 21-23, 54-56 |
| 208 | Spotted turtle | <i>Clemmys guttata</i> | 5-8, 19-25, 27-31, 33, 34, 41- 47, 57 |
| 209 | Timber rattlesnake | <i>Crotalus horridus</i> | 1-7, 12-15, 19, 21, 54 |
| 210 | Wood turtle | <i>Glyptemys insculpta</i> | 2-7, 19, 38-41, 44, 45 |
| Amphibians | | | |
| 211 | Atlantic Coast leopard frog | <i>Lithobates kauffeldi</i> | 33-35 |
| 212 | Barking treefrog | <i>Hyla gratiosa</i> | 6, 7, 26, 29, 57 |
| 213 | Carpenter frog | <i>Lithobates virgatipes</i> | 7, 8, 26-31, 33 |
| 214 | Common mudpuppy | <i>Necturus maculosus</i> | 40, 44 |
| 215 | Eastern hellbender | <i>Cryptobranchus alleganiensis</i> | 38, 40, 44, 45 |
| 216 | Eastern mud salamander | <i>Pseudotriton montanus</i> | 20, 27, 28, 33 |
| 217 | Eastern narrow-mouthed toad | <i>Gastrophryne carolinensis</i> | 6-8, 20, 26, 31, 33, 56, 57 |
| 218 | Eastern tiger salamander | <i>Ambystoma tigrinum</i> | 6-8, 26, 29, 31, 57 |
| 219 | Green salamander | <i>Aneides aeneus</i> | 2, 3, 5, 15 |
| 220 | Jefferson salamander | <i>Ambystoma jeffersonianum</i> | 1-7, 19, 31 |
| 221 | Mountain chorus frog | <i>Pseudacris brachyphona</i> | 2-5, 21-23, 31, 32 |
| 222 | Northern red salamander | <i>Pseudotriton ruber</i> | 23, 24, 27, 28, 32, 38-42 |
| 223 | Northern spring salamander | <i>Gyrinophilus porphyriticus</i> | 32, 38 |
| 224 | Seal salamander | <i>Desmognathus monticola</i> | 32, 38 |
| 225 | Southern two-lined salamander | <i>Eurycea cirrigera</i> | 42, 43 |
| 226 | Undetermined siren | <i>Siren sp. 1</i> | 57 |
| 227 | Upland chorus frog | <i>Pseudacris feriarum</i> | 3-7, 22-25, 31, 32, 56 |
| 228 | Valley and Ridge salamander | <i>Plethodon hoffmani</i> | 2-5, 12, 19 |
| 229 | Wehrle's salamander | <i>Plethodon wehrlei</i> | 1-3, 15 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|----------------------|----------------------------------|------------------------------------|-----------------------|
| Fishes | | | |
| 230 | American brook lamprey | <i>Lethenteron appendix</i> | 42 |
| 231 | American shad | <i>Alosa sapidissima</i> | 42, 45, 46, 51 |
| 232 | Atlantic sturgeon | <i>Acipenser oxyrinchus</i> | 46-48, 51, 58 |
| 233 | Banded sunfish | <i>Enneacanthus obesus</i> | 42, 43 |
| 234 | Barndoor skate | <i>Dipturus laevis</i> | 47, 48, 51, 57, 58 |
| 235 | Blackbanded sunfish | <i>Enneacanthus chaetodon</i> | 42, 43, 57 |
| 236 | Bowfin | <i>Amia calva</i> | 46 |
| 237 | Bridle shiner | <i>Notropis bifrenatus</i> | 41-43, 45, 46 |
| 238 | Brook trout | <i>Salvelinus fontinalis</i> | 38-41 |
| 239 | Checkered sculpin | <i>Cottus sp 7</i> | 39 |
| 240 | Chesapeake logperch | <i>Percina bimaculata</i> | 41, 42, 45, 46 |
| 241 | Comely shiner | <i>Notropis amoenus</i> | 40, 41, 44-46 |
| 242 | Flier | <i>Centrarchus macropterus</i> | 42, 43 |
| 243 | Glassy darter | <i>Etheostoma vitreum</i> | 41-43 |
| 244 | Hickory shad | <i>Alosa mediocris</i> | 42, 45, 46, 51 |
| 245 | Ironcolor shiner | <i>Notropis chalybaeus</i> | 42, 43 |
| 246 | Johnny darter | <i>Etheostoma nigrum</i> | 40, 44 |
| 247 | Longnose sucker | <i>Catostomus catostomus</i> | 40, 44 |
| 248 | Maryland darter | <i>Etheostoma sellare</i> | 41, 42 |
| 249 | Mottled sculpin | <i>Cottus bairdi</i> | 38, 40 |
| 250 | Mud sunfish | <i>Acantharchus pomotis</i> | 42, 43 |
| 251 | Pearl dace | <i>Margariscus margarita</i> | 39 |
| 252 | Shortnose sturgeon | <i>Acipenser brevirostrum</i> | 46-48, 51, 58 |
| 253 | Smooth skate | <i>Malacoraja senta</i> | 47, 48, 51, 58 |
| 254 | Spotfin killifish | <i>Fundulus luciae</i> | 34-36 |
| 255 | Stonecat | <i>Noturus flavus</i> | 40, 44 |
| 256 | Stripeback darter | <i>Percina notogramma</i> | 42, 46 |
| 257 | Striped shiner | <i>Luxilus chrysocephalus</i> | 40, 44 |
| 258 | Swamp darter | <i>Etheostoma fusiforme</i> | 42, 43, 57 |
| 259 | Thorny skate | <i>Amblyraja radiata</i> | 47, 48, 51, 58 |
| 260 | White catfish | <i>Ameiurus catus</i> | 45, 46 |
| Invertebrates | | | |
| Beetles | | | |
| 261 | A cave beetle | <i>Pseudanophthalmus sp 15</i> | 52 |
| 262 | A tenebrionid beetle | <i>Helops cisteloides</i> | 8 |
| 263 | A tenebrionid beetle | <i>Schoenicus puberulus</i> | 8 |
| 264 | A weevil | <i>Apion porosicolle</i> | Data deficient |
| 265 | Appalachian tiger beetle | <i>Cicindela ancocisconensis</i> | 19, 40, 44 |
| 266 | Ash seed weevil | <i>Thysanocnemis bischoffi</i> | Data deficient |
| 267 | Bethany Beach firefly | <i>Photuris bethaniensis</i> | 18 |
| 268 | Cow path tiger beetle | <i>Cicindela purpurea</i> | 1, 4, 9, 11-15, 56 |
| 269 | Eastern ash bark beetle | <i>Hylesinus aculeatus</i> | Data deficient |
| 270 | Eastern pinebarrens tiger beetle | <i>Cicindela abdominalis</i> | 8, 56 |
| 271 | Festive tiger beetle | <i>Cicindela scutellaris</i> | 8, 9, 56 |
| 272 | Ghost tiger beetle | <i>Cicindela lepida</i> | 18 |
| 273 | Northeastern beach tiger beetle | <i>Cicindela dorsalis dorsalis</i> | 17, 37 |
| 274 | Northern ash bark beetle | <i>Hylesinus criddlei</i> | Data deficient |
| 275 | Northern barrens tiger beetle | <i>Cicindela patruela</i> | 1, 4, 8, 9, 56 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|--------------------------------|------------------------------------|-------------------------------------|-----------------------|
| 276 | One-spotted tiger beetle | <i>Cicindela unipunctata</i> | 4, 8, 9, 12, 56 |
| 277 | Puritan tiger beetle | <i>Cicindela puritana</i> | 16 |
| 278 | Seth forest water scavenger beetle | <i>Hydrochus spangleri</i> | 31 |
| 279 | Six-banded longhorn beetle | <i>Dryobius sexnotatus</i> | 5-7 |
| 280 | Splendid tiger beetle | <i>Cicindela splendida</i> | 4, 8, 9, 11, 16, 56 |
| 281 | White tiger beetle | <i>Cicindela dorsalis media</i> | 17 |
| 282 | White-banded ash bark beetle | <i>Hylesinus fasciatus</i> | Data deficient |
| Bees, Wasps, & Ants | | | |
| 283 | A cellophane bee | <i>Colletes aestivalis</i> | Data deficient |
| 284 | A cuckoo bee | <i>Nomada rubicunda</i> | Data deficient |
| 285 | A dolichoderine ant | <i>Dolichoderus taschenbergi</i> | Data deficient |
| 286 | A formicine ant | <i>Camponotus impressus</i> | Data deficient |
| 287 | A fungus-growing ant | <i>Trachymyrmex septentrionalis</i> | Data deficient |
| 288 | A hairy-tongue bee | <i>Lasioglossum arantium</i> | Data deficient |
| 289 | A hairy-tongue bee | <i>Lasioglossum georgeickworti</i> | Data deficient |
| 290 | A hairy-tongue bee | <i>Lasioglossum marinum</i> | Data deficient |
| 291 | A hairy-tongue bee | <i>Lasioglossum nymphale</i> | Data deficient |
| 292 | A hairy-tongue bee | <i>Lasioglossum rahleighense</i> | Data deficient |
| 293 | A mason bee | <i>Osmia chalybea</i> | Data deficient |
| 294 | A mining bee | <i>Andrena braccata</i> | 4 |
| 295 | A mining bee | <i>Andrena fulvipennis</i> | 4 |
| 296 | A mining bee | <i>Protandrena abdominalis</i> | Data deficient |
| 297 | A myrmicine ant | <i>Leptothorax muscorum</i> | Data deficient |
| 298 | A myrmicine ant | <i>Myrmica pinetorum</i> | Data deficient |
| 299 | A sweat bee | <i>Dieunomia heteropoda</i> | Data deficient |
| 300 | A sweat bee | <i>Dieunomia nevadensis</i> | Data deficient |
| 301 | A temnothorax ant | <i>Temnothorax pergandei</i> | Data deficient |
| 302 | American bumble bee | <i>Bombus pensylvanicus</i> | 55 |
| 303 | An oil-collecting bee | <i>Macropis ciliata</i> | Data deficient |
| 304 | An oil-collecting bee | <i>Macropis patellata</i> | Data deficient |
| 305 | Ashton's cuckoo bumble bee | <i>Bombus ashtoni</i> | Data deficient |
| 306 | Black and gold bumble bee | <i>Bombus auricomus</i> | 55 |
| 307 | Blackheaded ash sawfly | <i>Tethida barda</i> | Data deficient |
| 308 | Brownheaded ash sawfly | <i>Tomostethus multinctus</i> | Data deficient |
| 309 | Half-black bumble bee | <i>Bombus vagans</i> | Data deficient |
| 310 | Lemon cuckoo bumble bee | <i>Bombus citrinus</i> | Data deficient |
| 311 | Macropis cuckoo bee | <i>Epeploidis pilosula</i> | Data deficient |
| 312 | Oak-grove ant | <i>Formica querquetulana</i> | Data deficient |
| 313 | Pearly-banded bee | <i>Nomia manei</i> | Data deficient |
| 314 | Rusty-patch bumble bee | <i>Bombus affinis</i> | 4-9 |
| 315 | Sanderson's bumble bee | <i>Bombus sandersoni</i> | 1-5 |
| 316 | Texas temnothorax ant | <i>Temnothorax texanus</i> | Data deficient |
| 317 | Variable cuckoo bumble bee | <i>Bombus variabilis</i> | Data deficient |
| 318 | Yellowbanded bumble bee | <i>Bombus terricola</i> | Data deficient |
| Butterflies and Moths | | | |
| 319 | A crambid snout moth | <i>Undulambia striatalis</i> | Data deficient |
| 320 | A geometrid moth | <i>Apodrepanulatrix liberaria</i> | Data deficient |
| 321 | A geometrid moth | <i>Cyclophora nanaria</i> | 11, 13, 14 |
| 322 | A geometrid moth | <i>Euchlaena milnei</i> | Data deficient |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-----|-----------------------------------|-----------------------------------|-----------------------|
| 323 | A lymantriid moth | <i>Dasychira atrivenosa</i> | Data deficient |
| 324 | A noctuid moth | <i>Amolita roseola</i> | Data deficient |
| 325 | A noctuid moth | <i>Chytonix sensilis</i> | Data deficient |
| 326 | A noctuid moth | <i>Hadena ectypa</i> | 6, 7 |
| 327 | A noctuid moth | <i>Melanapamea mixta</i> | 21 |
| 328 | A noctuid moth | <i>Meropleon cosmion</i> | Data deficient |
| 329 | A noctuid moth | <i>Meropleon titan</i> | 20, 28, 29, 34-36 |
| 330 | A noctuid moth | <i>Zale curema</i> | 8, 9, 11, 13, 14 |
| 331 | A noctuid moth | <i>Zale submediana</i> | Data deficient |
| 332 | American chestnut nepticulid moth | <i>Ectoedemia castaneae</i> | 1, 3-7 |
| 333 | Angle winged emerald moth | <i>Chloropteryx tepperaria</i> | Data deficient |
| 334 | Appalachian blue | <i>Celastrina neglectamajor</i> | 2, 3, 5-7 |
| 335 | Aralia shoot borer moth | <i>Papaipema araliae</i> | Data deficient |
| 336 | Ash pyralid | <i>Palpita magniferalis</i> | Data deficient |
| 337 | Atlantis fritillary | <i>Speyeria atlantis</i> | 19, 21 |
| 338 | Aureolaria seed borer moth | <i>Pyrrhia aurantiago</i> | Data deficient |
| 339 | Baltimore checkerspot | <i>Euphydryas phaeton</i> | 19, 21-24 |
| 340 | Black dash | <i>Euphyes conspicua</i> | 19, 21-24 |
| 341 | Bog copper | <i>Lycaena epixanthe</i> | 21 |
| 342 | Bold-based zale moth | <i>Zale lunifera</i> | Data deficient |
| 343 | Broad-lined catopyrrha | <i>Erastria coloraria</i> | Data deficient |
| 344 | Bronze copper | <i>Lycaena hyllus</i> | 20, 24, 27, 33-35 |
| 345 | Buffalo moth | <i>Parapamea buffaloensis</i> | Data deficient |
| 346 | Carolina satyr | <i>Hermeuptychia sosybius</i> | 6, 7, 20, 33 |
| 347 | Chain fern borer moth | <i>Papaipema stenocelis</i> | Data deficient |
| 348 | Chermock's mulberry wing | <i>Poanes massasoit chermocki</i> | 20, 27, 33 |
| 349 | Cobweb skipper | <i>Hesperia metea</i> | 4, 8, 9, 11-14, 56 |
| 350 | Compton tortoiseshell | <i>Nymphalis vaualbum</i> | 2, 3, 5 |
| 351 | Curved halter moth | <i>Capis curvata</i> | Data deficient |
| 352 | Cypress sphinx moth | <i>Isoparce cupressi</i> | 20, 33 |
| 353 | Delaware skipper | <i>Atrytone logan</i> | 11, 12, 19, 34-36 |
| 354 | Dion skipper | <i>Euphyes dion</i> | 20, 27, 28, 33 |
| 355 | Doris' tiger moth | <i>Grammia doris</i> | Data deficient |
| 356 | Dusted Skipper | <i>Atrytonopsis hianna</i> | Data deficient |
| 357 | Early hairstreak | <i>Erora laeta</i> | 2, 3, 5 |
| 358 | Edwards' hairstreak | <i>Satyrium edwardsii</i> | 4, 11-14 |
| 359 | Fingered lemmeria | <i>Lemmeria digitalis</i> | Data deficient |
| 360 | Franck's sphinx | <i>Sphinx franckii</i> | Data deficient |
| 361 | Fringed dart | <i>Eucoptocnemis fimbriaris</i> | Data deficient |
| 362 | Frosted elfin | <i>Callophrys irus</i> | 4, 8, 9, 13, 55, 56 |
| 363 | George's midget moth | <i>Elaphria georgei</i> | Data deficient |
| 364 | Giant swallowtail | <i>Papilio cresphontes</i> | 4, 6, 12, 14, 19 |
| 365 | Graceful clearwing | <i>Hemaris gracilis</i> | Data deficient |
| 366 | Gray comma | <i>Polygonia progne</i> | 1-3, 5 |
| 367 | Great purple hairstreak | <i>Atlides halesus</i> | 20, 33 |
| 368 | Grote's sallow | <i>Copivaleria grotei</i> | Data deficient |
| 369 | Harris's checkerspot | <i>Chlosyne harrisii</i> | 19, 21, 56 |
| 370 | Hessel's hairstreak | <i>Mitoura hesseli</i> | 20, 26, 33 |
| 371 | Hickory hairstreak | <i>Satyrium caryaevorum</i> | 3, 5 |
| 372 | Hoary elfin | <i>Callophrys polios</i> | 21 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|--------------------------------------|--------------------------------------|-----------------------------------|-----------------------|
| 373 | Hydrangea sphinx | <i>Darapsa versicolor</i> | Data deficient |
| 374 | Indian skipper | <i>Hesperia sassacus</i> | 11-14, 22-24, 54, 55 |
| 375 | King's hairstreak | <i>Satyrium kingi</i> | 20 |
| 376 | Lemmer's noctuid moth | <i>Lithophane lemmeri</i> | Data deficient |
| 377 | Leonard's skipper | <i>Hesperia leonardus</i> | 4, 8, 9, 11, 12, 56 |
| 378 | Little beggar | <i>Eubaphe meridiana</i> | Data deficient |
| 379 | Long dash | <i>Polites mystic</i> | 19, 21-24 |
| 380 | Louisiana owlet moth | <i>Macrochilo louisiana</i> | Data deficient |
| 381 | Marbled underwing | <i>Catocala marmorata</i> | 3, 5-7, 19, 20, 33 |
| 382 | Melsheimer's sack-bearer | <i>Cicinnus melsheimeri</i> | Data deficient |
| 383 | Mixed dart moth | <i>Euxoa immixta</i> | Data deficient |
| 384 | Monarch | <i>Danaus plexippus</i> | 18, 21, 24, 55, 56 |
| 385 | Mottled duskywing | <i>Erynnis martialis</i> | 4, 11, 12, 56 |
| 386 | Mulberry wing | <i>Poanes massasoit massasoit</i> | 19, 21-24 |
| 387 | Newman's brocade | <i>Meropleon ambifusca</i> | Data deficient |
| 388 | Northern crescent | <i>Phyciodes cocyta</i> | 3, 5, 12-14, 19 |
| 389 | Northern hairstreak | <i>Satyrium favonius ontario</i> | 11, 12 |
| 390 | Northern metalmark | <i>Calephelis borealis</i> | 4, 5, 12-14, 56 |
| 391 | Olympia marble | <i>Euchloe olympia</i> | 2, 4, 12, 56 |
| 392 | Palamedes swallowtail | <i>Papilio palamedes</i> | 20, 30, 33 |
| 393 | Pepper and salt skipper | <i>Amblyscirtes hegon</i> | 2, 5, 7, 19, 21-24 |
| 394 | Phleophagan chestnut nepticulid moth | <i>Ectoedemia phleophaga</i> | 1, 3-7 |
| 395 | Phyllira tiger moth | <i>Grammia phyllira</i> | Data deficient |
| 396 | Pine barrens zanclognatha | <i>Zanclognatha martha</i> | 8, 9, 11, 13, 14 |
| 397 | Pink sallow | <i>Psectraglaea carnosa</i> | Data deficient |
| 398 | Pink-edged sulphur | <i>Colias interior</i> | 21 |
| 399 | Pitcher plant borer moth | <i>Papaipema appassionata</i> | Data deficient |
| 400 | Plain schizura | <i>Schizura apicalis</i> | Data deficient |
| 401 | Polymnia stalk borer moth | <i>Papaipema polymniae</i> | Data deficient |
| 402 | Precious underwing | <i>Catocala pretiosa pretiosa</i> | 20, 27 |
| 403 | Purple plagodis | <i>Plagodis kuetzingi</i> | Data deficient |
| 404 | Rare skipper | <i>Problema bulenta</i> | 34-36 |
| 405 | Seaside goldenrod stem borer | <i>Papaipema duovata</i> | 34-36 |
| 406 | Silver-bordered fritillary | <i>Boloria selene</i> | 19, 21 |
| 407 | Silvery blue | <i>Glaucopsyche lygdamus</i> | 4, 12, 14, 56 |
| 408 | Sinuuous lytrosis | <i>Lytrosis sinuosa</i> | Data deficient |
| 409 | Southern grizzled skipper | <i>Pyrgus wyandot</i> | 12, 14, 56 |
| 410 | Southern ptichodis moth | <i>Ptichodis bistrigata</i> | Data deficient |
| 411 | Speyer's hooded owlet | <i>Cucullia speyeri</i> | Data deficient |
| 412 | Three-horned moth | <i>Pachypolia atricornis</i> | 2, 3, 5 |
| 413 | Tuscarora emerald | <i>Nemoria tuscarora</i> | Data deficient |
| 414 | Two-spotted skipper | <i>Euphyes bimacula</i> | 21 |
| 415 | Unexpected cycnia | <i>Cycnia inopinatus</i> | Data deficient |
| 416 | Venus flytrap cutworm | <i>Hemipachnobia subporphyrea</i> | Data deficient |
| 417 | Violet dart | <i>Euxoa violaris</i> | Data deficient |
| 418 | West Virginia white | <i>Pieris virginianensis</i> | 2, 3, 5, 19 |
| 419 | White-tailed diver moth | <i>Bellura gortynoides</i> | Data deficient |
| Dragonflies & Damselflies | | | |
| 420 | Allegheny river cruiser | <i>Macromia alleghaniensis</i> | 40, 44, 45 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-----|--------------------------|---|-------------------------------|
| 421 | Amber-winged spreadwing | <i>Lestes eurinus</i> | 21, 28, 31 |
| 422 | American emerald | <i>Cordulia shurtleffi</i> | 21, 57 |
| 423 | Appalachian jewelwing | <i>Calopteryx angustipennis</i> | 40, 44 |
| 424 | Appalachian snaketail | <i>Ophiogomphus incurvatus incurvatus</i> | 41, 42, 45, 46 |
| 425 | Arrowhead spiketail | <i>Cordulegaster obliqua</i> | 22-24, 27, 38, 41, 42 |
| 426 | Atlantic bluet | <i>Enallagma doubledayi</i> | 28, 57 |
| 427 | Attenuated bluet | <i>Enallagma daeckii</i> | 28, 29, 31 |
| 428 | Banded pennant | <i>Celithemis fasciata</i> | Data deficient |
| 429 | Banded spiketail | <i>Cordulegaster obliqua fasciata</i> | 42 |
| 430 | Bar-winged skimmer | <i>Libellula axilena</i> | 19-21, 25-29, 31 |
| 431 | Beaverpond baskettail | <i>Epitheca canis</i> | 19, 21 |
| 432 | Black-tipped darner | <i>Aeshna tuberculifera</i> | 19, 21, 28, 57 |
| 433 | Blackwater bluet | <i>Enallagma weewa</i> | 42, 43 |
| 434 | Brown spiketail | <i>Cordulegaster bilineata</i> | 22-24, 27, 38, 41, 42 |
| 435 | Brush-tipped emerald | <i>Somatochlora walshii</i> | 21 |
| 436 | Burgundy bluet | <i>Enallagma dubium</i> | 28, 57 |
| 437 | Canada darner | <i>Aeshna canadensis</i> | 19, 21, 57 |
| 438 | Chalk-fronted skimmer | <i>Ladona julia</i> | 21, 57 |
| 439 | Chesapeake snaketail | <i>Ophiogomphus sp 1</i> | 44, 45 |
| 440 | Comet darner | <i>Anax longipes</i> | 19, 21, 28, 29, 31, 57 |
| 441 | Common sanddragon | <i>Progomphus obscurus</i> | 41, 42, 45, 46 |
| 442 | Coppery emerald | <i>Somatochlora georgiana</i> | 42, 43, 46 |
| 443 | Crimson-ringed whiteface | <i>Leucorrhinia glacialis</i> | 21 |
| 444 | Delta-spotted spiketail | <i>Cordulegaster diastatops</i> | 22, 23, 27, 38, 42 |
| 445 | Dot-tailed whiteface | <i>Leucorrhinia intacta</i> | 21, 57 |
| 446 | Double-ringed pennant | <i>Celithemis verna</i> | Data deficient |
| 447 | Duckweed firetail | <i>Telebasis byersi</i> | 20, 43, 57 |
| 448 | Dusky clubtail | <i>Gomphus spicatus</i> | 21 |
| 449 | Eastern ringtail | <i>Erpetogomphus designatus</i> | 44, 45 |
| 450 | Elfin skimmer | <i>Nannothemis bella</i> | 20, 27, 28, 57 |
| 451 | Faded pennant | <i>Celithemis ornata</i> | 28, 57 |
| 452 | Fine-lined emerald | <i>Somatochlora filosa</i> | 20, 27-29, 34 |
| 453 | Four-spotted pennant | <i>Brachymesia gravida</i> | 20, 28, 29, 34 |
| 454 | Frosted whiteface | <i>Leucorrhinia frigida</i> | 21, 57 |
| 455 | Furtive forktail | <i>Ischnura prognata</i> | 20, 42, 43, 46 |
| 456 | Golden-winged skimmer | <i>Libellula auripennis</i> | 19-21, 28, 57 |
| 457 | Gray petaltail | <i>Tachopteryx thoreyi</i> | 22-23, 27 |
| 458 | Green-faced clubtail | <i>Gomphus viridifrons</i> | 40, 44, 45 |
| 459 | Green-striped darner | <i>Aeshna verticalis</i> | 19, 21, 28, 57 |
| 460 | Harlequin darner | <i>Gomphaeschna furcillata</i> | 19-21, 25, 26, 28, 29, 31, 33 |
| 461 | Harpoon clubtail | <i>Gomphus desertus</i> | 38, 40 |
| 462 | Hudsonian whiteface | <i>Leucorrhinia hudsonica</i> | 21 |
| 463 | Laura's clubtail | <i>Stylurus laurae</i> | 40-42, 44-46 |
| 464 | Little blue dragonlet | <i>Erythrodiplax minuscula</i> | 28, 57 |
| 465 | Maine snaketail | <i>Ophiogomphus mainensis fastigiatus</i> | 40, 44 |
| 466 | Mantled baskettail | <i>Epitheca semiaquea</i> | 28 |
| 467 | Martha's pennant | <i>Celithemis martha</i> | 20, 28, 29, 57 |
| 468 | Midland clubtail | <i>Gomphus fraternus</i> | 44, 45 |
| 469 | Mocha emerald | <i>Somatochlora linearis</i> | 38-43 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|--|--------------------------|------------------------------------|-------------------------------|
| 470 | Mustached clubtail | <i>Gomphus adelphus</i> | 40 |
| 471 | Northern bluet | <i>Enallagma annexum</i> | 21 |
| 472 | Northern pygmy clubtail | <i>Lanthus parvulus</i> | 38, 40 |
| 473 | Ocellated darner | <i>Boyeria grafiana</i> | 38, 40, 44 |
| 474 | Pale bluet | <i>Enallagma pallidum</i> | 28, 57 |
| 475 | Petite emerald | <i>Dorocordulia lepida</i> | 22-24 |
| 476 | Piedmont clubtail | <i>Gomphus parvidens</i> | 46 |
| 477 | Pygmy snaketail | <i>Ophiogomphus howei</i> | 44 |
| 478 | Rainbow bluet | <i>Enallagma antennatum</i> | 21, 57 |
| 479 | Rapids clubtail | <i>Gomphus quadricolor</i> | 40, 44, 45 |
| 480 | Red-veined pennant | <i>Celithemis bertha</i> | Data deficient |
| 481 | River jewelwing | <i>Calopteryx aequabilis</i> | 38 |
| 482 | Riverine clubtail | <i>Stylurus amnicola</i> | 45 |
| 483 | Robust baskettail | <i>Epithea spinosa</i> | 19, 20 |
| 484 | Royal river cruiser | <i>Macromia taeniolata</i> | 41-46 |
| 485 | Rusty snaketail | <i>Ophiogomphus rupinsulensis</i> | 44, 45 |
| 486 | Sable clubtail | <i>Gomphus rogersi</i> | 38, 40-42, 45 |
| 487 | Seepage dancer | <i>Argia bipunctulata</i> | 22-24, 27, 28 |
| 488 | Selys' sunfly | <i>Helocordulia selysii</i> | 42, 43 |
| 489 | Skillet clubtail | <i>Gomphus ventricosus</i> | 45 |
| 490 | Ski-tailed emerald | <i>Somatochlora elongata</i> | 19, 21, 38, 40 |
| 491 | Smoky rubyspot | <i>Hetaerina titia</i> | 45, 46 |
| 492 | Southern pygmy clubtail | <i>Lanthus vernalis</i> | 38, 40, 41 |
| 493 | Southern sprite | <i>Nehalennia integricollis</i> | 28 |
| 494 | Sparkling jewelwing | <i>Calopteryx dimidiata</i> | 42, 43 |
| 495 | Sphagnum sprite | <i>Nehalennia gracilis</i> | 22-24, 27-29, 31 |
| 496 | Spine-crowned clubtail | <i>Gomphus abbreviatus</i> | 40, 44, 45 |
| 497 | Splendid clubtail | <i>Gomphus lineatifrons</i> | 40, 44 |
| 498 | Spotted spreadwing | <i>Lestes congener</i> | 21, 28, 29, 31 |
| 499 | Spring blue darner | <i>Rhionaeshna mutata</i> | 21, 28, 57 |
| 500 | Stripe-winged baskettail | <i>Epithea costalis</i> | 19, 20 |
| 501 | Stygian shadowdragon | <i>Neurocordulia yamaskanensis</i> | 44-46 |
| 502 | Superb jewelwing | <i>Calopteryx amata</i> | 38 |
| 503 | Sweetflag spreadwing | <i>Lestes forcipatus</i> | 21, 28, 29, 31 |
| 504 | Taper-tailed darner | <i>Gomphaeschna antilope</i> | 19, 20, 26, 28, 29, 31, 33 |
| 505 | Tiger spiketail | <i>Cordulegaster erronea</i> | 22-24, 27, 38, 41, 42 |
| 506 | Treetop emerald | <i>Somatochlora provocans</i> | 27, 28 |
| 507 | Tule bluet | <i>Enallagma carunculatum</i> | 21, 28 |
| 508 | Uhler's sundragon | <i>Helocordulia uhleri</i> | 40, 42 |
| 509 | White corporal | <i>Ladona exusta</i> | 28 |
| 510 | White-faced meadowhawk | <i>Sympetrum obtrusum</i> | 19-21, 25, 26, 28, 29, 31, 33 |
| 511 | Yellow-sided skimmer | <i>Libellula flavida</i> | 21, 24, 27, 28 |
| 512 | Zebra clubtail | <i>Stylurus scudleri</i> | 38, 40 |
| Stoneflies, Mayflies, and Caddisflies | | | |
| 513 | A caddisfly | <i>Ceraclea spongillovorax</i> | Data deficient |
| 514 | A caddisfly | <i>Ceraclea uvalo</i> | Data deficient |
| 515 | A caddisfly | <i>Cernotina pallida</i> | Data deficient |
| 516 | A caddisfly | <i>Cheumatopsyche parentum</i> | Data deficient |
| 517 | A caddisfly | <i>Hydropsyche hoffmani</i> | Data deficient |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|-------------------------------|--------------------------------------|--|---------------------------|
| 518 | A caddisfly | <i>Protophila georgiana</i> | Data deficient |
| 519 | A Scalaris trichopteran | <i>Hydropsyche brunneipennis</i> | Data deficient |
| 520 | Aracoma sallfly | <i>Alloperla aracoma</i> | 38 |
| 521 | Dusky sallfly | <i>Alloperla biserrata</i> | 38 |
| 522 | Gaspe sallfly | <i>Utaperla gaspesiana</i> | 40, 44 |
| 523 | Pocahontas sallfly | <i>Sweltsa pocahontas</i> | 38 |
| 524 | Shenandoah needlefly | <i>Megaleuctra flinti</i> | 32 |
| 525 | Shenandoah sallfly | <i>Sweltsa palearata</i> | 32, 38 |
| 526 | Speith's great speckled olive mayfly | <i>Siphloplecton costalense</i> | 39 |
| Other Insects | | | |
| 527 | Ash bullet gall midge | <i>Dasineura pellex</i> | Data deficient |
| 528 | Ash midrib gall midge | <i>Continaria canadensis</i> | Data deficient |
| 529 | Ash plant bug | <i>Tropidosteptes amoenus</i> | Data deficient |
| 530 | Crabtree cave springtail | <i>Arrhopalites sp 1</i> | 52 |
| 531 | Eastern sedge barrens planthopper | <i>Limotettix minuendus</i> | 11 |
| 532 | Pitcher-plant mosquito | <i>Wyeomyia smithii</i> | 20, 28, 33 |
| Crustaceans and Allies | | | |
| 533 | A copepod | <i>Acanthocyclops columbiensis</i> | 32 |
| 534 | Acuminate crayfish | <i>Cambarus acuminatus</i> | 41, 42 |
| 535 | Allegheny cave amphipod | <i>Stygobromus allegheniensis</i> | 32, 52, 59 |
| 536 | Allegheny crayfish | <i>Orconectes obscurus</i> | 38, 40, 41, 44, 45 |
| 537 | Allegheny spring isopod | <i>Caecidotea alleghenyensis</i> | 32 |
| 538 | An amphipod | <i>Crangonyx stagnicolous</i> | 20, 26, 33 |
| 539 | An ostracod | <i>Donnaldsoncythere donnaldsonensis</i> | 38-42 |
| 540 | Appalachian cave spider | <i>Porhomma cavernicola</i> | 52 |
| 541 | Ash flowergall mite | <i>Aceria fraxiniflora</i> | Data deficient |
| 542 | Ash key gall mite | <i>Aceria fraxinivorus</i> | Data deficient |
| 543 | Ashleaf gall mite | <i>Aceria chondriphora</i> | Data deficient |
| 544 | Barrelville amphipod | <i>Stygobromus sp 5</i> | 32, 52 |
| 545 | Biggers' cave amphipod | <i>Stygobromus biggersi</i> | 32, 52 |
| 546 | Capital Area groundwater amphipod | <i>Stygobromus sextarius</i> | 32 |
| 547 | Cecil groundwater amphipod | <i>Stygobromus caecilius</i> | 32 |
| 548 | Devils Hole cave amphipod | <i>Stygobromus sp 6</i> | 32, 52 |
| 549 | Digger crayfish | <i>Fallicambarus fodiens</i> | 20, 26-29, 31, 42, 43, 46 |
| 550 | Feller's groundwater amphipod | <i>Stygobromus felleri</i> | 32 |
| 551 | Franz's cave amphipod | <i>Stygobromus franzi</i> | 32, 52, 59 |
| 552 | Franz's cave isopod | <i>Caecidotea franzi</i> | 32, 52, 59 |
| 553 | Friendly cave amphipod | <i>Stygobromus amicus</i> | 32, 52 |
| 554 | Greenbrier cave amphipod | <i>Stygobromus emarginatus</i> | 32, 52 |
| 555 | Holsinger's cave isopod | <i>Caecidotea holsingeri</i> | 52 |
| 556 | Horseshoe crab | <i>Limulus polyphemus</i> | 17, 37, 51 |
| 557 | Maus' cave isopod | <i>Caecidotea mausi</i> | 32, 52, 59 |
| 558 | Norden's groundwater isopod | <i>Caecidotea nordeni</i> | 32 |
| 559 | Pennsylvania cave crangonyctid | <i>Crangonyx dearolfi</i> | 52 |
| 560 | Pizzini's amphipod | <i>Stygobromus pizzinii</i> | 32 |
| 561 | Potomac amphipod | <i>Stygobromus tenuis potomacus</i> | 32 |
| 562 | Prettyboy groundwater amphipod | <i>Stygobromus paxillus</i> | 32 |
| 563 | Price's cave isopod | <i>Caecidotea pricei</i> | 32, 52 |
| 564 | Rappahannock spring amphipod | <i>Stygobromus foliatus</i> | 32 |

| | Common Name | Scientific Name | Key Wildlife Habitats |
|---------------------------|---------------------------------|--------------------------------------|-----------------------|
| 565 | Rock crawfish | <i>Cambarus carinirostris</i> | 38, 40 |
| 566 | Rock Creek groundwater amphipod | <i>Stygobromus kenki</i> | 32 |
| 567 | Roundtop amphipod | <i>Stygobromus sp 14</i> | 32, 52, 59 |
| 568 | Shenandoah Valley cave amphipod | <i>Stygobromus gracilipes</i> | 32, 52 |
| 569 | Snivelys cave spider | <i>Oreonetides sp 1</i> | 52 |
| 570 | Tenuis amphipod | <i>Stygobromus tenuis tenuis</i> | 32 |
| 571 | Tidewater amphipod | <i>Stygobromus indentatus</i> | 32 |
| 572 | Vandel's cave isopod | <i>Caecidotea vandeli</i> | 32, 52, 59 |
| Snails | | | |
| 573 | Angular disc | <i>Discus catskillensis</i> | 1, 2 |
| 574 | Appalachian springsnail | <i>Fontigens bottimeri</i> | 32, 52, 59 |
| 575 | Bear creek slitmouth | <i>Stenotrema simile</i> | 2, 3, 5 |
| 576 | Blue Ridge springsnail | <i>Fontigens orolibas</i> | 32, 52 |
| 577 | Cherrystone drop | <i>Hendersonia occulta</i> | 6, 14 |
| 578 | Chesapeake ambersnail | <i>Oxyloma subeffusum</i> | 20, 33, 34 |
| 579 | Coastal-plain ambersnail | <i>Oxyloma effusum</i> | 20, 33, 34 |
| 580 | Cylindrically-ornate wood snail | <i>Vertigo ventricosa</i> | 20, 26-28 |
| 581 | Maryland glyph | <i>Glyphyalinia raderi</i> | 6, 14 |
| 582 | Natural Bridge supercoil | <i>Paravitrea pontis</i> | 6, 14 |
| 583 | Rust glyph | <i>Glyphyalinia picea</i> | 1-3, 5, 6 |
| 584 | Snowhill ambersnail | <i>Catinella hubrichti</i> | 20, 33, 34 |
| 585 | Spruce knob threetooth | <i>Triodopsis picea</i> | 2, 21 |
| 586 | Striped whitelip | <i>Webbhelix multilineata</i> | 21 |
| Freshwater Mussels | | | |
| 587 | Alewife floater | <i>Anodonta implicata</i> | 41-46 |
| 588 | Atlantic spike | <i>Elliptio producta</i> | 40-42, 44-46 |
| 589 | Brook floater | <i>Alasmidonta varicosa</i> | 39-41, 44, 45 |
| 590 | Creeper | <i>Strophitus undulatus</i> | 39-42, 44-46, 57 |
| 591 | Dwarf wedgemussel | <i>Alasmidonta heterodon</i> | 42, 43, 45 |
| 592 | Eastern lampmussel | <i>Lampsilis radiata</i> | 40-46, 57 |
| 593 | Eastern pondmussel | <i>Ligumia nasuta</i> | 42, 46 |
| 594 | Green floater | <i>Lasmigona subviridis</i> | 40, 41, 44, 45 |
| 595 | Northern lance | <i>Elliptio fisheriana</i> | 42, 43, 46, 57 |
| 596 | Paper pondshell | <i>Utterbackia imbecillis</i> | 42, 44-46, 57 |
| 597 | Tidewater mucket | <i>Leptodea ochracea</i> | 42, 45, 46 |
| 598 | Triangle floater | <i>Alasmidonta undulata</i> | 39-42, 44-46 |
| 599 | Yellow lampmussel | <i>Lampsilis cariosa</i> | 42, 44-46 |
| 600 | Yellow lance | <i>Elliptio lanceolata</i> | 41, 42, 45, 46 |
| Flatworms | | | |
| 601 | A planarian | <i>Paraplanaria dactyligera</i> | 32 |
| 602 | A planarian | <i>Phagocata dissimilis sp. nov.</i> | 32 |
| 603 | A planarian | <i>Phagocata projecta sp. nov.</i> | 32 |
| 604 | A planarian | <i>Phagocata virilis</i> | 32 |
| 605 | A planarian | <i>Procotyla typhlops</i> | 32 |
| 606 | A planarian | <i>Sphalloplana buchanani</i> | 32, 52 |
| 607 | A planarian | <i>Sphalloplana cava sp. nov.</i> | 32 |
| 608 | A planarian | <i>Sphalloplana pricei</i> | 32 |
| 609 | A planarian | <i>Sphalloplana sp 1</i> | 32, 52, 59 |
| 610 | Hoffmaster's cave planarian | <i>Sphalloplana hoffmasteri</i> | 52, 59 |

Appendix 4b. Maryland’s Natural Community Classification
List of Ecological Community Groups and Community Types

| | Global Rank ¹ | State Rank ² | Community Element Global Code ³ |
|---|--------------------------|-------------------------|--|
| TERRESTRIAL SYSTEM | | | |
| MESIC FORESTS | | | |
| Northern Hardwood Forest | | | |
| Central Appalachian Northern Hardwood Forest | G4 | S2 | CEGL006045 |
| Acidic Cove Forest | | | |
| Central Appalachian Acidic Cove Forest (White pine - Hemlock - Mixed Hardwoods Type) | G4 | S3 | CEGL006304 |
| Rich Cove Forest | | | |
| Central Appalachian Rich Cove Forest | G4? | S3 | CEGL006237 |
| Eastern Hemlock - Hardwood Forest | | | |
| East-central Hemlock Hardwood Forest | G3? | SU | CEGL005043 |
| Central Appalachian Hemlock - Northern Hardwood Forest | G4? | SU | CEGL006206 |
| Piedmont / Coastal Plain Eastern Hemlock - Hardwood Forest | G2G3 | S1 | CEGL006474 |
| Central Appalachian Hemlock - Chestnut Oak Forest | G3 | S1 | CEGL006923 |
| Hemlock - Northern Hardwood Forest | G4? | S1 | CEGL006109 |
| Mesic Mixed Hardwood Forest | | | |
| Northern Coastal Plain / Piedmont Mesic | G5 | S4 | CEGL006075 |
| Basic Mesic Forest | | | |
| Northern Coastal Plain / Piedmont Basic Mesic Hardwood Forest | G4? | S3? | CEGL006055 |
| Central Appalachian / Piedmont Rich Cove / Mesic Slope Forest (Twinleaf - Blue Cohosh Type) | G4G5 | S4 | CEGL008412 |
| High Allegheny Rich Red Oak - Sugar Maple Forest | G4G5 | SNR | CEGL006125 |
| Upper Piedmont / Northern Blue Ridge Basic Mesic Hardwood Forest | G4? | S4 | CEGL006186 |
| DRY-MESIC FORESTS AND WOODLANDS | | | |

Dry - Mesic Calcareous Forest

| | | | |
|---|------|----|----------------------------|
| Ridge and Valley Limestone Oak-Hickory Forest | G3G4 | S3 | CEGL004793 |
| Central Appalachian Rich Red Oak - Sugar Maple Forest | G4 | S4 | CEGL008517 |

Basic Oak - Hickory Forest

| | | | |
|--|------|-----|----------------------------|
| Potomac River Bedrock Terrace Oak-Hickory Forest | G1G2 | S1 | CEGL006209 |
| Northern Hardpan Basic Oak-Hickory Forest | G3 | S2 | CEGL006216 |
| Inner Piedmont / Lower Blue Ridge Basic Oak - Hickory Forest | G3G4 | S3? | CEGL008514 |
| Central Appalachian Montane Oak-Hickory Forest (Basic Type) | G3 | S2? | CEGL008518 |

Acidic Oak - Hickory Forest

| | | | |
|---|------|----|----------------------------|
| Piedmont Dry-Mesic Acidic Oak-Hickory Forest | G4G5 | S4 | CEGL008475 |
| Central Appalachian Acidic Oak - Hickory Forest | G5 | S4 | CEGL008515 |

Eastern White Pine - Hardwood Forest

| | | | |
|---|----|----|----------------------------|
| Central Appalachian / Piedmont White Pine - Subsericeous Oak Forest | G5 | S4 | CEGL008539 |
|---|----|----|----------------------------|

Oak - Heath Forest

| | | | |
|--|------|-----|----------------------------|
| Northeastern Coastal Plain Mixed Oak / Heath Forest | G4G5 | S4 | CEGL006269 |
| Low-Elevation Mixed Oak / Heath Forest | G5 | S5 | CEGL008521 |
| Central Appalachian Dry Chestnut Oak - Northern Red Oak / Heath Forest | G3G4 | SNR | CEGL008523 |
| Central Appalachian Chestnut Oak / Mixed Herbs Shale Woodland | G3? | S3? | CEGL008526 |
| Central Appalachian Chestnut Oak - Virginia Pine Woodland | G3? | SNR | CEGL008540 |
| Chesapeake Bay River-Bluff Chestnut Oak Forest | GNR | S3 | CEGL006490 |
| Central Appalachian Dry-Mesic Chestnut Oak - Northern Red Oak Forest | G5 | S4 | CEGL006057 |
| Central Appalachian / Northern Piedmont Chestnut Oak Forest | G5 | S5 | CEGL006299 |
| Northern Appalachian Chestnut Oak Forest | G5 | S3 | CEGL006282 |

Coastal Plain Oak - Beech Heath Forest

| | | | |
|--|----|-----|----------------------------|
| Northeastern Coastal Plain / Piedmont Oak - Beech / Heath Forest | G4 | S3? | CEGL006919 |
|--|----|-----|----------------------------|

Boulderfield Forest and Woodland

| | | | |
|---|------|------|----------------------------|
| Central Appalachian Basic Boulderfield Forest (Montane Basswood - White Ash Type) | G3 | S2? | CEGL008528 |
| Central Appalachian Acidic Boulderfield Woodland | G3G4 | S3S4 | CEGL006565 |
| Central Appalachian / Piedmont Low-Elevation Rich Boulderfield Forest | G3G4 | SNR | CEGL006471 |

DRY FORESTS AND WOODLANDS

Montane Pine - Oak Woodland

| | | | |
|---|----|----|----------------------------|
| Central Appalachian Pine - Oak / Heath Woodland | G4 | S4 | CEGL004996 |
|---|----|----|----------------------------|

Montane - Piedmont Acidic Woodland

| | | | |
|--|-----|-----|----------------------------|
| Appalachian / Northern Piedmont Riverside Outcrop Woodland | G1 | S1 | CEGL008449 |
| Central Appalachian Chestnut Oak - Virginia Pine Woodland | G3? | S2? | CEGL008540 |

Montane - Piedmont Basic Woodland

| | | | |
|------------------------------------|----|-----|----------------------------|
| Central Appalachian Basic Woodland | G2 | S1? | CEGL003683 |
|------------------------------------|----|-----|----------------------------|

Montane Dry Calcareous Forest and Woodland

| | | | |
|--|-----|------|----------------------------|
| Appalachian Sugar Maple - Chinkapin Oak Limestone Forest | G4? | S3S4 | CEGL006017 |
|--|-----|------|----------------------------|

Coastal Plain Dry Calcareous Forest and Woodland

| | | | |
|--|----|----|----------------------------|
| North Atlantic Coastal Plain Dry Calcareous Forest | G1 | S1 | CEGL007748 |
|--|----|----|----------------------------|

Coastal Plain Pine - Oak Woodland

| | | | |
|----------------------------------|------|----|----------------------------|
| Pine Barrens Pine - Oak Woodland | G2G3 | S3 | CEGL006329 |
|----------------------------------|------|----|----------------------------|

Inland Sand Dune and Ridge Woodland

| | | | |
|---------------------------------------|-----|-----|----------------------------|
| Inland Dune and Ridge Forest/Woodland | G3 | S3 | CEGL006851 |
| Inland Dune Ridge Forest | GNR | SNA | CEGL006354 |
| Hardwood Inland Dune Ridge Forest | GNR | S2 | CEGL006954 |

GLADES, BARRENS, AND ROCK OUTCROPS

Limestone Glade

| | | | |
|----------------------------------|------|-----|----------------------------|
| Limestone Chinkapin Oak Woodland | G3G4 | S2? | CEGL006231 |
|----------------------------------|------|-----|----------------------------|

Sandstone Glade

| | | | |
|--|-----|----|----------------------------|
| Appalachian Pitch Pine Pavement Woodland | GNR | S2 | CEGL004821 |
|--|-----|----|----------------------------|

| | | | |
|---|------|-----|--------------------------------|
| Central Appalachian Blueberry Shrubland | G4G5 | S3 | CEGL003958 |
| Serpentine Barren | | | |
| Serpentine Red Maple - Pine Forest | G1G2 | S2? | CEGL006439 |
| Serpentine Red-cedar - Virginia Pine / Greenbrier Forest | G1G2 | S2? | CEGL006440 |
| Serpentine Little Bluestem - Prairie Dropseed Grassland | G1G2 | S1 | CEGL006442 |
| Shale Barren | | | |
| Central Appalachian Circumneutral Barrens | G2 | S1 | CEGL006037 |
| North-Central Appalachian Acidic Shale Woodland | G3 | S2 | CEGL006288 |
| Central Appalachian Virginia Pine / Sparse Herbs Shale Woodland | G3 | S2? | CEGL008525 |
| Basic Outcrop Barren | | | |
| Greenstone Glade | G2 | S1 | CEGL008529 (x) |
| Riverside Outcrop Barren | | | |
| Potomac Gorge Riverside Outcrop Barrens | G2 | S1 | CEGL006491 |
| Acidic Cliff and Bluff | | | |
| Spleenwort Acidic Cliff | GNR | SNR | CEGL004391 |
| Basic Cliff | | | |
| Appalachian Cliff White-cedar Woodland | G2G3 | S1 | CEGL002596 |
| Montane Cliff (Calcareous Type) | G3G4 | S1 | CEGL004476 |
| Piedmont / Central Appalachian Subcalcareous Cliff and Rock Outcrop | GNR | SNR | CEGL006479 |
| MARITIME UPLAND COMMUNITIES | | | |
| Maritime Dune Grassland | | | |
| Beachgrass - Panicgrass Dune Grassland | G2 | S2 | CEGL004043 |
| Overwash Dune Grassland | G2G3 | SNR | CEGL004097 |
| Mid-Atlantic Coast Backdune Grassland | G2 | SNR | CEGL004240 |
| Maritime Dune Scrub | | | |
| Chesapeake Bay Maritime Shrubland | G2 | S2 | CEGL003881 |
| North Atlantic Coastal Plain Vine Dune | G1G2 | S1 | CEGL003886 |
| Central Coast Beach-heather Dune Shrubland | G2G3 | S2 | CEGL003950 |

| Maritime Dune Woodland | | | | |
|--|------|------|----------------------------|--|
| Loblolly Pine Dune Woodland | G1G2 | S1 | CEGL006052 | |
| Maritime Red-cedar Woodland | G2 | S2 | CEGL006212 | |
| Chesapeake Bay Tall Maritime Shrubland | G1G2 | S1 | CEGL006319 | |
| Maritime Forest | | | | |
| Mid-Atlantic Coastal Maritime Forest | G2 | S2 | CEGL006040 | |
| PALUSTRINE SYSTEM | | | | |
| ALLUVIAL WETLANDS | | | | |
| Bald Cypress - Gum Swamp | | | | |
| Non-tidal Bald-cypress - Gum Swamp | G2 | S2 | CEGL006214 | |
| Central Atlantic Blackwater Swamp Forest | G3 | S2 | CEGL007054 | |
| Semipermanent Impoundment | | | | |
| Coastal Plain Emergent Millpond Bog | GNR | SNR | CEGL006853 | |
| Piedmont/Mountain Semipermanent Impoundment (Montane Boggy Type) | G3? | S3 | CEGL004510 | |
| Swamp-loosestrife Shrub Swamp | GNR | S5 | CEGL005089 | |
| Coastal Plain Pond | G2 | S2? | CEGL006086 | |
| Floodplain Pool | | | | |
| Northeastern Buttonbush Shrub Swamp | G4G5 | SNR | CEGL006069 | |
| Water-lily Aquatic Wetland | G4G5 | SNR | CEGL002386 | |
| Floodplain Pool | G3 | SNR | CEGL007696 | |
| Coastal Plain - Piedmont Bottomland Forest | | | | |
| Potomac Gorge Willow Oak Floodplain Forest [PROVISIONAL] | GNR | S1 | CEGL006494 | |
| Coastal Plain / Piedmont Small-Stream Floodplain Forest | G4 | S4 | CEGL004418 | |
| Northern Piedmont Small-Stream Floodplain Forest | G4 | S3S4 | CEGL006492 | |
| Northern Piedmont / Central Appalachian Pin Oak Floodplain Swamp | G3G4 | SNR | CEGL006497 | |
| Northern Piedmont / Central Appalachian Maple-Ash Swamp Forest | G4 | S4 | CEGL006548 | |
| Coastal Plain Oak Floodplain Swamp | G3G4 | S4 | CEGL006605 | |

| | | | |
|--|------|-----|----------------------------|
| Chesapeake / Piedmont Red Maple / Lizard's-tail Swamp | GNR | S4 | CEGL006606 |
| Montane - Piedmont Bottomland Forest | | | |
| Mid-Atlantic High Terrace Hardwood Floodplain Forest | G3? | SNR | CEGL006459 |
| Piedmont / Central Appalachian Rich Floodplain Forest | G4 | S4 | CEGL004073 |
| Piedmont / Central Appalachian Silver Maple Forest | G4 | S4 | CEGL006217 |
| Montane - Piedmont Small-Stream Forest | | | |
| Northern Blue Ridge Montane Alluvial Forest | G3? | SNR | CEGL006255 |
| Central Appalachian Ridge and Valley Floodplain Forest | GNR | SNR | CEGL006473 |
| Depositional Bar and Shore | | | |
| Appalachian-Atlantic River Bar Drawdown Shore | G3 | SNR | CEGL006483 |
| Rocky Bar and Shore (Twisted Sedge Type) | G3G4 | S4 | CEGL004103 |
| Water-willow Rocky Bar and Shore | G4G5 | S5 | CEGL004286 |
| Piedmont / Central Appalachian Riverbank Tall Herbaceous Vegetation | GNR | SNR | CEGL006480 |
| Piedmont / Central Appalachian Scour Bar Herbaceous Vegetation | GNR | SNR | CEGL006481 |
| River-Scour Woodland | | | |
| Piedmont / Central Appalachian River-Scour Woodland | G1G2 | S1 | CEGL006218 |
| Central Appalachian / Piedmont Bedrock Floodplain Woodland | G2? | S2 | CEGL006476 |
| Piedmont Riverscour Shrubland | G1? | S1 | CEGL006484 |
| Piedmont / Central Appalachian Sycamore - River Birch Scour Woodland | G4G5 | S4 | CEGL003896 |
| Riverside Prairie | | | |
| Fall-line Riverwash Bedrock Prairie | G3 | S3 | CEGL006283 |
| Ridge and Valley Gravel-Wash Prairie | G2G3 | S2 | CEGL006477 |
| Piedmont / Central Appalachian Riverside Outcrop Prairie | G1 | S1 | CEGL006478 |
| NON-ALLUVIAL WETLANDS | | | |
| High-Elevation Seepage Swamp | | | |
| Swamp Forest - Bog Complex (Spruce Type) | G2? | S1 | CEGL006277 |
| High-Elevation Hemlock - Yellow Birch Seepage Swamp | G2 | S1 | CEGL008533 |

| | | | |
|--|------|------|----------------------------|
| Eastern Hemlock - Great Laurel Swamp | G4? | S1 | CEGL006279 |
| Southern Tamarack Poor Swamp | G4? | S1 | CEGL002472 |
| Central Appalachian Forested Acidic Seep | GNR | S3? | CEGL006132 |
| Montane - Piedmont Acidic Seepage Swamp | | | |
| Central Appalachian Acidic Seepage Swamp | G2 | S2 | CEGL007853 |
| Montane - Piedmont Basic Seepage Swamp | | | |
| Central Appalachian Basic Seepage Swamp | G3 | S3 | CEGL008416 |
| Coastal Plain - Piedmont Acidic Seepage Swamp | | | |
| Southern Red Maple - Blackgum Swamp Forest | G3? | S3? | CEGL006238 |
| Pine Barrens Lowland Forest | G2G3 | S2? | CEGL006926 |
| Coastal Plain - Piedmont Basic Seepage Swamp | | | |
| Southern New England / Northern Piedmont Red Maple Seepage Swamp | G4G5 | S2 | CEGL006406 |
| Coastal Plain - Piedmont Acidic Seepage Bog/Fen | | | |
| Fall-line Terrace Gravel Magnolia Bog | G1 | S1 | CEGL006219 |
| Delmarva Poor Fen | G1 | S1 | CEGL006467 |
| Coastal Plain Acidic Seepage Swale | GNR | S2? | CEGL006499 |
| Coastal Plain Dwarf-Shrub Peatland | GNR | S1 | CEGL006852 |
| Montane Peatland | | | |
| Cottongrass Bog | G3 | S2S3 | CEGL006570 |
| Red Spruce Peat Swamp | G2G3 | S1S2 | CEGL006588 |
| Pitch Pine Peat Swamp | G1G2 | S1 | CEGL006587 |
| Chokeberry - Northern Wild Raisin Shrub Peatland | GNR | S3 | CEGL006545 |
| Cranberry - Beakrush Peatland | G2 | S2 | CEGL007856 |
| Silvery Sedge Fen | GNR | S3 | CEGL006549 |
| Appalachian St. John's-wort Shrub Swamp | GNR | S4 | CEGL006464 |
| Threeway Sedge Basin Marsh | GNR | S3 | CEGL006552 |
| Buxbaum's Sedge Fen | GNR | S1 | n/a |
| Montane - Piedmont Wet Meadow/Fen | | | |
| Lake Sedge Fen | G4G5 | S1 | CEGL002256 |

| | | | |
|------------------------------------|------|------|----------------------------|
| Beaked Sedge Fen | G4G5 | S3? | CEGL002257 |
| Common Rush Marsh | G5 | S5 | CEGL004112 |
| Bluejoint Grass Wet Meadow | G4G5 | S4S5 | CEGL005448 |
| Eastern Upright Sedge Meadow | G4G5 | S4 | CEGL006412 |
| Smooth Alder Shrub Swamp | G4G5 | SNR | CEGL005082 |
| Northern Piedmont Wet Prairie | GNR | S1 | n/a |
| Wet Ultramafic Prairie | GNR | S1 | n/a |
| Central Appalachian Cutgrass Marsh | GNR | S4S5 | CEGL006461 |

Montane - Piedmont Seep

| | | | |
|-----------------------------------|------|-----|----------------------------|
| Golden-saxifrage Forested Seep | G3G5 | S4 | CEGL006193 |
| Mafic Seep | GNR | S5 | n/a |
| Central Appalachian Woodland Seep | GNR | SNR | CEGL006298 |

Upland Depression Swamp

| | | | |
|--|------|-----|----------------------------|
| Piedmont Pin Oak - Swamp White Oak Seasonal Pond | G2 | S1 | CEGL004643 |
| Piedmont Upland Depression Willow Oak Swamp Forest | G2G3 | S1 | CEGL007403 |
| Northeastern Pin Oak - Swamp White Oak Forest | GNR | SNR | CEGL006240 |
| Coastal Plain Red Maple - Sweetgum Swamp | G3 | S3 | CEGL006110 |
| Central Coastal Plain Basin Swamp | G1G2 | S1 | CEGL006223 |

Coastal Plain Non-Riverine Hardwood Swamp

| | | | |
|--|-----|-----|----------------------------|
| Chesapeake Bay Nonriverine Wet Hardwood Forest | G2? | S1 | CEGL004644 |
| Mesic Coastal Plain Oak Forest | GNR | SNR | CEGL006390 |

Atlantic White Cedar Swamp

| | | | |
|--|-----|----|----------------------------|
| Peatland Atlantic White-cedar Forest | G2 | S1 | CEGL006146 |
| Coastal Plain Atlantic White-cedar - Red Maple Swamp | GNR | S3 | CEGL006078 |

Delmarva Bay

| | | | |
|---------------------------------|------|----|----------------------------|
| Chainfern Small Depression Pond | G2? | S1 | CEGL004475 |
| Coastal Plain Muck Pondshore | G2G3 | S2 | CEGL006264 |
| Buttonbush Coastal Plain Pond | G3? | S2 | CEGL006242 |
| Delmarva Bay Tall Grassland | G1G2 | S1 | CEGL006609 |
| Panicgrass Pondshore | GNR | S2 | CEGL006338 |

| | | | |
|--|------|------|----------------------------|
| Northern Peatland Sedge Coastal Plain Pond | G3G4 | S2S3 | CEGL004120 |
| NON-TIDAL MARITIME WETLANDS | | | |
| Interdunal Swale | | | |
| Barrier Island Bog | G2G4 | SU | CEGL003906 |
| Forked Rush Dune Swale | G2G3 | S1 | CEGL004111 |
| Interdunal Swale | G1G2 | S1 | CEGL004117 |
| Interdune Switchgrass Brackish Depression | G2G4 | SNR | CEGL004129 |
| Maritime Swamp | | | |
| Wax-myrtle Shrub Swamp | G2G3 | SNR | CEGL003840 |
| Coastal Loblolly Pine Wetland Forest | G3 | S2S3 | CEGL006137 |
| Sea-Level Fen | | | |
| Sea Level Fen | G1 | S1 | CEGL006310 |
| ESTUARINE SYSTEM | | | |
| TIDAL WETLANDS | | | |
| Intertidal Shore | | | |
| North Atlantic Coastal Plain River Brackish Intertidal Mudflat | G2G4 | S1 | CEGL004473 |
| Estuary Pipewort Freshwater Intertidal Flat | G2 | S1 | CEGL006352 |
| Atlantic Coast Brackish Tidal Marsh | GNR | S1 | CEGL004188 |
| Shore Quillwort Tidal Flat | GNR | S1 | CEGL006058 |
| Tidal Freshwater / Oligohaline Aquatic Bed | | | |
| Mixed Freshwater Subtidal Community | GNR | SNR | CEGL006048 |
| Tidal Freshwater Marsh and Shrubland | | | |
| Atlantic Coast Wild Rice Tidal Marsh | G4? | S4 | CEGL004202 |
| Broadleaf Pond-lily Tidal Marsh | G4G5 | S4 | CEGL004472 |
| Pickerelweed Tidal Marsh | G3G4 | S4 | CEGL004706 |
| Freshwater Tidal Mixed High Marsh | GNR | S4 | CEGL006325 |
| Sweetflag Tidal Marsh | GNR | S4 | CEGL006833 |
| American Lotus Tidal Marsh | GNR | SU | CEGL006913 |
| Seaside Alder Tidal Shrubland | GNR | S3 | CEGL006841 |
| Smooth Alder Tidal Shrubland | GNR | S4 | CEGL006843 |

| | | | |
|---|------|------|----------------------------|
| Desert False Indigo Tidal Shrubland | GNR | SU | CEGL006844 |
| Tidal Hardwood Swamp | | | |
| Ash - Swamp Tupelo Freshwater Tidal Swamp | G3 | S3 | CEGL006287 |
| Tidal Bald Cypress Swamp | | | |
| Bald-cypress / Shoreline Sedge Woodland | G2? | S1 | CEGL004654 |
| Chesapeake Bay Tidal Cypress - Swamp Tupelo Swamp | G3 | S1 | CEGL006850 |
| Tidal Oligohaline Marsh and Shrubland | | | |
| Atlantic Coast Tidal Oligohaline Spikerush Marsh | G1G2 | S2S3 | CEGL004628 |
| Shoreline Sedge Tidal Marsh | GNR | S1 | CEGL006177 |
| Brackish Tidal Creek Shrubland | GNR | S3 | CEGL006846 |
| Atlantic Big Cordgrass Marsh | G4 | S4? | CEGL004195 |
| Cattail Brackish Tidal Marsh | G4G5 | S4 | CEGL004201 |
| Brackish Meadow | GNR | S4 | CEGL006150 |
| Oligohaline Mixed Forbs Tidal Marsh | GNR | S4 | CEGL006181 |
| Transitional Tidal Marsh | GNR | S4 | CEGL006612 |
| Wax Myrtle - Swamp Rose Tidal Shrubland | G4 | S3S4 | CEGL004656 |
| Brackish Tidal Creek Shrubland | GNR | S3 | CEGL006846 |
| Tidal Mesohaline / Polyhaline Aquatic Bed | | | |
| North Atlantic Seawrack Bed | G4G5 | SNR | CEGL004336 |
| Northern Atlantic Coast Widgeongrass Bed | GNR | SNR | CEGL006167 |
| Tidal Mesohaline Marsh and Shrubland | | | |
| Needlerush High Marsh | G5 | S5 | CEGL004186 |
| North Atlantic Low Salt Marsh | G5 | S5 | CEGL004192 |
| Mid- and Southern Atlantic High Salt Marsh | G4G5 | SNR | CEGL004197 |
| Mid-Atlantic Low Salt Marsh | GNR | SNR | CEGL006586 |
| Irregularly Flooded Eastern Tidal Salt Shrub | G5 | S5 | CEGL003921 |
| Brackish Shrubland | GNR | S4 | CEGL006847 |
| Eastern Tidal Salt Shrub | G5 | S5 | CEGL006848 |
| Salt Pannes | | | |
| Salt Panne (Salicornia Type) | G5 | S4 | CEGL004308 |

RIVERINE SYSTEM

Riverine Aquatic Bed

| | | | |
|-------------------------|------|-----|----------------------------|
| Eel-grass River Channel | G3G4 | SNR | CEGL004333 |
|-------------------------|------|-----|----------------------------|

MARINE SYSTEM

Coastal Beach

| | | | |
|----------------------------------|------|----|----------------------------|
| North Atlantic Upper Ocean Beach | G4G5 | S3 | CEGL004400 |
|----------------------------------|------|----|----------------------------|

SUCCESSIONAL / MODIFIED VEGETATION

Successional / Modified Terrestrial Forest

| | | | |
|-----------------------------------|-----|-----|----------------------------|
| Successional Virginia Pine Forest | GNA | SNA | CEGL002591 |
|-----------------------------------|-----|-----|----------------------------|

| | | | |
|---|-----|-----|----------------------------|
| Early- to Mid-Successional Loblolly Pine Forest | GNA | SNA | CEGL006011 |
|---|-----|-----|----------------------------|

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|---|-----|-----|----------------------------|
| Mid- to Late-Successional Loblolly Pine - Sweetgum Forest | GNA | SNA | CEGL008462 |
|---|-----|-----|----------------------------|

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|---|-----|-----|----------------------------|
| Loblolly Pine - (White Oak, Southern Red Oak, Post Oak) Successional Coastal Plain Forest | GNR | SNA | CEGL004766 |
|---|-----|-----|----------------------------|

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|--------------------------|-----|-----|----------------------------|
| Loblolly Pine Plantation | GNA | SNA | CEGL007179 |
|--------------------------|-----|-----|----------------------------|

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|---|-----|-----|----------------------------|
| Virginia Pine / Blackjack Oak Serpentine Forest | GNA | SNA | CEGL006266 |
|---|-----|-----|----------------------------|

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|---|-----|-----|----------------------------|
| Successional / Modified Mixed Hardwood Forest | GNA | SNA | CEGL006599 |
|---|-----|-----|----------------------------|

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|---|-----|-----|----------------------------|
| Successional Tuliptree Forest (Rich Type) | GNA | SNA | CEGL007220 |
|---|-----|-----|----------------------------|

| | | | |
|----------------------------------|-----|-----|----------------------------|
| Successional Black Locust Forest | GNA | SNA | CEGL007279 |
|----------------------------------|-----|-----|----------------------------|

| | | | |
|----------------------------------|-----|-----|----------------------------|
| Successional Black Walnut Forest | GNA | SNA | CEGL007879 |
|----------------------------------|-----|-----|----------------------------|

| | | | |
|--------------------------------|-----|-----|----------------------------|
| Successional White Pine Forest | GNA | SNA | CEGL007944 |
|--------------------------------|-----|-----|----------------------------|

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|--|-----|-----|----------------------------|
| Successional Sweet Birch / Clubmoss Northern Hardwood Forest | GNA | SNA | CEGL008503 |
|--|-----|-----|----------------------------|

Successional / Modified Terrestrial Shrubland

| | | | |
|----------------------|-----|-----|----------------------------|
| Kudzu Vine-shrubland | GNA | SNA | CEGL003882 |
|----------------------|-----|-----|----------------------------|

| | | | |
|-----------------------------------|-----|-----|----------------------------|
| Successional Blackberry Shrubland | GNA | SNA | CEGL003892 |
|-----------------------------------|-----|-----|----------------------------|

Successional / Modified Terrestrial Herbaceous Vegetation

| | | | |
|-----------------------------------|-----|-----|----------------------------|
| Successional Broomsedge Grassland | GNA | SNA | CEGL004044 |
|-----------------------------------|-----|-----|----------------------------|

| | | | |
|--|-----|-----|----------------------------|
| Successional Central Appalachian Montane Grassland | GNA | SNA | CEGL004760 |
|--|-----|-----|----------------------------|

Successional / Modified Palustrine Forest

| | | | |
|--|-----|-----|----------------------------|
| Successional Coastal Plain / Piedmont Floodplain Forest (River Birch - Red Maple Type) | GNA | SNA | CEGL006976 |
| Red Maple - (Swamp Tupelo) / Coastal Sweet-pepperbush - (Swamp Bay) Forest | GNA | SNR | CEGL007445 |
| Successional / Modified Palustrine Shrubland | | | |
| Successional Bushy St. Johns-wort Shrub Swamp | GNA | SNA | CEGL006464 |
| Successional / Modified Estuarine Forest | | | |
| Loblolly Pine / Wax-myrtle / Saltmeadow Cordgrass Tidal Woodland | GNR | S5 | CEGL006849 |
| Successional / Modified Estuarine Herbaceous Vegetation | | | |
| Common Reed Modified Tidal Marsh | GNA | SNA | CEGL004187 |

^{1,2}See Appendix 3g for Global and State Conservation Ranks and Rank Qualifiers.

³Each community type is crosswalked to a corresponding United States National Vegetation Classification (USNVC) code, which includes the string "CEGL" (Community Element Global) and a unique six-digit number. Community Types that are not defined in the USNVC are listed as "n/a" in this field. Each USNVC code in the list is hyperlinked to an equivalent community type description on the NatureServe Explorer website, which features detailed range-wide information for each community type. USNVC codes trailed by an "(x)" means the Community Type concept recognized at the state level intersects the global concept and should not be considered equivalent.



Appendix 4c: County to Key Wildlife Habitat Cross-reference

| Key Wildlife Habitat | Maryland Counties in Geographical Order | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------|------------|-----------|---------|-----------|---------|-------|--------|------------|--------------|-----------------|---------|---------|------------|------|--------------|--------|----------|------------|----------|----------|-----------|---|
| | Garrett | Allegany | Washington | Frederick | Carroll | Baltimore | Harford | Cecil | Howard | Montgomery | Anne Arundel | Prince George's | Charles | Calvert | St. Mary's | Kent | Queen Anne's | Talbot | Caroline | Dorchester | Wicomico | Somerset | Worcester | |
| UPLAND | | | | | | | | | | | | | | | | | | | | | | | | |
| Forest | | | | | | | | | | | | | | | | | | | | | | | | |
| High Elevation Ridge Forest | X | X | | | | | | | | | | | | | | | | | | | | | | |
| Hemlock-Northern Hardwood Forest | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | |
| Cove Forest | X | X | X | X | | | | | | | | | | | | | | | | | | | | |
| Montane - Piedmont Oak-Pine Forest | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | |
| Oak-Hickory Forest | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | |
| Basic Mesic Forest | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | X |
| Mesic Mixed Hardwood Forest | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Coastal Plain Oak-Pine Forest | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Coastal Plain Pitch Pine Forest | | | | | | | | X | | | X | X | | | | | | | | | | | | |
| Maritime Forest and Shrubland | | | | | | | | | | | | | | | | | | | | X | X | X | X | |
| Glades, Barrens, and Rock Outcrops | | | | | | | | | | | | | | | | | | | | | | | | |
| Serpentine Barren | | | | | | X | X | X | | X | | | | | | | | | | | | | | |
| Shale Barren | | X | | | | | | | | | | | | | | | | | | | | | | |
| Acidic Glade and Barren | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | |



| Key Wildlife Habitat | Maryland Counties by Geographical Order | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------|------------|-----------|---------|-----------|---------|-------|--------|------------|--------------|-----------------|---------|---------|------------|------|--------------|--------|----------|------------|----------|----------|-----------|---|--|
| | Garrett | Allegany | Washington | Frederick | Carroll | Baltimore | Harford | Cecil | Howard | Montgomery | Anne Arundel | Prince George's | Charles | Calvert | St. Mary's | Kent | Queen Anne's | Talbot | Caroline | Dorchester | Wicomico | Somerset | Worcester | | |
| Basic Glade and Barren | X | X | X | X | X | X | | | | X | | | | | | | | | | | | | | | |
| Cliff and Rock Outcrop | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| Coastal Bluff | | | | | | | | | | | X | X | X | X | | X | X | X | | | | | | | |
| Coastal Beaches and Dunes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coastal Beach | | | | | | | | | | | | | | X | X | | | | | X | X | X | X | | |
| Maritime Dune and Grassland | | | | | | | | | | | | | | | | | | | | | | | | X | |
| WETLAND | | | | | | | | | | | | | | | | | | | | | | | | | |
| Floodplain Wetlands | | | | | | | | | | | | | | | | | | | | | | | | | |
| Montane - Piedmont Floodplain | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| Coastal Plain Floodplain | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | |
| Groundwater Wetlands | | | | | | | | | | | | | | | | | | | | | | | | | |
| Montane Bog and Fen | X | X | | | | | | | | | | | | | | | | | | | | | | | |
| Montane - Piedmont Acidic Seepage Swamp | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| Montane - Piedmont Basic Seepage Swamp | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | |
| Piedmont Seepage Wetland | | | | X | X | X | X | X | X | X | | | | | | | | | | | | | | | |



| Key Wildlife Habitat | Maryland Counties in Geographical Order | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------|------------|-----------|---------|-----------|---------|-------|--------|------------|--------------|-----------------|---------|---------|------------|------|--------------|--------|----------|------------|----------|----------|-----------|
| | Garrett | Allegany | Washington | Frederick | Carroll | Baltimore | Harford | Cecil | Howard | Montgomery | Anne Arundel | Prince George's | Charles | Calvert | St. Mary's | Kent | Queen Anne's | Talbot | Caroline | Dorchester | Wicomico | Somerset | Worcester |
| Piedmont Upland Depression Swamp | | | | X | X | X | X | X | X | X | | | | | | | | | | | | | |
| Coastal Plain Flatwood and Depression Swamp | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Coastal Plain Seepage Swamp | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Coastal Plain Seepage Bog and Fen | | | | | | | | X | | | X | X | X | X | | | | | X | X | X | | |
| Delmarva Bay | | | | | | | | | | | | | | | | X | X | X | X | X | X | X | X |
| Maritime Swamp | | | | | | | | | | | | | | | | | | | | X | X | X | X |
| Vernal Pool | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Spring | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Tidal Wetlands | | | | | | | | | | | | | | | | | | | | | | | |
| Tidal Forest | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Tidal Freshwater Marsh and Shrubland | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Tidal Brackish Marsh and Shrubland | | | | | | | | | | | | | | | X | X | X | X | X | X | X | X | X |
| Tidal Salt Marsh and Shrubland | | | | | | | | | | | | | | | | | | | | X | X | X | X |



| Key Wildlife Habitat | Maryland Counties in Geographical Order | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|---|----------|------------|-----------|---------|-----------|---------|-------|--------|------------|--------------|-----------------|---------|---------|------------|------|--------------|--------|----------|------------|----------|----------|-----------|
| | Garrett | Allegany | Washington | Frederick | Carroll | Baltimore | Harford | Cecil | Howard | Montgomery | Anne Arundel | Prince George's | Charles | Calvert | St. Mary's | Kent | Queen Anne's | Talbot | Caroline | Dorchester | Wicomico | Somerset | Worcester |
| Intertidal Mudflat and Sand Flat | | | | | | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| AQUATIC | | | | | | | | | | | | | | | | | | | | | | | |
| Streams and Rivers | | | | | | | | | | | | | | | | | | | | | | | |
| Coldwater Stream | X | X | X | X | X | X | X | | | | | | | | | | | | | | | | |
| Limestone Stream | | | X | X | | | | | | | | | | | | | | | | | | | |
| Highland Stream | X | X | X | X | | | | | | | | | | | | | | | | | | | |
| Piedmont Stream | | | | X | X | X | X | X | X | X | X | X | | | | | | | | | | | |
| Coastal Plain Stream | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | |
| Blackwater Stream | | | | | | | X | | | | | X | X | X | X | X | X | X | X | X | X | X | X |
| Highland River | X | X | X | X | | | | | | | | | | | | | | | | | | | |
| Piedmont River | | | | X | X | X | X | X | X | X | | | | | | | | | | | | | |
| Coastal Plain River | | | | | | X | | | X | | X | X | X | | X | X | X | | | X | X | | X |
| Bay and Ocean | | | | | | | | | | | | | | | | | | | | | | | |
| Shellfish Bed | | | | | | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Hard bottom (Living and Non-living) | | | | | | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Submerged Aquatic Vegetation | | | | | | X | X | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Macroalgae | | | | | | | | | | | | | | | | | | | | | | | X |



| Key Wildlife Habitat | Maryland Counties in Geographical Order | | | | | | | | | | | | | | | | | | | | | | |
|--|---|----------|------------|-----------|---------|-----------|---------|-------|--------|------------|--------------|-----------------|---------|---------|------------|------|--------------|--------|----------|------------|----------|----------|-----------|
| | Garrett | Allegany | Washington | Frederick | Carroll | Baltimore | Harford | Cecil | Howard | Montgomery | Anne Arundel | Prince George's | Charles | Calvert | St. Mary's | Kent | Queen Anne's | Talbot | Caroline | Dorchester | Wicomico | Somerset | Worcester |
| Pelagic - Open Water | | | | | | X | X | X | | | X | | | X | X | X | X | X | | X | X | X | X |
| SUBTERRANEAN | | | | | | | | | | | | | | | | | | | | | | | |
| Cave and Karst | X | X | X | X | X | X | | | X | | | | | | | | | | | | | | |
| OTHER HABITATS | | | | | | | | | | | | | | | | | | | | | | | |
| Managed Montane Conifer Forest | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Managed Successional Forest | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Managed Grassland | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Roadside and Utility Right-of-way | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Artificial Impoundment and Wetland | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Artificial Structures - Buildings and Other Structures | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Artificial Structures - Mines and Tunnels | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |



Appendix 4d. Cross-reference between Key Wildlife Habitats in 2005 Wildlife Diversity Conservation Plan and 2015 State Wildlife Action Plan

| New Key Wildlife Habitat (2015) | Old Key Wildlife Habitat (2005) |
|---|--|
| Upland Habitats | |
| Forests | |
| High Elevation Ridge Forest | Dry Oak-Pine Forests |
| Hemlock-Northern Hardwood Forest | Northern Conifer-Hardwoods Forests |
| Cove Forest | Mesic Deciduous Forests |
| Montane-Piedmont Oak-Pine Forest | Dry Oak-Pine Forests |
| Oak-Hickory Forest | Mesic Deciduous Forests |
| Basic Mesic Forest | Mesic Deciduous Forests |
| Mesic Mixed Hardwood Forest | Mesic Deciduous Forests, Loblolly Pine-Oak Forests |
| Coastal Plain Oak-Pine Forest | Dry Oak-Pine Forests |
| Coastal Plain Pitch Pine Forest | Dry Oak-Pine Forests |
| Maritime Forest and Shrubland | Maritime Forests and Shrublands |
| Glades, Barrens, and Cliffs | |
| Serpentine Barren | Barrens and Dry Glades |
| Shale Barren | Barrens and Dry Glades |
| Acidic Glade and Barren | Barrens and Dry Glades |
| Basic Glade and Barren | Barrens and Dry Glades |
| Cliff and Rock Outcrop | Cliffs and Rock Outcrops |
| Coastal Bluff | Cliffs and Rock Outcrops |
| Coastal Beaches and Dunes | |
| Coastal Beach | Coastal Beaches, Dunes and Mudflats |
| Maritime Dune and Grassland | Coastal Beaches, Dunes and Mudflats |
| Wetland Habitats | |
| Floodplain Wetlands | |
| Montane-Piedmont Floodplain | Floodplain Forests, Nontidal Shrub Wetlands, Nontidal Emergent Wetlands |
| Coastal Plain Floodplain | Floodplain Forests, Nontidal Shrub Wetlands, Nontidal Emergent Wetlands |
| Groundwater Wetlands | |
| Montane Bog and Fen | Bog and Fen Wetland Complexes, Nontidal Shrub Wetlands, Nontidal Emergent Wetlands |
| Montane-Piedmont Acidic Seepage Swamp | Forested Seepage Wetlands, Nontidal Shrub Wetlands |
| Montane-Piedmont Basic Seepage Swamp | Forested Seepage Wetlands, Nontidal Shrub Wetlands |
| Piedmont Seepage Wetland | Forested Seepage Wetlands, Nontidal Shrub Wetlands |
| Piedmont Upland Depression Swamp | Upland Depression Swamps |
| Coastal Plain Flatwood and Depression Swamp | Loblolly Pine-Oak Forests, Upland Depression Swamps |
| Coastal Plain Seepage Swamp | Forested Seepage Wetlands, Nontidal Shrub Wetlands |
| Coastal Plain Seepage Bog and Fen | Bog and Fen Wetland Complexes, Nontidal Shrub Wetlands, Nontidal Emergent Wetlands |
| Delmarva Bay | Carolina Bays, Nontidal Emergent Wetlands, Nontidal Shrub Wetlands |



| New Key Wildlife Habitat (2015) | Old Key Wildlife Habitat (2005) |
|---|---|
| Maritime Swamp | Upland Depression Swamps, Nontidal Shrub Wetlands |
| Vernal Pool | Vernal Pools |
| Spring | Caves, Mines and Springs |
| Tidal Wetlands | |
| Tidal Forest | Floodplain Forests |
| Tidal Freshwater Marsh and Shrubland | Tidal Marshes, Tidal Shrub Wetlands |
| Tidal Brackish Marsh and Shrubland | Tidal Marshes, Tidal Shrub Wetlands |
| Tidal Salt Marsh and Shrubland | Tidal Marshes, Tidal Shrub Wetlands |
| Intertidal Mudflat and Sand Flat | Coastal Beaches, Dunes and Mudflats |
| Aquatic Habitats | |
| Streams and Rivers | |
| Coldwater Stream | Coldwater Streams |
| Limestone Stream | Limestone Streams |
| Highland Stream | Highland Streams |
| Piedmont Stream | Piedmont Streams |
| Coastal Plain Stream | Coastal Plain Streams |
| Blackwater Stream | Blackwater Streams |
| Highland River | Highland Rivers |
| Piedmont River | Piedmont Rivers |
| Coastal Plain River | Coastal Plain Rivers |
| Bay and Ocean | |
| Shellfish Bed | Oligohaline Estuaries, Mesohaline Estuaries, Polyhaline Estuaries |
| Hard bottom (Living and Non-living) | Mesohaline Estuaries, Polyhaline Estuaries |
| Submerged Aquatic Vegetation | Oligohaline Estuaries, Mesohaline Estuaries, Polyhaline Estuaries |
| Macroalgae | Mesohaline Estuaries, Polyhaline Estuaries |
| Pelagic-Open Water | Ocean |
| Subterranean Habitats | |
| Cave and Karst | Caves, Mines and Springs |
| Other Habitats | |
| Managed Montane Conifer Forest | n/a |
| Managed Successional Forest | Early Successional Forests |
| Managed Grassland | Grasslands |
| Roadside and Utility Right-of-way | n/a |
| Artificial Impoundment and Wetland | Nontidal Shrub Wetlands, Nontidal Emergent Wetlands |
| Artificial Structure – Buildings and Other Structures | n/a |
| Artificial Structure – Mine and Tunnel | Caves, Mines and Springs |



Appendix 4e. Cross-reference to Maryland’s Key Wildlife Habitats and the Northeastern Terrestrial Wildlife Habitat Classification System

| Key Wildlife Habitat | Northeastern Terrestrial Wildlife Habitat Classification System (NETWHCS) |
|---------------------------------------|---|
| Upland Habitats | |
| Forests | |
| High Elevation Ridge Forest | Central and Southern Appalachian Montane Oak Forest (CES202.596) |
| Hemlock-Northern Hardwood Forest | Appalachian (Hemlock)-Northern Hardwood Forest (CES202.593) |
| Cove Forest | Southern and Central Appalachian Cove Forest (CES202.373) |
| Montane - Piedmont Oak-Pine Forest | Central Appalachian Dry Oak-Pine Forest (CES202.591) |
| Oak-Hickory Forest | Northeastern Interior Dry-Mesic Oak Forest (CES202.592) |
| Basic Mesic Forest | Northern Atlantic Coastal Plain Calcareous Ravine (CES203.069), Southern and Central Appalachian Cove Forest (CES202.231) |
| Mesic Mixed Hardwood Forest | Southern Atlantic Coastal Plain Mesic Hardwood Forest (CES203.242) |
| Coastal Plain Oak-Pine Forest | Northern Atlantic Coastal Plain Hardwood Forest (CES203.475) |
| Coastal Plain Pitch Pine Forest | Northern Atlantic Coastal Plain Pitch Pine Barrens (CES203.269) |
| Maritime Forest and Shrubland | Northern Atlantic Coastal Plain Maritime Forest (CES203.302) |
| Glades, Barrens, and Cliffs | |
| Serpentine Barren | Eastern Serpentine Woodland (CES202.347) |
| Shale Barren | Appalachian Shale Barrens (CES202.598) |
| Acidic Glade and Barren | Central Appalachian Pine-Oak Rocky Woodland (CES202.600) |
| Basic Glade and Barren | Central Appalachian Alkaline Glade and Woodland (CES202.602), Southern and Central Appalachian Mafic Glade and Barren (CES202.348), Piedmont Hardpan Woodland and Forest (CES202.268) |
| Cliff and Rock Outcrop | North-Central Appalachian Acidic Cliff and Talus (CES202.601), North-Central Appalachian Circumneutral Cliff and Talus (CES202.603) |
| Coastal Bluff | Northeastern Erosional Bluff (CES203.498) |
| Coastal Beaches and Dunes | |
| Coastal Beach | Northern Atlantic Coastal Plain Sandy Beach (CES203.301) |
| Maritime Dune and Grassland | Northern Atlantic Coastal Plain Dune and Swale (CES203.264) |
| Wetland Habitats | |
| Floodplain Wetlands | |
| Montane-Piedmont Floodplain | Central Appalachian River Floodplain (CES202.608), Central Appalachian Stream and Riparian (CES202.609) |
| Coastal Plain Floodplain | Northern Atlantic Coastal Plain Stream and River (CES203.070) |
| Groundwater Wetlands | |
| Montane Bog and Fen | High Allegheny Wetland (CES202.069) |
| Montane-Piedmont Acidic Seepage Swamp | North-Central Appalachian Acidic Swamp (CES202.604) |
| Montane-Piedmont Basic Seepage Swamp | North-Central Interior and Appalachian Rich Swamp (CES202.605) |
| Piedmont Seepage Wetland | Piedmont Seepage Wetland (CES202.298), Laurentian-Acadian Wet Meadow-Shrub Swamp (CES201.582) |
| Piedmont Upland Depression Swamp | Piedmont Upland Depression Swamp (CES202.336) |



| Key Wildlife Habitat | Northeastern Terrestrial Wildlife Habitat Classification System (NETWHCS) |
|---|---|
| Coastal Plain Flatwood and Depression Swamp | Northern Atlantic Coastal Plain Basin Swamp and Wet Hardwood Forest (CES203.520) |
| Coastal Plain Seepage Swamp | Northern Atlantic Coastal Plain Pitch Pine Lowland Forest (CES203.374), Northern Atlantic Coastal Plain Stream and River (CES203.070) |
| Coastal Plain Seepage Bog and Fen | Northern Atlantic Coastal Plain Pitch Pine Lowland Forest (CES203.374), Northern Atlantic Coastal Plain Basin Peat Swamp (CES203.522) |
| Delmarva Bay | Northern Atlantic Coastal Plain Pond (CES203.518) |
| Maritime Swamp | Northern Atlantic Coastal Plain Maritime Forest (CES203.302) |
| Vernal Pool | (Habitat found within many NETWHCS types) |
| Spring | (Habitat found within many NETWHCS types) |
| Tidal Wetlands | |
| Tidal Forest | Northern Atlantic Coastal Plain Tidal Swamp (CES203.282) |
| Tidal Freshwater Marsh and Shrubland | Northern Atlantic Coastal Plain Fresh and Oligohaline Tidal Marsh (CES203.516) |
| Tidal Brackish Marsh and Shrubland | Northern Atlantic Coastal Plain Brackish Tidal Marsh (CES203.894) |
| Tidal Salt Marsh and Shrubland | Northern Atlantic Coastal Plain Tidal Salt Marsh (CES203.519) |
| Intertidal Mudflat and Sand Flat | Northern Atlantic Intertidal Mudflat (CES201.050), North Atlantic Tidal Sand Flat (CES201.049) |
| Subterranean Habitats | |
| Cave and Karst | n/a |
| Other Habitats | |
| Managed Montane Conifer Forest | Managed Tree Plantation; structural modifier |
| Managed Successional Forest | Ruderal Forest - Northern and Central Hardwood and Conifer |
| Managed Grassland | Ruderal Upland – Old Field, Pasture/Hay |
| Roadside and Utility Right-of-way | Powerline ROW |
| Artificial Impoundment and Wetland | Modified/Managed Marsh |
| Artificial Structure – Buildings and Other Structures | Commercial/Industrial, Residential-High Intensity, Residential-Medium Intensity, Residential-Low Intensity, Residential-Rural/Sparse |
| Artificial Structure – Mine and Tunnel | n/a |



Appendix 4f. Cross-reference to Maryland’s Key Wildlife Habitats and the Northeastern Aquatic Habitat Classification System

| Key Wildlife Habitat | Northeastern Aquatic Habitat Classification System (NEAHCS) |
|-------------------------|--|
| Aquatic Habitats | |
| Coldwater Stream | <p>Headwaters and creeks: High gradient/cold, high gradient/cool, high gradient/warm; moderate gradient/cold, moderate gradient/cool, moderate gradient/warm; Low gradient/cool</p> <p>Small rivers: High gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm; low gradient/cool, low gradient/warm</p> |
| Limestone Stream | <p>Headwaters and creeks: High gradient/cold, high gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm</p> <p>Small rivers: High gradient/warm, moderate gradient/warm; low gradient/warm</p> <p>Medium rivers: Warm</p> |
| Highland Stream | <p>Headwaters and creeks: High gradient/cold, high gradient/cool, high gradient/warm; moderate gradient/cold, moderate gradient/cool, moderate gradient/warm; low gradient/cool, low gradient/warm</p> <p>Small rivers: High gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm</p> <p>Medium rivers: Warm</p> |
| Piedmont Stream | <p>Headwaters and creeks: High gradient/cold, high gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm; low gradient/warm</p> <p>Small rivers: High gradient/cool, high gradient/warm; moderate gradient/warm; low gradient/warm</p> <p>Medium rivers: Warm</p> |
| Coastal Plain Stream | <p>Headwaters and creeks: High gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm; low gradient/warm; High gradient/warm</p> <p>Small rivers: High gradient/cool, high gradient/warm; moderate gradient/warm; low gradient/warm</p> <p>Medium rivers: Warm</p> |
| Blackwater Stream | <p>Headwaters and creeks: High gradient/warm; moderate gradient/warm; low gradient/warm</p> <p>Small rivers: High gradient/warm; moderate gradient/warm; low gradient/warm</p> |
| Highland River | <p>Headwaters and creeks: High gradient/cold, high gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm; low gradient/warm</p> |



| Key Wildlife Habitat | Northeastern Aquatic Habitat Classification System (NEAHCS) |
|-------------------------|--|
| Aquatic Habitats | |
| | <p>Small rivers: High gradient/cool, high gradient/warm; moderate gradient/warm; low gradient/warm</p> <p>Medium rivers: Warm</p> |
| Piedmont River | <p>Headwaters and creeks: High gradient/cool, high gradient/warm; moderate gradient/cool, moderate gradient/warm; low gradient/warm</p> <p>Small rivers: High gradient/warm; moderate gradient/warm; low gradient/warm</p> <p>Medium rivers: Warm</p> |
| Coastal Plain River | <p>Headwaters and creeks: High gradient/warm; Moderate gradient/warm; Low gradient/warm</p> <p>Small rivers: High gradient/warm; Moderate gradient/warm; Low gradient/warm</p> <p>Medium rivers: Warm</p> |

