

APPENDIX H – TERRESTRIAL AND AQUATIC SPECIES VIABILITY TABLES

Table H-1. Terrestrial Species Priority and Species Groups

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Apochthonius holsingeri</i>	A cave pseudoscorpion	G1	U1	Caves					
<i>Boltonia montana</i>	Dolls'-daisy	G1G2	U1	Riparian	Special Biologic Area				
<i>Corallorhiza bentleyi</i>	Bentley's coalroot	G1G2	U1	Occurrence Protection					
<i>Helicodiscus diadema</i>	Shaggy coil	G1	U1	Calciphiles	Occurrence Protection				
<i>Kleptochthonius anophthalmus</i>	A cave pseudoscorpion	G1	U1	Caves					
<i>Nampabius turbator</i>	Cave centipede	G1	U1	Calciphiles	Caves				
<i>Nannaria shenandoah</i>	Shenandoah Mountain xystodesmid	G1	U1	Occurrence Protection					
<i>Pygmarrhopalites sacer</i>	Cave springtail	G1	U1	Calciphiles	Caves				
<i>Pygmarrhopalites caedus</i>	A cave springtail	G1	U1	Caves	Occurrence Protection				
<i>Pyrgus wyandot</i>	Appalachian grizzled skipper	G1	U1	Fire Dependent/ Enhanced	Lepidopterans	Open Woodlands	Sensitive to Over-Collection	Shale barrens	Special Biologic Area
<i>Iliamna remota</i>	Kankakee globe-mallow	G1Q	UP	Riparian					
<i>Leuctra monticola</i>	montane needlefly	G1	UP	Riparian					
<i>Pseudanophthalmus avernus</i>	Avernus cave beetle	G1	UP	Calciphiles	Caves				
<i>Pseudanophthalmus intersectus</i>	Crossroads cave beetle	G1	UP	Calciphiles	Caves				
<i>Pseudanophthalmus nelsoni</i>	Nelson's cave beetle	G1	UP	Calciphiles	Caves				

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Pseudanophthalmus petrunkevitchi</i>	Petrunkevitch's cave beetle	G1	UP	Calciphiles	Caves				
<i>Pseudotremia princeps</i>	South Branch Valley cave millipede	G1	UP	Calciphiles	Caves				
<i>Stygobromus hoffmani</i>	Alleghany County cave amphipod	G1	UP	Calciphiles	Caves				
<i>Buckleya distichophylla</i>	Piratebush	G3	U1	Fire Dependent/ Enhanced	Occurrence Protection				
<i>Carex roanensis</i>	Roan Mountain sedge	G2G3	U1	Occurrence Protection	Special Biologic Area				
<i>Echinacea laevigata</i>	smooth coneflower	G2G3	U1	Calciphiles	Fire Dependent/ Enhanced	Open Woodlands	Special Biologic Area		
<i>Glaucomys sabrinus fuscus</i>	Virginia northern flying squirrel	G2	U1	Area Sensitive Mature Forest	High Elevation Forests	Riparian	Special Biologic Area		
<i>Glyphyalinia raderi</i>	Maryland glyph	G2	U1	Calciphiles	Occurrence Protection				
<i>Helicodiscus triodus</i>	Talus coil	G2	U1	Calciphiles	Occurrence Protection				
<i>Myotis sodalis</i>	Indiana bat	G2	U1	Area Sensitive Mature Forest	Caves	Cavity, Den, Snags	Occurrence Protection	Open Woodlands	Riparian
<i>Plethodon sherando</i>	Big levels salamander	G2	U1	Open Woodlands	Special Biologic Area				
<i>Potamogeton tennesseensis</i>	Tennessee pondweed	G2	U1	Riparian					
<i>Pycnanthemum torreyi</i>	Torrey's mountain-mint	G2	U1	Calciphiles	Mafic rocks	Open Woodlands			
<i>Pygmarrhopalites carolynae</i>	Cave springtail	G2	U1	Calciphiles	Caves				
<i>Stygobromus mundus</i>	Bath County cave amphipod	G2	U1	Calciphiles	Caves				
<i>Trillium pusillum</i> var. <i>virginianum</i>	mountain least trillium	GG3T2	U1	High Elevation Forests	Special Biologic Area				
<i>Arabis serotina</i>	shale barren rockcress	GG3	U2	Fire Dependent/ Enhanced	Shale barrens	Special Biologic Area			
<i>Clematis viticaulis</i>	Millboro leatherflower	G2	U2	Shale barrens	Special Biologic Area				

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Heuchera alba</i>	white alumroot	G2Q	U2	High Elevation Forests	Occurrence Protection	Special Biologic Area			
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	G2	U2	Riparian					
<i>Phlox buckleyi</i>	sword-leaved phlox	G2	U2	Fire Dependent/Enhanced	Occurrence Protection	Ruderal	Special Biologic Area		
<i>Plethodon virginia</i>	Shenandoah Mt. salamander	G2	U2	Area Sensitive Mature Forest	High Elevation Forests	Late Successional Hardwood	Special Biologic Area	Cliff, Talus, outcrops	
<i>Stygobromus sp. 7</i>	Sherando spinosid amphipod	G2	U2	Calciphiles	Caves				
<i>Stygobromus sp. nov.</i>	Massanutten Spring Amphipod	G2	U2	Calciphiles	Caves				
<i>Thryomanes bewickii altus</i>	Appalachian Bewick's wren	G2	UH	High Elevation Openings	Cavity, Den, Snags	Grasslands	Shrublands		
<i>Megaleuctra flinti</i>	Shenandoah needlefly	G2	UP	Riparian					
<i>Paxistima canbyi</i>	Canby's mountain lover	G2	UP	Calciphiles	Cliff, Talus, outcrops				
<i>Stygobromus morrisoni</i>	Morrison's cave amphipod	G2	UP	Calciphiles	Caves				
<i>Erora laeta</i>	Early hairstreak	GU	U1	Lepidopterans	Occurrence Protection				
<i>Callophrys irus</i>	Frosted elfin	G3	U1	Fire Dependent/Enhanced	Lepidopterans	Occurrence Protection	Open Woodlands		
<i>Cicindela ancocisconensis</i>	a tiger beetle	G3	U1	Riparian					
<i>Cicindela patruela</i>	Barrens tiger beetle	G3	U1	Ruderal	Sandstone glades and barrens	Special Biologic Area			
<i>Clematis coactilis</i>	Virginia white-haired leatherflower	G3	U1	Shale barrens					
<i>Hypericum mitchellianum</i>	Blue Ridge St. John's-wort	G3	U1	High Elevation Forests	High Elevation Openings	Occurrence Protection	Special Biologic Area		
<i>Microtus chrotorrhinus carolinensis</i>	Southern rock vole	G3	U1	High Elevation Forests	Riparian				
<i>Myotis leibii</i>	eastern small-footed bat	G3	U1	Caves	Cliff, Talus, outcrops	Occurrence Protection			

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Poa paludigena</i>	bog bluegrass	G3	U1	Riparian					
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	G3	U1	Riparian	Special Biologic Area				
<i>Sorex palustris punctulatus</i>	southern water shrew	G3	U1	High Elevation Forests	Riparian	Special Biologic Area			
<i>Stygobromus gracilipes</i>	Shenandoah Valley cave amphipod	G3	U1	Calciphiles	Caves				
<i>Vitis rupestris</i>	sand grape	G3	U1	Special Biologic Area	Riparian				
<i>Arabis patens</i>	Spreading rockcress	G3	U2	Shale barrens					
<i>Carex polymorpha</i>	variable sedge	G3	U2	Fire Dependent/Enhanced	Occurrence Protection	Special Biologic Area			
<i>Gaylussacia brachycera</i>	box huckleberry	G3	U2	Fire Dependent/Enhanced	Occurrence Protection	Special Biologic Area			
<i>Gymnocarpium appalachianum</i>	Appalachian oak fern	G3	U2	High Elevation Forests	Occurrence Protection	Special Biologic Area			
<i>Helenium virginicum</i>	Virginia sneezeweed	G3	U2	Riparian	Special Biologic Area				
<i>Helonias bullata</i>	swamp-pink	G3	U2	Special Biologic Area	Riparian				
<i>Plethodon punctatus</i>	Cow Knob salamander	G3	U2	Area Sensitive Mature Forest	High Elevation Forests	Late Successional Hardwood	Special Biologic Area	Cliff, Talus, outcrops	
<i>Speyeria diana</i>	Diana fritillary	G3	U2	Lepidopterans	Open Woodlands	Sensitive to Over-Collection			
<i>Triphora trianthophora</i>	nodding pogonia	G3	U2	Special Biologic Area	Occurrence Protection				
<i>Zygonopus weyerienseis</i>	Grand Caverns blind cave millipede	G3	U2	Calciphiles	Caves				
<i>Juglans cinerea</i>	butternut	GG4	U3	Occurrence Protection					
<i>Liatris helleri</i>	shale -barren blazing star	G3	U3	Shale barrens					
<i>Miktoniscus racovitza</i>	Racovitza's terrestrial cave isopod	G3	U3	Caves					
<i>Monotropis odorata</i>	sweet pinesap	G3	U3	Occurrence Protection	Special Biologic Area				
<i>Neotoma magister</i>	Alleghany woodrat	G3	U3	Caves	Cliff, Talus, outcrops	Late Successional Hardwood			

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Oenothera argillicola</i>	Shale-barren evening primrose	G3	U3	Shale barrens					
<i>Panax quinquefolius</i>	American Ginseng	G3G4	U3	Cove forests	Sensitive to Over-Collection				
<i>Ruellia purshiana</i>	Pursh's wild petunia	G3	U3	Alkaline glades and barrens	Calciphiles	Fire Dependent/Enhanced	Mafic rocks		
<i>Scutellaria saxatilis</i>	Rock skullcap	G3	U3	Cliff, Talus, outcrops	Open Woodlands				
<i>Taenidia montana</i>	Virginia mountain pimpernel	G3	U3	Shale barrens					
<i>Trifolium virginicum</i>	Kate's mountain clover	G3	U3	Special Biologic Area	Shale barrens				
<i>Peltigera hydrothyria</i>	Waterfan	G3	U4	Riparian					
<i>Erynnis martialis</i>	Mottled duskywing	G3	UH	Area Sensitive Shrubland and Open Woodlands	Fire Dependent/Enhanced	Lepidopterans	Occurrence Protection	Special Biologic Area	
<i>Speyeria idalia</i>	Regal fritillary	G3	UH	Area Sensitive Grasslands.	Lepidopterans	Sensitive to Over-Collection			
<i>Virginia valeriae pulchra</i>	mountain earth snake	G3	UH	Grasslands	Open Woodlands	Shrublands			
<i>Carex schweinitzii</i>	Schweinitz's sedge	G3G4	UP	Riparian					
<i>Catocala herodias gerhardi</i>	Herodias underwing	G3	UP	Lepidopterans	Occurrence Protection	Open Woodlands			
<i>Catocala marmorata</i>	Marbled underwing	G3	UP	Lepidopterans	Occurrence Protection	Riparian			
<i>Delphinium exaltatum</i>	tall larkspur	G3	UP	Calciphiles	Fire Dependent/Enhanced	Open Woodlands			
<i>Euphorbia purpurea</i>	glade spurge	G3	UP	Calciphiles	Riparian				
<i>Hansonoperla appalachia</i>	Appalachian stonefly	G3	UP	Riparian					
<i>Leuctra mitchellensis</i>	Mitchell needelfly	G3	UP	Riparian					

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<i>Paragnetina ishusa</i>	widecollar stonefly	G3	UP	Riparian					
<i>Paraleptophlebia jeanae</i>	a mayfly	G3	UP	Riparian					
<i>Parnassia grandifolia</i>	Large-leaved grass-of-parnassus	G3	UP	Riparian					
<i>Perlesta frisoni</i>	Blue Ridge stonefly	G3	UP	Riparian					
<i>Phlox amplifolia</i>	Broadleaf phlox	G3G5	UP	Calciphiles	Occurrence Protection				
<i>Semionellus placidus</i>	Millipede	G3	UP	Late Successional Hardwood	Occurrence Protection				
<i>Sida hermaphrodita</i>	Virginia mallow	G3	UP	Riparian					
<i>Triodopsis picea</i>	Spruce Knob threetooth	G3	UP	Occurrence Protection					
<i>Zygonopus whitei</i>	Luray Caverns blind cave millipede	G3	UP	Calciphiles	Caves				
<i>Adlumia fungosa</i>	Climbing fumatory	G4	U1	Occurrence Protection					
<i>Arnoglossom muehlenbergii</i>	great Indian-plantain	G4	U1	Fire Dependent/Enhanced	Grasslands	Occurrence Protection	Riparian	Ruderal	
<i>Carex barrattii</i>	Barratt's sedge	G4	U1	Riparian	Special Biologic Area				
<i>Corynorhinus townsendii virginianus</i>	Virginia big-eared bat	G4	U1	Area Sensitive Mature Forest	Caves	Occurrence Protection			
<i>Cuscuta rostrata</i>	beaked dodder	G4	U1	High Elevation Openings	Occurrence Protection	Special Biologic Area			
<i>Cypripedium reginae</i>	showy lady's-slipper	G4	U1	Occurrence Protection	Riparian	Sensitive to Over-Collection	Special Biologic Area		
<i>Eleocharis compressa</i>	flat-stemmed spikerush	G4	U1	Riparian					
<i>Eleocharis melanocarpa</i>	black-fruited spikerush	G4	U1	Riparian	Special Biologic Area				
<i>Eleocharis robbinsii</i>	Robbins spikerush	G4G5	U1	Riparian	Special Biologic Area				
<i>Euchloe olympia</i>	Olympia marble	G4	U1	Lepidopterans	Open Woodlands	Shale barrens			

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<i>Lanius ludovicianus</i>	loggerhead shrike	G4	U1	Area Sensitive Grasslands.	Grasslands	Shrublands			
<i>Paronychia argyrocoma</i>	Silver Nail-wort	G4	U1	Shale barrens					
<i>Potamogeton oakesianus</i>	Oakes pondweed	G4	U1	Riparian	Special Biologic Area				
<i>Schoenoplectus subterminalis</i>	water bulrush	G4G5	U1	Riparian	Special Biologic Area				
<i>Scutellaria parvula</i> var. <i>parvula</i>	small skullcap	G4T4?	U1	Calciphiles	Cliff, Talus, outcrops	Open Woodlands			
<i>Solidago randii</i> = <i>S. simplex</i> var. <i>randii</i>	Rand's goldenrod	G4	U1	Special Biologic Area	Mafic rocks				
<i>Solidago rupestris</i>	riverbank goldenrod	G4?	U1	Special Biologic Area	Riparian				
<i>Solidago uliginosa</i>	bog goldenrod	G4G5	U1	Special Biologic Area	Riparian				
<i>Spiranthes ochroleuca</i>	yellow nodding ladies'-tresses	G4	U1	Riparian	Open Woodlands	Special Biologic Area			
<i>Vaccinium macrocarpon</i>	large cranberry	G4	U1	Special Biologic Area	Riparian				
<i>Autochton cellus</i>	Golden-banded skipper	G4	U2	Lepidopterans	Riparian				
<i>Clematis albicoma</i>	White-haired Leatherflower	G4	U2	Shale barrens					
<i>Polygonia progne</i>	Gray comma	G4	U2	Grasslands & Shrublands	Lepidopterans	Riparian	Open Woodlands	Ruderal	Special Biologic Area
<i>Prunus alleghaniensis</i>	Alleghany sloe	G4	U2	Fire Dependent/Enhanced	Open Woodlands	Shale barrens			
<i>Satyrrium favonius ontario</i>	Northern Hairstreak	G4	U2	Lepidopterans	Occurrence Protection	Open Woodlands			
<i>Sylvilagus obscurus</i>	Appalachian Cottontail	G4	U2	High Elevation Forests	High Elevation Openings	Riparian			

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<i>Vermivora chrysoptera</i>	golden winged warbler	G4	U2	Area Sensitive Grassland, Shrubland, Open Woodlands	High Elevation Openings	Fire Dependent/Enhanced	Grasslands & Shrublands	Riparian	Open Woodlands
<i>Crotalus horridus</i>	Timber rattlesnake	G4	U3	Cliff, Talus, outcrops	Sensitive to Over-Collection				
<i>Dendroica cerulea</i>	cerulean warbler	G4	U3	Area Sensitive Mature Forest	Late Successional Hardwood	Riparian			
<i>Eriogonum allenii</i>	Yellow Buckwheat	G4	U3	Shale barrens					
<i>Glyptemys insculpta</i>	wood turtle	G3	U3	Late Successional Hardwood	Riparian	Open Woodlands	Sensitive to Over-Collection	Shrublands	Grasslands
<i>Solidago arguta</i> var. <i>harrisii</i>	Shale Barren Goldenrod	G4T4	U3	Shale barrens					
<i>Contopus borealis</i>	olive-sided flycatcher	G4	UH	High Elevation Forests	High Elevation Openings	Riparian	Special Biologic Area	Cavity, Den, Snags	
<i>Falco peregrinus</i>	peregrine falcon	G4	UH	Cliff, Talus, outcrops	Occurrence Protection	Open Woodlands			
<i>Phyciodes batesii</i>	Tawny crescent	G4	UH	Lepidopterans	Occurrence Protection				
<i>Pituophis melanoleucus</i>	northern pinesnake	G4	UH	Fire Dependent/Enhanced	Occurrence Protection	Open Woodlands			
<i>Houstonia canadensis</i>	Canada bluets	G4G5	UNP	Alkaline glades and barrens	Calciphiles	Special Biologic Area			
<i>Ammodramus henslowii</i>	Henslow's sparrow	G4	UP	Area Sensitive Grasslands.	Occurrence Protection				
<i>Cyperus dentatus</i>	toothed flatsedge	G4	UP	Riparian					
<i>Helianthemum propinquum</i>	low frostweed	G4	UP	Open Woodlands					
<i>Huperzia appalachiana</i>	Appalachian fir clubmoss	G5	UP	High Elevation Forests	Riparian				
<i>Isonychia tusculanensis</i>	a mayfly	G4	UP	Riparian					
<i>Linum lewisii</i>	prairie flax	G4	UP	Calciphiles	Cliff, Talus, outcrops	Open Woodlands			
<i>Onosmodium virginianum</i>	Virginia false-gromwell	G4	UP	Fire Dependent/Enhanced	Open Woodlands	Calciphiles			

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<i>Paronychia virginica</i>	yellow nailwort	G4	UP	Calciphiles	Cliff, Talus, outcrops	Shale barrens			
<i>Prunus nigra</i>	Canada plum	G4G5	UP	Ruderal	Shrublands				
<i>Zigadenus elegans</i> <i>ssp. glaucus</i> = <i>Anticlea glauca</i>	white camas	G4	UP	Cliff, Talus, outcrops	Open Woodlands	Calciphiles			
<i>Aegolius acadicus</i>	northern saw-whet owl	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	Cavity, Den, Snags	Riparian	Special Biologic Area	
<i>Alnus incana</i> ssp. <i>rugosa</i>	speckled alder	G5T5	U1	Riparian					
<i>Ambystoma tigrinum</i>	Eastern tiger salamander	G5	U1	Late Successional Hardwood	Riparian	Special Biologic Area			
<i>Anaphalis margaritacea</i>	pearly everlasting	G5	U1	Fire Dependent/Enhanced	Grasslands	Shrublands	Special Biologic Area		
<i>Bromus kalmii</i>	wild chess	G5	U1	Fire Dependent/Enhanced	Shale barrens	Special Biologic Area			
<i>Campanula rotundifolia</i>	American harebell	G5	U1	Calciphiles	Cliff, Talus, outcrops	Special Biologic Area			
<i>Caprimulgus carolinensis</i>	chuck-will's widow	G5	U1	Area Sensitive Grassland, Shrubland, Open Woodlands	Fire Dependent/Enhanced	Open Woodlands	Regenerating Forests		
<i>Carex aquatilis</i>	water sedge	G5	U1	Riparian	Special Biologic Area				
<i>Carex arctata</i>	black sedge	G5	U1	Riparian	Special Biologic Area				
<i>Carex buxbaumii</i>	Buxbaum's sedge	G5	U1	Riparian	Special Biologic Area				
<i>Carex lasiocarpa</i> var. <i>americana</i>	slender sedge	G5T5	U1	Riparian	Special Biologic Area				
<i>Carex vesicaria</i>	inflated sedge	G5	U1	Riparian	Special Biologic Area				
<i>Carpodacus purpureus</i>	purple finch	G5	U1	High Elevation Openings	High Elevation Forests	Special Biologic Area			
<i>Catharus guttatus</i>	hermit thrush	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	High Elevation Openings	Special Biologic Area		
<i>Cheilanthes eatonii</i>	chestnut lipfern	G5?	U1	Cliff, Talus, outcrops	Shale barrens	Special Biologic Area			

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<i>Cirsium altissimum</i>	tall thistle	G5	U1	Ruderal	Special Biologic Area				
<i>Clemmys guttata</i>	spotted turtle	G5	U1	Riparian	Special Biologic Area				
<i>Colias interior</i>	Pink-edged sulphur	G5	U1	Lepidopterans	Riparian	Special Biologic Area			
<i>Colinus virginianus</i>	northern bobwhite	G5	U1	Area Sensitive Grassland, Shrubland, Open Woodlands	Fire Dependent/Enhanced	Grasslands	Open Woodlands	Shrublands	
<i>Cornus canadensis</i>	bunchberry	G5	U1	High Elevation Forests	Occurrence Protection	Special Biologic Area			
<i>Cornus rugosa</i>	roundleaf dogwood	G5	U1	Occurrence Protection	Special Biologic Area				
<i>Crataegus pruinosa</i>	prunose hawthorn	G5	U1	Fire Dependent/Enhanced	Occurrence Protection	Special Biologic Area			
<i>Cuscuta coryli</i>	hazel dodder	G5?	U1	Cliff, Talus, outcrops	Occurrence Protection				
<i>Cystopteris fragilis</i>	fragile fern	G5	U1	Cliff, Talus, outcrops	Special Biologic Area				
<i>Dendroica fusca</i>	blackburnian warbler	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	Special Biologic Area			
<i>Dendroica magnolia</i>	magnolia warbler	G5	U1	High Elevation Forests	Regenerating Forests	Special Biologic Area	Riparian		
<i>Elymus trachycaulus</i>	slender wheatgrass	G5	U1	Fire Dependent/Enhanced	Shale barrens	Special Biologic Area			
<i>Epilobium leptophyllum</i>	linear-leaved willow-herb	G5	U1	Riparian	Special Biologic Area				
<i>Equisetum sylvaticum</i>	woodland horsetail	G5	U1	Special Biologic Area	Riparian				
<i>Eriocaulon aquaticum</i>	white buttons	G5	U1	Riparian	Special Biologic Area				
<i>Erynnis persius</i>	Persius duskywing	G5	U1	Grasslands	Lepidopterans	Riparian	Shrublands		
<i>Erysimum capitatum</i>	western wallflower	G5	U1	Open Woodlands	Shale barrens	Special Biologic Area			
<i>Glyceria grandis</i>	American manna-grass	G5	U1	Riparian	Special Biologic Area				
<i>Gnaphalium uliginosum</i>	low cudweed	G5	U1	High Elevation Openings	Riparian	Ruderal	Special Biologic Area		

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<i>Haliaeetus leucocephalus</i>	bald eagle	G5	U1	Occurrence Protection	Riparian				
<i>Helianthemum bicknellii</i>	plains frostweed	G5	U1	Cliff, Talus, outcrops	Open Woodlands	Sandstone glades and barrens	Special Biologic Area		
<i>Hypericum boreale</i>	northern St. John's-wort	G5	U1	Riparian					
<i>Incisalia polia</i>	Hoary elfin	G5	U1	Grasslands	Lepidopterans	Sandstone glades and barrens	Shrublands		
<i>Isoetes lacustris</i>	lake quillwort	G5	U1	Riparian	Special Biologic Area				
<i>Juncus brachycephalus</i>	small-head rush	G5	U1	Special Biologic Area	Riparian				
<i>Juncus brevicaudatus</i>	narrow-panicked rush	G5	U1	Special Biologic Area	Riparian				
<i>Juniperus communis var depressa</i>	ground juniper	G5T5	U1	High Elevation Openings	Special Biologic Area	Calciphiles			
<i>Lepus americanus</i>	snowshoe hare	G5	U1	High Elevation Forests	High Elevation Openings	Regenerating Forests	Special Biologic Area		
<i>Leucothoe fontanesiana</i>	highland dog-hobble	G5	U1	Cove forests	Occurrence Protection	Special Biologic Area			
<i>Liparis loeselii</i>	Loesel's twayblade	G5	U1	Riparian	Special Biologic Area				
<i>Lonicera canadensis</i>	American fly-honeysuckle	G5	U1	High Elevation Forests	Riparian				
<i>Loxia curvirostra</i>	red crossbill	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	Special Biologic Area			
<i>Martes pennanti</i>	fisher	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	Special Biologic Area			
<i>Melospiza georgiana</i>	swamp sparrow	G5	U1	High Elevation Openings	Riparian				
<i>Minuartia groenlandica</i>	mountain sandwort	G5	U1	Cliff, Talus, outcrops	Sensitive to Recreation Traffic	Special Biologic Area			
<i>Muhlenbergia glomerata</i>	marsh muhly	G5	U1	Mafic rocks	Special Biologic Area	Riparian			
<i>Oligoneuron rigidum</i>	stiff goldenrod	G5	U1	Calciphiles	Open Woodlands	Special Biologic Area			

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Oporornis philadelphia</i>	mourning warbler	G5	U1	High Elevation Forests	High Elevation Openings	Regenerating Forests	Fire Dependent/Enhanced		
<i>Oryzopsis asperifolia</i>	white-grained mtn-ricegrass	G5	U1	Open Woodlands	Shrublands	Special Biologic Area			
<i>Osmundastrum cinnamomeum</i> var. <i>glandulosum</i>	glandular cinnamon fern	G5TNR	U1	Special Biologic Area	Riparian				
<i>Panax trifolius</i>	Dwarf ginseng	G5	U1	Cove forests	Sensitive to Over-Collection				
<i>Panicum hemitomon</i>	maidencane	G5?	U1	Riparian	Special Biologic Area				
<i>Platanthera grandiflora</i>	large purple fringed orchid	G5	U1	Riparian	Sensitive to Over-Collection	Special Biologic Area			
<i>Platanthera peramoena</i>	purple fringeless orchid	G5	U1	Riparian	Sensitive to Over-Collection				
<i>Poa palustris</i>	fowl bluegrass	G5	U1	Riparian	Special Biologic Area				
<i>Potentilla arguta</i>	tall cinquefoil	G5	U1	Mafic rocks	Special Biologic Area				
<i>Pyrola elliptica</i>	shinleaf	G5	U1	High Elevation Forests	Occurrence Protection	Special Biologic Area			
<i>Regulus satrapa</i>	golden-crowned kinglet	G5	U1	High Elevation Forests	Special Biologic Area				
<i>Ribes americanum</i>	wild black currant	G5	U1	Special Biologic Area	Riparian				
<i>Rubus idaeus</i> ssp. <i>strigosus</i>	American red raspberry	G5T5	U1	High Elevation Openings	Special Biologic Area				
<i>Sabatia campanulata</i>	slender marsh rose-pink	G5	U1	Special Biologic Area	Riparian				
<i>Sagittaria calycina</i> var. <i>calycina</i>	long-lobed arrowhead	G5T5?	U1	Special Biologic Area	Riparian				
<i>Schizachne purpurascens</i>	purple oatgrass	G5	U1	High Elevation Forests	Special Biologic Area	Riparian			
<i>Seiurus noveboracensis</i>	northern waterthrush	G5	U1	Area Sensitive Mature Forest	High Elevation Forests	Special Biologic Area	Riparian		
<i>Sibbaldiopsis tridentata</i>	three-toothed cinquefoil	G5	U1	Cliff, Talus, outcrops	Sensitive to Recreation Traffic	Special Biologic Area			

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Sitta canadensis</i>	red-breasted nuthatch	G5	U1	Cavity, Den, Snags	High Elevation Forests	Special Biologic Area			
<i>Speyeria atlantis</i>	Atlantis fritillary	G5	U1	Lepidopterans	Special Biologic Area	Riparian			
<i>Sphagnum russowii</i>	Russow's peatmoss	G5	U1	Special Biologic Area	Riparian				
<i>Symphoricarpos albus</i>	snowberry	G5	U1	Calciphiles	Cliff, Talus, outcrops	Special Biologic Area			
<i>Thuja occidentalis</i>	northern white cedar	G5	U1	Cliff, Talus, outcrops	Special Biologic Area	Calciphiles			
<i>Triantha racemosa</i>	coastal false-asphodel	G5	U1	Riparian	Special Biologic Area				
<i>Trichostema setaceum</i>	narrow-leaved blue curls	G5	U1	Open Woodlands	Shale barrens	Special Biologic Area			
<i>Troglodytes troglodytes</i>	winter wren	G5	U1	High Elevation Forests	Special Biologic Area	Riparian	Cavity, Den, Snags		
<i>Viola pedatifida</i>	prairie violet	G5	U1	Special Biologic Area	Shale barrens				
<i>Woodwardia virginica</i>	Virginia chainfern	G5	U1	Special Biologic Area	Riparian				
<i>Aralia hispida</i>	Bristly Sarsaparilla	G5	U2	Cliff, Talus, outcrops	Fire Dependent/Enhanced	Special Biologic Area			
<i>Betula cordifolia</i>	mountain paper birch	G5	U2	Cliff, Talus, outcrops	Fire Dependent/Enhanced	Special Biologic Area			
<i>Boloria selene</i>	Silver-bordered fritillary	G5	U2	Lepidopterans	Riparian	Special Biologic Area			
<i>Certhia americana</i>	brown creeper	G5	U2	Area Sensitive Mature Forest	High Elevation Forests	Cavity, Den, Snags	Riparian	Special Biologic Area	
<i>Coccyzus erythrophthalmus</i>	black-billed cuckoo	G5	U2	High Elevation Forests	High Elevation Openings	Riparian			
<i>Empidonax alnorum</i>	alder flycatcher	G5	U2	High Elevation Forests	Riparian	Special Biologic Area	Riparian		
<i>Eumeces anthracinus</i>	coal skink	G5	U2	Occurrence Protection	Open Woodlands	Ruderal	Shrublands		
<i>Glyceria acutiflora</i>	sharp-scaled manna-grass	G5	U2	Riparian					

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Liochlorophis vernalis</i>	Smooth green snake	G5	U2	High Elevation Openings	Open Woodlands	Grasslands	Fire Dependent/Enhanced		
<i>Mustela nivalis</i>	least weasel	G5	U2	Grasslands	Shrublands				
<i>Phyciodes coccyta</i>	Northern crescent	G5	U2	Lepidopterans					
<i>Poa saltuensis</i>	drooping bluegrass	G5	U2	Mafic rocks	Open Woodlands	Special Biologic Area			
<i>Saxifraga pensylvanica</i>	swamp saxifrage	G5	U2	Riparian					
<i>Scolopax minor</i>	American woodcock	G5	U2	Grasslands	Riparian				
<i>Sparganium chlorocarpum</i> = <i>S. emersum</i>	narrow-leaf burreed	G5	U2	Special Biologic Area	Riparian				
<i>Sphyrapicus varius</i>	yellow-bellied sapsucker	G5	U2	High Elevation Forests	High Elevation Openings	Riparian	Cavity, Den, Snags		
<i>Spilogale putorius</i>	Spotted Skunk	G5	U2	Late Successional Hardwood	Shrublands	Cliff, Talus, outcrops			
<i>Tyto alba</i>	barn owl	G5	U2	Area Sensitive Grasslands.	Cavity, Den, Snags	Grasslands			
<i>Caprimulgus vociferus</i>	whip-poor-will	G5	U3	Area Sensitive Grassland, Shrubland, Open Woodlands	Fire Dependent/Enhanced	Open Woodlands	Regenerating Forests		
<i>Castor canadensis</i>	Beaver	G5	U3	Riparian	Special Biologic Area				
<i>Lontra canadensis</i>	North American river otter	G5	U3	Riparian					
<i>Aquila chrysaetos</i>	golden eagle	G5	U4	Area Sensitive Mature Forest					
<i>Dendroica discolor</i>	prairie warbler	G5	U4	Area Sensitive Grassland, Shrubland, Open Woodlands	Fire Dependent/Enhanced	Regenerating Forests			
<i>Empidonax virescens</i>	acadian flycatcher	G5	U4	Area Sensitive Mature Forest	Riparian				
<i>Echinodorus tenellus</i>	dwarf burhead	G5?	UH	Riparian	Special Biologic Area	Riparian			
<i>Eurybia radula</i>	rough-leaved aster	G5	UP	Riparian					

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Astragalus distortus</i>	bent milkvetch	G5	UP	Shale barrens					
<i>Bartramia longicauda</i>	upland sandpiper	G5	UP	Area Sensitive Grasslands.	Fire Dependent/Enhanced	Occurrence Protection			
<i>Bromus ciliatus</i>	fringed brome grass	G5	UP	Riparian					
<i>Calopogon tuberosus</i>	Grass pink	G5	UP	Riparian					
<i>Circus cyaneus</i>	northern harrier	G5	UP	Area Sensitive Grasslands.	Occurrence Protection				
<i>Clematis occidentalis</i>	purple clematis	G5	UP	Mafic rocks					
<i>Crataegus calpodendron</i>	pear hawthorn	G5	UP	Occurrence Protection					
<i>Desmodium canadense</i>	showy tick-trefoil	G5	UP	Riparian					
<i>Desmodium cuspidatum</i>	toothed tick-trefoil	G5	UP	Calciphiles	Occurrence Protection	Ruderal	Special Biologic Area		
<i>Desmodium sessilifolium</i>	sessile-leaf tick-trefoil	G5	UP	Open Woodlands	Riparian				
<i>Elymus canadensis</i>	nodding wild rye	G5	UP	Riparian					
<i>Epilobium ciliatum</i>	Hair willow-herb	G5	UP	Riparian					
<i>Eupatorium maculatum</i>	spotted joe-pye weed	G5	UP	Riparian					
<i>Geranium robertianum</i>	herb-robert	G5	UP	Cliff, Talus, outcrops					
<i>Goodyera repens</i>	dwarf rattlesnake plantain	G5	UP	Occurrence Protection	Riparian				
<i>Linum sulcatum</i>	grooved yellow flax	G5	UP	Calciphiles	Cliff, Talus, outcrops	Open Woodlands			
<i>Lycopodiella inundata</i>	northern bog clubmoss	G5	UP	Riparian					
<i>Lythrum alatum</i>	winged loosestrife	G5	UP	Riparian					
<i>Maianthemum stellatum</i>	stary false Solomon's-seal	G5	UP	Riparian					
<i>Melica nitens</i>	Three-flowered melic grass	G5	UP	Calciphiles	Open Woodlands	Shale barrens			

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	G5	UP	Riparian					
<i>Polanisia dodecandra</i>	common clammy-weed	G5	UP	Riparian					
<i>Pseudognaphalium macounii</i>	Winged cudweed	G5	UP	Caves					
<i>Rosa setigera</i>	prairie rose	G5	UP	Calciphiles	Open Woodlands	Shale barrens			
<i>Sagittaria rigida</i>	sessile-fruited arrowhead	G5	UP	Riparian					
<i>Scirpus torreyi</i>	Torrey's bulrush	G5?	UP	Riparian					
<i>Spartina pectinata</i>	freshwater cordgrass	G5	UP	Riparian					
<i>Spiranthes lucida</i>	shining ladies'-tresses	G5	UP	Riparian					
<i>Sporobolus neglectus</i>	small dropseed	G5	UP	Cliff, Talus, outcrops	Shale barrens	Calciphiles			
<i>Triadenum fraseri</i>	Fraser's marsh St. John's-wort	G5	UP	Riparian	Special Biologic Area				
<i>Verbena scabra</i>	sandpaper vervain	G5	UP	Riparian					
<i>Veronica scutellata</i>	marsh speedwell	G5	UP	Riparian					
<i>Viburnum lentago</i>	nannyberry	G5	UP	Riparian					
<i>Vicia americana</i>	American purple vetch	G5	UP	Riparian	Ruderal				
<i>Bonasa umbellus</i>	ruffed grouse	G5	UNA	Fire Dependent/ Enhanced	Grasslands & Shrublands	Regenerating Forests & Hard and Soft Mast Dependent	Late Successional Hardwood	Riparian	Open Woodlands
<i>Meleagris gallopavo</i>	wild turkey	G5	UNA	Fire Dependent/ Enhanced	Grasslands	Hard and Soft Mast Dependent	Late Successional Hardwood	Open Woodlands	Shrublands
<i>Odocoileus virginianus</i>	white-tailed deer	G5	UNA	Fire Dependent/ Enhanced	Grasslands & Shrublands	Hard and Soft Mast Dependent	Late Successional Hardwood	Open Woodlands	Regenerating Forests
<i>Sciurus carolinensis</i>	gray squirrel	G5	UNA	Late Successional Hardwood	Hard and Soft Mast Dependent	Cavity, Den, Snags	Riparian		

Element Name	Common Name	G Rank	Unit Rank	Species Group 1	Species Group 2	Species Group 3	Species Group 4	Species Group 5	Species Group 6
<i>Sciurus niger</i>	Eastern fox squirrel	G5	UNA	Area Sensitive Grassland, Shrubland, Open Woodlands	Cavity, Den, Snags	Fire Dependent/Enhanced	Hard and Soft Mast Dependent		
<i>Ursus americanus</i>	black bear	G5	UNA	Regenerating Forests & Hard and Soft Mast Dependent	Late Successional Hardwood	Area Sensitive Mature Forest	Grasslands & Shrublands	Cavity, Den, Snags	Open Woodlands

Shaded Cells are species groups affected by direction requiring additional protection
 Unshaded cells are species groups affected by levels of habitat management activities
 G-Rank is the Global Conservation Rank
 G1 – Critically Imperiled
 G2- Imperiled
 G3- Vulnerable
 G4- Apparently Secure
 G5 – Secure

Unit Rank	Unit Rank Description
U1	Critically Imperiled—Critically imperiled on the unit because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the unit.
U2	Imperiled—Imperiled on the unit because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the unit.
U3	Vulnerable—Vulnerable on the unit due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation on the unit.
U4	Apparently Secure—Uncommon but not rare; some cause for long-term concern due to declines or other factors.
U5	Secure—Common, widespread, and abundant on the unit.
UH	Possibly Extirpated (Historical)—Species or system occurred historically in unit, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or system could become UH without such
UP	Possibly Present—There are no known current or historical occurrences, but the unit is within the range of the species or system and there is some chance it may occur.
UNA	Not Applicable—A unit rank is not applicable because rarity or vulnerability is not the conservation issue for the species or system (e.g., cowbirds or invasive species).

Table H-2. Priority Species and Comparison of Alternative Effects on Habitat Management for the Species

Element Name	Common Name	G Rank	Unit Rank	Habitat Management Effects Compared to Current Condition							Species Protection Plan Direction
				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Apochthonius holsingeri</i>	A cave pseudoscorpion	G1	U1								+
<i>Boltonia montana</i>	Dolls' daisy	G1	U1								+
<i>Corallorhiza bentleyi</i>	Bentley's coalroot	G1	U1								+
<i>Helicodiscus diadema</i>	Shaggy coil	G1	U1								+
<i>Kleptochthonius anophthalmus</i>	A cave pseudoscorpion	G1	U1								+
<i>Nampabius turbator</i>	Cave centipede	G1	U1								+
<i>Nannaria shenandoah</i>	Shenandoah Mountain xystodesmid	G1	U1								+
<i>Pygmarrhopalites sacer</i>	Cave springtail	G1	U1								+
<i>Pygmarrhopalites caedus</i>	A cave springtail	G1	U1								+
<i>Pyrgus wyandot</i>	Appalachian grizzled skipper	G1	U1		++	-	+	++	++	++	+
<i>Illiamna remota</i>	Kankakee globe-mallow	G1	UP								+
<i>Leuctra monticola</i>	montane needelfly	G1	UP								+
<i>Pseudanophthalmus avernus</i>	Avernus cave beetle	G1	UP								+
<i>Pseudanophthalmus intersectus</i>	Crossroads cave beetle	G1	UP								+
<i>Pseudanophthalmus nelsoni</i>	Nelson's cave beetle	G1	UP								+
<i>Pseudanophthalmus petrunkevitchi</i>	Petrunkevitch's cave beetle	G1	UP								+
<i>Pseudotremia princeps</i>	South Branch Valley cave millipede	G1	UP								+
<i>Stygobromus hoffmani</i>	Alleghany County cave amphipod	G1	UP								+
<i>Buckleya distichophylla</i>	Piratebush	G2	U1		++	-	+	++	++	++	+
<i>Carex roanensis</i>	Roan Mountain sedge	G2	U1								+
<i>Echinacea laevigata</i>	smooth coneflower	G2	U1		++	-	+	++	++	++	+
<i>Glaucomys sabrinus fuscus</i>	Virginia northern flying squirrel	G2	U1		=	-	=	=	=	=	+
<i>Glyphyalinia raderi</i>	Maryland glyph	G2	U1								+
<i>Helicodiscus triodus</i>	Talus coil	G2	U1								+
<i>Myotis sodalis</i>	Indiana bat	G2	U1		+	-	+	+	+	+	+
<i>Plethodon sherando</i>	Big levels salamander	G2	U1		++	-	+	++	++	++	+
<i>Potamogeton tennesseensis</i>	Tennessee pondweed	G2	U1								+
<i>Pycnanthemum torreyi</i>	Torrey's mountain-mint	G2	U1		++	-	+	++	++	++	+
<i>Pygmarrhopalites carolynae</i>	Cave springtail	G2	U1								+
<i>Stygobromus mundus</i>	Bath County cave amphipod	G2	U1								+

Element Name	Common Name	G Rank	Unit Rank	Habitat Management Effects Compared to Current Condition							Species Protection Plan Direction
				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Trillium pusillum</i> var. <i>virginianum</i>	mountain least trillium	G2	U1								+
<i>Arabis serotina</i>	shale barren rockcress	G2	U2		++	-	+	++	++	++	+
<i>Clematis viticaulis</i>	Millboro leatherflower	G2	U2								+
<i>Heuchera alba</i>	white alumroot	G2	U2								+
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	G2	U2								+
<i>Phlox buckleyi</i>	sword-leaved phlox	G2	U2		++	-	+	++	++	++	+
<i>Plethodon virginia</i>	Shenandoah Mt. salamander	G2	U2		=	=	=	=	=	=	+
<i>Stygobromus</i> sp. 7	Sherando spinosid amphipod	G2	U2								+
<i>Stygobromus</i> sp. nov.	Massanutten Spring Amphipod	G2	U2								+
<i>Thryomanes bewickii</i> <i>altus</i>	Appalachian Bewick's wren	G2	UH		+	-	+	=	-	+	+
<i>Megaleuctra flinti</i>	Shenandoah needlefly	G2	UP								+
<i>Paxistima canbyi</i>	Canby's mountain lover	G2	UP								+
<i>Stygobromus morrisoni</i>	Morrison's cave amphipod	G2	UP								+
<i>Erora laeta</i>	Early hairstreak	GU	U1								+
<i>Callophrys irus</i>	Frosted elfin	G3	U1		++	-	+	++	++	++	+
<i>Cicindela ancocisconensis</i>	a tiger beetle	G3	U1								+
<i>Cicindela patruela</i>	Barrens tiger beetle	G3	U1								+
<i>Clematis coactilis</i>	Virginia white-haired leatherflower	G3	U1								+
<i>Hypericum mitchellianum</i>	Blue Ridge St. John's-wort	G3	U1		+	-	+	=	-	+	+
<i>Microtus chrotorrhinus carolinensis</i>	Southern rock vole	G3	U1								+
<i>Myotis leibii</i>	eastern small-footed bat	G3	U1								+
<i>Poa paludigena</i>	bog bluegrass	G3	U1								+
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	G3	U1								+
<i>Sorex palustris punctulatus</i>	southern water shrew	G3	U1								+
<i>Stygobromus gracilipes</i>	Shenandoah Valley cave amphipod	G3	U1								+
<i>Vitis rupestris</i>	sand grape	G3	U1								+
<i>Arabis patens</i>	Spreading rockcress	G3	U2								+
<i>Carex polymorpha</i>	variable sedge	G3	U2		++	-	+	++	++	++	+
<i>Gaylussacia brachycera</i>	box huckleberry	G3	U2		++	-	+	++	++	++	+
<i>Gymnocarpium appalachianum</i>	Appalachian oak fern	G3	U2								+
<i>Helenium virginicum</i>	Virginia sneezeweed	G3	U2								+
<i>Helonias bullata</i>	swamp-pink	G3	U2								+

Element Name	Common Name	G Rank	Unit Rank	Habitat Management Effects Compared to Current Condition							Species Protection Plan Direction
				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Plethodon punctatus</i>	Cow Knob salamander	G3	U2		=	=	=	=	=	=	+
<i>Speyeria diana</i>	Diana fritillary	G3	U2		++	-	+	++	++	++	+
<i>Triphora trianthophora</i>	nodding pogonia	G3	U2								+
<i>Zygonopus weyerienseis</i>	Grand Caverns blind cave millipede	G3	U2								+
<i>Juglans cinerea</i>	butternut	G3	U3								+
<i>Liatris helleri</i>	shale -barren blazing star	G3	U3								+
<i>Miktoniscus racovitzae</i>	Racovitza's terrestrial cave isopod	G3	U3								+
<i>Monotropis odorata</i>	sweet pinesap	G3	U3								+
<i>Neotoma magister</i>	Alleghany woodrat	G3	U3		-	+	-	-	-	-	+
<i>Oenothera argillicola</i>	Shale-barren evening primrose	G3	U3								+
<i>Panax quinquefolius</i>	Ginseng	G3	U3		+	-	+	=	+	+	+
<i>Ruellia purshiana</i>	Pursh's wild petunia	G3	U3		++	-	+	++	++	++	+
<i>Scutellaria saxatilis</i>	Rock skullcap	G3	U3		++	-	+	++	++	++	+
<i>Taenidia montana</i>	Virginia mountain pimpernel	G3	U3								+
<i>Trifolium virginicum</i>	Kate's mountain clover	G3	U3								+
<i>Peltigera hydrothyria</i>	Waterfan	G3	U4								+
<i>Erynnis martialis</i>	Mottled duskywing	G3	UH		++	-	+	++	++	++	+
<i>Speyeria idalia</i>	Regal fritillary	G3	UH		=	=	=	=	=	=	+
<i>Virginia valeriae pulchra</i>	mountain earth snake	G3	UH		++	-	+	++	++	++	
<i>Carex schweinitzii</i>	Schweinitz's sedge	G3	UP								+
<i>Catocala herodias gerhardi</i>	Herodias underwing	G3	UP		++	-	+	++	++	++	+
<i>Catocala marmorata</i>	Marbled underwing	G3	UP								+
<i>Delphinium exaltatum</i>	tall larkspur	G3	UP		++	-	+	++	++	++	+
<i>Euphorbia purpurea</i>	glade spurge	G3	UP								+
<i>Hansonoperla appalachia</i>	Appalachian stonefly	G3	UP								+
<i>Leuctra mitchellensis</i>	Mitchell needlefly	G3	UP								+
<i>Paragnetina ishusa</i>	widecollar stonefly	G3	UP								+
<i>Paraleptophlebia jeanae</i>	a mayfly	G3	UP								+
<i>Parnassia grandifolia</i>	Large-leaved grass-of-parnassus	G3	UP								+
<i>Perlesta frisoni</i>	Blue Ridge stonefly	G3	UP								+
<i>Phlox amplifolia</i>	Broadleaf phlox	G3	UP								+
<i>Semionellus placidus</i>	Millipede	G3	UP		-	+	-	-	-	-	+
<i>Sida hermaphrodita</i>	Virginia mallow	G3	UP								+
<i>Triodopsis picea</i>	Spruce Knob threetooth	G3	UP								+
<i>Zygonopus whitei</i>	Luray Caverns blind cave millipede	G3	UP								+
<i>Adlumia fungosa</i>	Climbing fumatory	G4	U1								+
<i>Arnoglossom muehlenbergii</i>	great Indian-plantain	G4	U1		++	-	+	++	++	++	+

Element Name	Common Name	G Rank	Unit Rank	Habitat Management Effects Compared to Current Condition							Species Protection Plan Direction
				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Carex barrattii</i>	Barratt's sedge	G4	U1								+
<i>Corynorhinus townsendii virginianus</i>	Virginia big-eared bat	G4	U1		=	=	=	=	=	=	+
<i>Cuscuta rostrata</i>	beaked dodder	G4	U1		+	-	+	=	-	+	+
<i>Cypripedium reginae</i>	showy lady's-slipper	G4	U1								+
<i>Eleocharis compressa</i>	flat-stemmed spikerush	G4	U1								+
<i>Eleocharis melanocarpa</i>	black-fruited spikerush	G4	U1								+
<i>Eleocharis robbinsii</i>	Robbins spikerush	G4	U1								+
<i>Euchloe olympia</i>	Olympia marble	G4	U1		++	-	+	++	++	++	+
<i>Lanius ludovicianus</i>	loggerhead shrike	G4	U1		+	-	+	+	+	+	
<i>Paronychia argyrocoma</i>	Silver Nail-wort	G4	U1								+
<i>Potamogeton oakesianus</i>	Oakes pondweed	G4	U1								+
<i>Schoenoplectus subterminalis</i>	water bulrush	G4	U1								+
<i>Scutellaria parvula</i> var. <i>parvula</i>	small skullcap	G4	U1		++	-	+	++	++	++	+
<i>Solidago randii</i> = <i>S. simplex</i> var. <i>randii</i>	Rand's goldenrod	G4	U1								+
<i>Solidago rupestris</i>	riverbank goldenrod	G4	U1								+
<i>Solidago uliginosa</i>	bog goldenrod	G4	U1								+
<i>Spiranthes ochroleuca</i>	yellow nodding ladies'-tresses	G4	U1		++	-	+	++	++	++	+
<i>Vaccinium macrocarpon</i>	large cranberry	G4	U1								+
<i>Autochton cellus</i>	Golden-banded skipper	G4	U2								+
<i>Clematis albicoma</i>	White-haired Leatherflower	G4	U2								+
<i>Polygonia progne</i>	Gray comma	G4	U2		++	-	+	++	++	++	+
<i>Prunus alleghaniensis</i>	Alleghany sloe	G4	U2		++	-	+	++	++	++	+
<i>Satyrrium favonius ontario</i>	Northern Hairstreak	G4	U2		++	-	+	++	++	++	+
<i>Sylvilagus obscurus</i>	Appalachian Cottontail	G4	U2		+	-	+	=	-	+	+
<i>Vermivora chrysoptera</i>	golden winged warbler	G4	U2		++	-	+	++	+	++	+
<i>Crotalus horridus</i>	Timber rattlesnake	G4	U3								+
<i>Dendroica cerulea</i>	cerulean warbler	G4	U3		=	=	=	=	=	=	+
<i>Eriogonum allenii</i>	Yellow Buckwheat	G4	U3								+
<i>Glyptemys insculpta</i>	wood turtle	G4	U3		+	-	+	+	+	+	+
<i>Solidago arguta</i> var. <i>harrisii</i>	Shale Barren Goldenrod	G4	U3								+
<i>Contopus borealis</i>	olive-sided flycatcher	G4	UH		+	-	+	=	-	+	+
<i>Falco peregrinus</i>	peregrine falcon	G4	UH		++	-	+	++	++	++	+
<i>Phyciodes batesii</i>	Tawny crescent	G4	UH								+
<i>Pituophis melanoleucus</i>	northern pinesnake	G4	UH		++	-	+	++	++	++	+
<i>Houstonia canadensis</i>	Canada bluets	G4	UNP								+

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				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Ammodramus henslowii</i>	Henslow's sparrow	G4	UP		=	=	=	=	=	=	+
<i>Cyperus dentatus</i>	toothed flatsedge	G4	UP								+
<i>Helianthemum propinquum</i>	low frostweed	G4	UP		++	-	+	++	++	++	
<i>Huperzia appalachiana</i>	Appalachian fir clubmoss	G4	UP								+
<i>Isonychia tusculanensis</i>	a mayfly	G4	UP								+
<i>Linum lewisii</i>	prairie flax	G4	UP		++	-	+	++	++	++	+
<i>Onosmodium virginianum</i>	Virginia false-gromwell	G4	UP		++	-	+	++	++	++	+
<i>Paronychia virginica</i>	yellow nailwort	G4	UP								+
<i>Prunus nigra</i>	Canada plum	G4	UP		+	-	+	+	=	+	+
<i>Zigadenus elegans</i> ssp. <i>glaucus</i> = <i>Anticlea glauca</i>	white camas	G4	UP		++	-	+	++	++	++	+
<i>Aegolius acadicus</i>	northern saw-whet owl	G5	U1		=	=	=	=	=	=	+
<i>Alnus incana</i> ssp. <i>rugosa</i>	speckled alder	G5	U1								+
<i>Ambystoma tigrinum</i>	Eastern tiger salamander	G5	U1		-	+	-	-	-	-	+
<i>Anaphalis margaritacea</i>	pearly everlasting	G5	U1		++	-	+	++	++	++	+
<i>Bromus kalmii</i>	wild chess	G5	U1		++	-	+	++	++	++	+
<i>Campanula rotundifolia</i>	American harebell	G5	U1								+
<i>Caprimulgus carolinensis</i>	chuck-will's widow	G5	U1		++	-	+	++	++	++	
<i>Carex aquatilis</i>	water sedge	G5	U1								+
<i>Carex arctata</i>	black sedge	G5	U1								+
<i>Carex buxbaumii</i>	Buxbaum's sedge	G5	U1								+
<i>Carex lasiocarpa</i> var. <i>americana</i>	slender sedge	G5	U1								+
<i>Carex vesicaria</i>		G5	U1								+
<i>Carpodacus purpureus</i>	purple finch	G5	U1		+	-	+	=	-	+	+
<i>Catharus guttatus</i>	hermit thrush	G5	U1		+	-	+	+	+	+	+
<i>Cheilanthes eatonii</i>	chestnut lipfern	G5	U1								+
<i>Cirsium altissimum</i>	tall thistle	G5	U1								+
<i>Clemmys guttata</i>	spotted turtle	G5	U1								+
<i>Colias interior</i>	Pink-edged sulphur	G5	U1								+
<i>Colinus virginianus</i>	northern bobwhite	G5	U1		++	-	+	++	+	++	
<i>Cornus canadensis</i>	bunchberry	G5	U1								+
<i>Cornus rugosa</i>	roundleaf dogwood	G5	U1								+
<i>Crataegus pruinosa</i>	prunose hawthorn	G5	U1		++	-	+	++	++	++	+
<i>Cuscuta coryli</i>	hazel dodder	G5	U1								+
<i>Cystopteris fragilis</i>	fragile fern	G5	U1								+
<i>Dendroica fusca</i>	blackburnian warbler	G5	U1		=	=	=	=	=	=	+
<i>Dendroica magnolia</i>	magnolia warbler	G5	U1		+	-	++	+	=	+	+
<i>Elymus trachycaulus</i>	slender wheatgrass	G5	U1		++	-	+	++	++	++	+

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				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Epilobium leptophyllum</i>	linear-leaved willow-herb	G5	U1								+
<i>Equisetum sylvaticum</i>	woodland horsetail	G5	U1								+
<i>Eriocaulon aquaticum</i>	white buttons	G5	U1								+
<i>Erynnis persius</i>	Persius duskywing	G5	U1		+	-	+	+	+	+	+
<i>Erysimum capitatum</i>	western wallflower	G5	U1		++	-	+	++	++	++	+
<i>Glyceria grandis</i>	American manna-grass	G5	U1								+
<i>Gnaphalium uliginosum</i>	low cudweed	G5	U1		+	-	+	=	-	+	+
<i>Haliaeetus leucocephalus</i>	bald eagle	G5	U1								+
<i>Helianthemum bicknellii</i>	plains frostweed	G5	U1		++	-	+	++	++	++	+
<i>Hypericum boreale</i>	northern St. John's-wort	G5	U1								+
<i>Incisalia polia</i>	Hoary elfin	G5	U1		+	-	+	+	+	+	+
<i>Isoetes lacustris</i>	lake quillwort	G5	U1								+
<i>Juncus brachycephalus</i>	small-head rush	G5	U1								+
<i>Juncus brevicaudatus</i>	narrow-panicked rush	G5	U1								+
<i>Juniperus communis var depressa</i>	ground juniper	G5	U1		+	-	+	=	-	+	+
<i>Lepus americanus</i>	snowshoe hare	G5	U1		+	-	++	+	=	+	+
<i>Leucothoe fontanesiana</i>	highland dog-hobble	G5	U1		+	-	+	=	+	+	+
<i>Liparis loeselii</i>	Loesel's twayblade	G5	U1								+
<i>Lonicera canadensis</i>	American fly-honeysuckle	G5	U1								+
<i>Loxia curvirostra</i>	red crossbill	G5	U1		=	=	=	=	=	=	+
<i>Martes pennanti</i>	fisher	G5	U1		=	=	=	=	=	=	+
<i>Melospiza georgiana</i>	swamp sparrow	G5	U1		+	-	+	=	-	+	+
<i>Minuartia groenlandica</i>	mountain sandwort	G5	U1								+
<i>Muhlenbergia glomerata</i>	marsh muhly	G5	U1								+
<i>Oligoneuron rigidum</i>	stiff goldenrod	G5	U1		++	-	+	++	++	++	+
<i>Oporornis philadelphia</i>	mourning warbler	G5	U1		++	-	+	++	++	++	+
<i>Oryzopsis asperifolia</i>	white-grained mtn-ricegrass	G5	U1		++	-	+	++	++	++	+
<i>Osmunda cinnamomea var. glandulosa</i>	glandular cinnamon fern	G5	U1								+
<i>Panax trifolius</i>	Dwarf ginseng	G5	U1		+	-	+	=	+	+	+
<i>Panicum hemitomon</i>	maiden cane	G5	U1								+
<i>Platanthera grandiflora</i>	large purple fringed orchid	G5	U1								+
<i>Platanthera peramoena</i>	purple fringeless orchid	G5	U1								+
<i>Poa palustris</i>	fowl bluegrass	G5	U1								+
<i>Potentilla arguta</i>	tall cinquefoil	G5	U1								+
<i>Pyrola elliptica</i>	shinleaf	G5	U1								+
<i>Regulus satrapa</i>	golden-crowned kinglet	G5	U1								+
<i>Ribes americanum</i>	wild black currant	G5	U1								+

Element Name	Common Name	G Rank	Unit Rank	Habitat Management Effects Compared to Current Condition							Species Protection Plan Direction
				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Rubus idaeus ssp. strigosus</i>	American red raspberry	G5	U1		+	-	+	=	-	+	+
<i>Sabatia campanulata</i>	slender marsh rose-pink	G5	U1								+
<i>Sagittaria calycina var calycina</i>	long-lobed arrowhead	G5	U1								+
<i>Schizachne purpurascens</i>	purple oat-grass	G5	U1								+
<i>Seiurus noveboracensis</i>	northern waterthrush	G5	U1		=	=	=	=	=	=	+
<i>Sibbaldiopsis tridentata</i>	three-toothed cinquefoil	G5	U1								+
<i>Sitta canadensis</i>	red-breasted nuthatch	G5	U1								+
<i>Speyeria atlantis</i>	Atlantis fritillary	G5	U1								+
<i>Sphagnum russowii</i>	Russow's peatmoss	G5	U1								+
<i>Symphoricarpos albus</i>	snowberry	G5	U1								+
<i>Thuja occidentalis</i>	northern white cedar	G5	U1								+
<i>Triantha racemosa</i>	coastal false-asphodel	G5	U1								+
<i>Trichostema setaceum</i>	narrow-leaved blue curls	G5	U1		++	-	+	++	++	++	+
<i>Troglodytes troglodytes</i>	winter wren	G5	U1								+
<i>Viola pedatifida</i>	prairie violet	G5	U1								+
<i>Woodwardia virginica</i>	Virginia chainfern	G5	U1								+
<i>Aralia hispida</i>	Bristly Sarsaparilla	G5	U2		++	-	+	++	++	++	+
<i>Betula cordifolia</i>	mountain paper birch	G5	U2		++	-	+	++	++	++	+
<i>Boloria selene</i>	Silver-bordered fritillary	G5	U2								+
<i>Certhia americana</i>	brown creeper	G5	U2		=	=	=	=	=	=	+
<i>Coccyzus erythrophthalmus</i>	black-billed cuckoo	G5	U2		+	-	+	=	-	+	+
<i>Empidonax alnorum</i>	alder flycatcher	G5	U2								+
<i>Eumeces anthracinus</i>	coal skink	G5	U2		++	-	+	++	++	++	+
<i>Glyceria acutiflora</i>	sharp-scaled manna-grass	G5	U2								+
<i>Liochlorophis vernalis</i>	Smooth green snake	G5	U2		++	-	+	++	++	++	
<i>Mustela nivalis</i>	least weasel	G5	U2		+	-	+	+	+	+	
<i>Phyciodes coccyta</i>	Northern crescent	G5	U2								+
<i>Poa saltuensis</i>	drooping bluegrass	G5	U2		++	-	+	++	++	++	+
<i>Saxifraga pensylvanica</i>	swamp saxifrage	G5	U2								+
<i>Scolopax minor</i>	American woodcock	G5	U2		+	-	+	+	+	+	+
<i>Sparganium chlorocarpum</i> = <i>S. emersum</i>	narrow-leaf burreed	G5	U2								+
<i>Sphyrapicus varius</i>	yellow-bellied sapsucker	G5	U2		+	-	+	=	-	+	+
<i>Spilogale putorius</i>	Spotted Skunk	G5	U2		+	-	+	+	+	+	+
<i>Tyto alba</i>	barn owl	G5	U2		+	-	+	+	+	+	+
<i>Caprimulgus vociferus</i>	whip-poor-will	G5	U3		++	-	+	++	++	++	
<i>Castor canadensis</i>	Beaver	G5	U3								+
<i>Lontra canadensis</i>		G5	U3								+
<i>Aquila chrysaetos</i>	golden eagle	G5	U4		=	=	=	=	=	=	

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				Alt A	Alt B	Alt C	Alt D	Alt E	Alt F	Alts G, H and I	Alts B - I
<i>Dendroica discolor</i>	prairie warbler	G5	U4		++	-	+	++	++	++	
<i>Empidonax virescens</i>	acadian flycatcher	G5	U4		=	=	=	=	=	=	+
<i>Echinodorus tenellus</i>	dwarf burhead	G5	UH								+
<i>Aster radula</i>	rough-leaved aster	G5	UP								+
<i>Astragalus distortus</i>	bent milkvetch	G5	UP								+
<i>Bartramia longicauda</i>	upland sandpiper	G5	UP		++	-	+	++	++	++	+
<i>Bromus ciliatus</i>	fringed brome grass	G5	UP								+
<i>Calopogon tuberosus</i>	Grass pink	G5	UP								+
<i>Circus cyaneus</i>	northern harrier	G5	UP		=	=	=	=	=	=	+
<i>Clematis occidentalis</i>	purple clematis	G5	UP								+
<i>Crataegus calpodendron</i>	pear hawthorn	G5	UP								+
<i>Desmodium canadense</i>	showy tick-trefoil	G5	UP								+
<i>Desmodium cuspidatum</i>	toothed tick-trefoil	G5	UP								+
<i>Desmodium sessilifolium</i>	sessile-leaf tick-trefoil	G5	UP		++	-	+	++	++	++	+
<i>Elymus canadensis</i>	nodding wild rye	G5	UP								+
<i>Epilobium ciliatum</i>	Hair willow-herb	G5	UP								+
<i>Eupatorium maculatum</i>	spotted joe-pye weed	G5	UP								+
<i>Geranium robertianum</i>	herb-robert	G5	UP								+
<i>Goodyera repens</i>	dwarf rattlesnake plantain	G5	UP								+
<i>Linum sulcatum</i>	grooved yellow flax	G5	UP		++	-	+	++	++	++	+
<i>Lycopodiella inundata</i>	northern bog clubmoss	G5	UP								+
<i>Lythrum alatum</i>	winged loosestrife	G5	UP								+
<i>Maianthemum stellatum</i>	stary false Solomon's-seal	G5	UP								+
<i>Melica nitens</i>	Three-flowered melic grass	G5	UP		++	-	+	++	++	++	+
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	G5	UP								+
<i>Polanisia dodecandra</i>	common clammy-weed	G5	UP								+
<i>Pseudognaphalium macounii</i>	Winged cudweed	G5	UP								+
<i>Rosa setigera</i>	prairie rose	G5	UP		++	-	+	++	++	++	+
<i>Sagittaria rigida</i>	sessile-fruited arrowhead	G5	UP								+
<i>Scirpus torreyi</i>		G5	UP								+
<i>Spartina pectinata</i>	freshwater cordgrass	G5	UP								+
<i>Spiranthes lucida</i>	shining ladies'-tresses	G5	UP								+
<i>Sporobolus neglectus</i>	small dropseed	G5	UP								+
<i>Triadenum fraseri</i>	Fraser's marsh St. John's-wort	G5	UP								+
<i>Verbena scabra</i>	sandpaper vervain	G5	UP								+
<i>Veronica scutellata</i>	marsh speedwell	G5	UP								+
<i>Viburnum lentago</i>	nannyberry	G5	UP								+
<i>Vicia americana</i>	American purple vetch	G5	UP								+
<i>Bonasa umbellus</i>	ruffed grouse	G5	UNA		++	-	+	++	+	++	+
<i>Meleagris gallopavo</i>	wild turkey	G5	UNA		++	-	+	++	+	++	

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<i>Odocoileus virginianus</i>	white-tailed deer	G5	UNA		++	-	+	++	+	++		
<i>Sciurus carolinensis</i>	gray squirrel	G5	UNA		+	-	+	+	=	+		+
<i>Sciurus niger</i>	Eastern fox squirrel	G5	UNA		+	-	+	+	=	+		+
<i>Ursus americanus</i>	black bear	G5	UNA		++	-	+	++	+	++		+

+ means small improvement in habitat

++ means improvement in habitat

= means habitat remains the same

- means small decrease in habitat

Blank means no difference in habitat among the alternatives

Table H-3. Current/Existing Situation Viability Outcomes by Species and Watershed
(Shaded columns indicate species sensitivity)

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
<i>Pleurobema collina</i>	James spinymussel	Potts Creek	P	26%	71%	87%	100%	1.16	C
		Cowpasture River	P	59%	85%	86%	100%	1.32	C
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	E
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Calfpasture River	P	59%	78%	88%	100%	1.32	C
		Pedlar River-James River	P	16%	25%	79%	16%	2.98	C
<i>Helenium virginicum</i>	Virginia sneezeweed	Back Creek-South River	NFP	20%	36%	63%	41%	2.57	B
		Naked Creek-South Fork Shenandoah River	P	10%	58%	64%	45%	2.08	C
<i>Helonias bullata</i>	swamp pink	Back Creek-South River	NFP	20%	36%	63%	41%	2.57	B
		Irish Creek-South River	NF	34%	53%	72%	41%	1.60	B
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	Dry River-North River	NF	59%	66%	71%	71%	1.59	D
		Back Creek-South River	P	20%	36%	63%	41%	2.57	E
		Naked Creek-South Fork Shenandoah River	P	10%	58%	64%	45%	2.08	E
		Potts Creek	NF	26%	71%	87%	100%	1.16	D
		Back Creek-Jackson River	P	41%	84%	74%	98%	1.32	E
<i>Notropis semperasper</i>	Roughhead shiner	Dunlap Creek	P	42%	83%	86%	100%	1.10	C
		Potts Creek	P	26%	71%	87%	100%	1.16	C
		Back Creek-Jackson River	NFP	41%	84%	74%	98%	1.32	B
		Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	C
		Cowpasture River	NFP	59%	85%	86%	100%	1.32	B
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	C
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Calfpasture River	P	59%	78%	88%	100%	1.32	C
<i>Noturus gilberti</i>	Orangefin madtom	Cowpasture River	P	59%	85%	86%	100%	1.32	C

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	Shoemaker River-North Fork Shenandoah River	NF	53%	88%	86%	100%	1.50	D
		Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	E
		Cowpasture River	NFP	59%	85%	86%	100%	1.32	B
		Craig Creek	P	<1%	76%	88%	100%	1.16	E
		Calfpasture River	NF	59%	78%	88%	100%	1.32	D
<i>Cicindela ancocisconensis</i>	Appalachian tiger beetle	Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	E
		Cowpasture River	NFP	59%	85%	86%	100%	1.32	D
<i>Sorex palustris punctulatus</i>	southern water shrew	North Fork South Branch Potomac River	NFP	5%	92%	82%	80%	1.22	D
		Back Creek-Jackson River	NFP	41%	84%	74%	98%	1.32	D
<i>Alasmidonta varicosa</i>	Brook floater	Gooney Run-South Fork Shenandoah River	P	7%	60%	67%	35%	2.52	E
		Smith Creek-North Fork Shenandoah River	P	6%	46%	44%	22%	2.62	E
		Stony Creek-North Fork Shenandoah River	P	28%	61%	66%	73%	2.47	E
<i>Elliptio lanceolata</i>	Yellow lance	Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	C
		Cowpasture River	P	59%	85%	86%	100%	1.32	C
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	E
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Maury River	P	9%	32%	54%	30%	2.32	C
		Pedlar River-James River	P	16%	25%	79%	16%	2.98	C
<i>Fusconaia masoni</i>	Atlantic pigtoe	Catawba Creek-James River	P	5%	53%	67%	59%	1.81	E
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Calfpasture River	P	59%	78%	88%	100%	1.32	E
<i>Lasmigona subviridis</i>	Green floater	Stony Creek-North Fork Shenandoah River	P	28%	61%	66%	73%	2.47	C
		Pedlar River-James River	P	16%	25%	79%	16%	2.98	C

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
		Tye River	P	17%	33%	77%	13%	1.86	C
<i>Villosa constricta</i>	Notched Rainbow	Potts Creek	P	26%	71%	87%	100%	1.16	C
		Cowpasture River	P	59%	85%	86%	100%	1.32	C
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	C
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Maury River	P	9%	32%	54%	30%	2.32	C
		Pedlar River-James River	P	16%	25%	79%	16%	2.98	C
<i>Peltigera hydrothyria</i>	waterfan	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	B
		Middle River	NF	10%	37%	40%	36%	2.72	B
		Stony Creek-North Fork Shenandoah River	NF	28%	61%	66%	73%	2.47	B
		Cowpasture River	NF	59%	85%	86%	100%	1.32	B
		Irish Creek-South River	NFP	34%	53%	72%	41%	1.60	A
		Tye River	NFP	17%	33%	77%	13%	1.86	A
		Buffalo River	NFP	8%	28%	76%	22%	2.08	A
<i>Ambystoma tigrinum</i>	eastern tiger salamander	Back Creek-South River	NFP	20%	36%	63%	41%	2.57	B
<i>Cambarus monongalensis</i>	A Crayfish	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	B
<i>Anguilla rostrata</i>	American eel	Middle River	P	10%	37%	40%	36%	2.72	C
		Dry River-North River	P	59%	66%	71%	71%	1.59	C
		Back Creek-South River	P	20%	36%	63%	41%	2.57	C
		Naked Creek-South Fork Shenandoah River	P	10%	58%	64%	45%	2.08	C
		Gooney Run-south Fork Shenandoah River	NFP	7%	60%	67%	35%	2.52	B
		Smith Creek-North Fork Shenandoah River	P	6%	46%	44%	22%	2.62	C
		Stony Creek-North Fork Shenandoah River	P	28%	61%	66%	73%	2.47	C
		Cedar Creek	NFP	19%	34%	78%	69%	1.77	A
		Craig Creek	P	<1%	76%	88%	100%	1.16	E
		Pedlar River-James River	P	16%	25%	79%	16%	2.98	C
		Tye River	NFP	17%	33%	77%	13%	1.86	A
		Buffalo River	NFP	8%	28%	76%	22%	2.08	A

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
		Rockfish River	P	1%	21%	80%	21%	1.71	C
<i>Salvelinus fontinalis</i>	Brook trout	North Fork South Branch Potomac River	NFP	5%	92%	82%	80%	1.22	B
		South Fork South Branch Potomac River	NFP	29%	86%	82%	100%	1.37	B
		Cacapon River	NFP	20%	79%	83%	100%	1.44	B
		Dry River-North River	NFP	59%	66%	71%	71%	1.59	A
		Back Creek-South River	NFP	20%	36%	63%	41%	2.57	B
		Naked Creek-South Fork Shenandoah River	NFP	10%	58%	64%	45%	2.08	B
		Gooney Run-south Fork Shenandoah River	NFP	7%	60%	67%	35%	2.52	B
		Shoemaker River-North Fork Shenandoah River	NFP	53%	88%	86%	100%	1.50	B
		Smith Creek-North Fork Shenandoah River	NF	6%	46%	44%	22%	2.62	B
		Stony Creek-North Fork Shenandoah River	NFP	28%	61%	66%	73%	2.47	A
		Cedar Creek	NFP	19%	34%	78%	69%	1.77	B
		Dunlap Creek	NFP	42%	83%	86%	100%	1.10	B
		Potts Creek	NFP	26%	71%	87%	100%	1.16	B
		Back Creek-Jackson River	NFP	41%	84%	74%	98%	1.32	A
		Wilson Creek-Jackson River	NFP	38%	86%	83%	100%	1.90	A
		Cowpasture River	NFP	59%	85%	86%	100%	1.32	A
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	C
		Craig Creek	NFP	<1%	76%	88%	100%	1.16	B
		Calfpasture River	NFP	59%	78%	88%	100%	1.32	A
		Little Calfpasture River	NFP	30%	75%	81%	100%	2.03	B
		Maury River	NF	9%	32%	54%	30%	2.32	B
		Irish Creek-South River	NFP	34%	53%	72%	41%	1.60	A
		Pedlar River-James River	NFP	16%	25%	79%	16%	2.98	B
		Tye River	NFP	17%	33%	77%	13%	1.86	A
		Buffalo River	NFP	8%	28%	76%	22%	2.08	B
		Rockfish River	NFP	1%	21%	80%	21%	1.71	B
<i>Cottus cf. cognatus</i>	Checkered sculpin	Cacapon River	P	20%	79%	83%	100%	1.44	C
<i>Aeshna canadensis</i>	Canada darner	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
<i>Aeshna tuberculifera</i>	black-tipped darner	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
		Dry River-North River	NF	59%	66%	71%	71%	1.59	B
		Back Creek-South River	NF	20%	36%	63%	41%	2.57	B
		Naked Creek-South Fork Shenandoah River	NF	10%	58%	64%	45%	2.08	D
		Potts Creek	NF	26%	71%	87%	100%	1.16	B
		Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	C
		Catawba Creek-James River	P	5%	53%	67%	59%	1.81	E
<i>Aeshna verticalis</i>	green-striped darner	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Anax longipes</i>	comet darner	Back Creek-South River	NF	20%	36%	63%	41%	2.57	B
<i>Calopteryx amata</i>	Superb jewelwing	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Calopteryx angustipennis</i>	Appalachian jewelwing	Stony Creek-North Fork Shenandoah River	NF	28%	61%	66%	73%	2.47	B
		Cowpasture River	NF	59%	85%	86%	100%	1.32	B
		Craig Creek	P	<1%	76%	88%	100%	1.16	C
		Maurry River	P	9%	32%	54%	30%	2.32	C
<i>Celithemis martha</i>	Martha's penant	Back Creek-South River	NF	20%	36%	63%	41%	2.57	B
<i>Cordulegaster diastatops</i>	delta-spotted spiketail	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	B
<i>Enallagma annexum</i> (AKA <i>cyathigerum</i>)	northern bluet	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Epitheca canis</i>	beaverpond baskettail	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Gomphus adelphus</i>	mustached clubtail	Cowpasture River	P	59%	85%	86%	100%	1.32	C
		Calfpasture River	P	59%	78%	88%	100%	1.32	C
<i>Gomphus quadricolor</i>	rapids clubtail	Cowpasture River	P	59%	85%	86%	100%	1.32	C
		Craig Creek	P	<1%	76%	88%	100%	1.16	C

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
		Calfpasture River	P	59%	78%	88%	100%	1.32	C
<i>Ladona julia</i> (AKA <i>Libellula julia</i>)	chalk-fronted corporal skimmer	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Lanthus parvulus</i>	double-striped clubtail	North Fork South Branch Potomac River	NFP	5%	92%	82%	80%	1.22	B
<i>Lestes disjunctus</i>	northern spreadwing	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
		Back Creek-Jackson River	P	41%	84%	74%	98%	1.32	C
		Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	C
<i>Leucorrhinia hudsonica</i>	Hudsonian whiteface	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Nehalennia irene</i>	sedge sprite	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Neurocordulia yamaskanensis</i>	stygian shadowdragon	Stony Creek-North Fork Shenandoah River	P	28%	61%	66%	73%	2.47	C
		Wilson Creek-Jackson River	P	38%	86%	83%	100%	1.90	C
<i>Rhionaeschna mutata</i> (AKA <i>Aeshna mutata</i>)	spatterdock darner	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
		Potts Creek	P	26%	71%	87%	100%	1.16	C
<i>Somatochlora elongata</i>	Ski-tipped emerald	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Sympetrum obtrusum</i>	white-faced meadowhawk	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	B
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	North Fork South Branch Potomac River	NF	5%	92%	82%	80%	1.22	D
<i>Clemmys guttata</i>	spotted turtle	Back Creek-South River	NF	20%	36%	63%	41%	2.57	D
<i>Glyptemys insculpta</i>	wood turtle	South Fork South Branch Potomac River	P	29%	86%	82%	100%	1.37	C
		Cacapon River	NFP	20%	79%	83%	100%	1.44	B

Scientific Name	Common Name	Watershed	National Forest (NF) or Private (P) occurrence	% GWNF	% High Erosion Potential	% Forested Riparian	% High Acid Sensitivity	Road Density (miles/sq.mi.)	Viability Outcome *
		Shoemaker River-North Fork Shenandoah River	NFP	53%	88%	86%	100%	1.50	B
		Smith Creek-North Fork Shenandoah River	P	6%	46%	44%	22%	2.62	C
		Stony Creek-North Fork Shenandoah River	NFP	28%	61%	66%	73%	2.47	B
		Cedar Creek	NFP	19%	34%	78%	69%	1.77	B

*Outcome A. Species is well distributed and abundant within watershed. Forest Service may influence conditions in the watershed to keep it well distributed. Likelihood of maintaining viability is high.

Outcome B. Species is potentially at risk in the watershed; however, the extent and location of NFS lands with respect to the species is conducive to positively influence the sustainability of the species within this watershed. Therefore, likelihood of maintaining viability is moderate.

Outcome C. Species is potentially at risk within the watershed; however, the extent and location of NFS lands with respect to the species is NOT conducive to positively influence the sustainability of the species within this watershed. Therefore, species viability in the watershed may be at risk.

Outcome D. The species is so rare within the watershed (population is at very low density and/or at only a few local sites) that stochastic events (accidents, weather events, etc.) may place persistence of the species within the watershed at risk; however, the extent and location of NFS lands with respect to the species is conducive to positively influence the sustainability of the species within this watershed. Therefore, likelihood of maintaining viability is moderate.

Outcome E. The species is so rare within the watershed (population is at very low density and/or at only a few local sites) that stochastic events (accidents, weather events, etc.) may place persistence of the species within the watershed at risk. Forest Service ability to influence the species is limited. Therefore species viability in the watershed may be at risk.

**Birds and non-TE plants and mammals were not included in this analysis because species occurrence locations were not readily available in GIS format. See Terrestrial Ecological Analysis.

Table H-4. Species Habitat on GWNF, Rank* and Sensitivity Factor**

Species			Habitat and Ranking								Species Sensitivity Factor				
GROUP	SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK VA	S-RANK WV	STATUS	POTENTIAL HABITAT ON FS	UNIT RANK	GLOBAL CONSERVATION IMPORTANCE RATING	REGIONAL CONSERVATION IMPORTANCE RATING	SEDIMENT	HABITAT COMPLEXITY	TEMP.	ACID DEPOSITION	PASSAGE
mussel	<i>Pleurobema collina</i>	James spiny mussel	G1	S1	S1	FE	14.3 mi	U1	4	3	x	x		x	
plant	<i>Helenium virginicum</i>	Virginia sneezeweed	G3	S2		FT	4.0 ac	U2	1	1		x			
plant	<i>Helonias bullata</i>	swamp pink	G3	S2S3		FT	7.3 mi	U2	1	1	x			x	
plant	<i>Scirpus ancistrochaetus</i>	northeastern bulrush	G3	S2	S1	FE	1.1 ac	U1	2	2		x			
fish	<i>Notropis semperasper</i>	Roughhead shiner	G2G3	S2S3	—	S	73.7 mi	U3	3	2	x	x		x	
fish	<i>Noturus gilberti</i>	Orange fin madtom	G2	S2	—	S	6.5 mi	UP	4	4	x	x		x	
insect	<i>Hydraena maureenae</i>	Maureen's shale stream beetle	G1G3	S1S3	—	S	150.9 mi	U2	1	3	x			x	
insect	<i>Cicindela ancocisconensis</i>	Appalachian tiger beetle	G3	S2	S3	S	6.20 mi	U1	3	2	x				
mammal	<i>Sorex palustris punctulatus</i>	southern water shrew	G5T3	S1S2	S1	S	13.5 mi	U1	2	2		x	x	x	
mussel	<i>Alasmodonta varicosa</i>	Brook floater	G3	S1	S1	S	1.3 mi	UP	4	4	x	x		x	
mussel	<i>Elliptio lanceolata</i>	Yellow lance	G2G3	S2S3	—	S	30.8 mi	UP	4	3	x	x		x	
mussel	<i>Fusconaia masoni</i>	Atlantic pigtoe	G2	S2	—	S	0.2 mi	UP	4	4	x	x		x	
mussel	<i>Lasmigona subviridis</i>	Green floater	G3	S2	S2	S	21.9 mi	UP	4	3	x	x		x	
bird	<i>Haliaeetus leucocephalus</i>	Bald eagle	G5	S23B /S3N	S2B /S3N	S	Riparian	U1	4	3					
plant	<i>Boltonia montana</i>	Doll's daisy	G1G2	S1	—	S	Riparian	U1	1	1					
plant	<i>Iliamna remota</i>	Kankakee globe-mallow	G1Q	S1	—	S	Riparian	UP	4	4					

Species			Habitat and Ranking								Species Sensitivity Factor				
GROUP	SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK VA	S-RANK WV	STATUS	POTENTIAL HABITAT ON FS	UNIT RANK	GLOBAL CONSERVATION IMPORTANCE RATING	REGIONAL CONSERVATION IMPORTANCE RATING	SEDIMENT	HABITAT COMPLEXITY	TEMP.	ACID DEPOSITION	PASSAGE
plant	<i>Isoetes virginica</i>	Virginia quillwort	G1	S1?	—	S	Riparian	UP	5	5					
plant	<i>Peltigera hydrothyria</i>	waterfan	G4	S1	—	S	515.0 mi	U4	3	2	x		x	x	
plant	<i>Poa paludigena</i>	bog bluegrass	G3	S2	S1	S	Riparian	U1	3	2					
plant	<i>Potamogeton hillii</i>	Hill's pondweed	G3	S1	—	S	Riparian	UP	5	5					
plant	<i>Potamogeton tennesseensis</i>	Tennessee pondweed	G2	S1	S2	S	Riparian	U1	3	3					
plant	<i>Sida hermaphrodita</i>	Virginia mallow	G3	S1	S2	S	Riparian	UP	4	4					
plant	<i>Vitis rupestris</i>	sand grape	G3	S1?	S2	S	Riparian	U1	4	3					
amphib	<i>Ambystoma tigrinum</i>	eastern tiger salamander	G5	S1		LR	39.1 ac	U1	4	2				x	
bird	<i>Anas rubripes</i>	Amer. black duck	G5	S4	S2B/S4N	LR	36.6 mi & 3,228.7 ac	UP	4	3					
bird	<i>Empidonax alnorum</i>	alder flycatcher	G5	S1B	S3B/S4N	LR	185.7 ac	U2	4	2					
bird	<i>Empidonax virescens</i>	Acadian flycatcher	G5	S5	S5B	MIS	Riparian	U4	4	3					
bird	<i>Melospiza georgiana</i>	swamp sparrow	G5	S1B/S4S5N	S3B/S4N	LR	85.0 ac	U1	4	3					
bird	<i>Nycticorax nycticorax</i>	black-crowned night-heron	G5	S3B/S4N	SHB	LR	36.6 mi & 3,228.7 ac	UP	4	3					
bird	<i>Nyctanassa violacea</i>	yellow-crowned night-heron	G5	S2S3B/S3N	S1N	LR	36.6 mi & 3,228.7 ac	UP	4	3				x	
bird	<i>Seiurus noveboracensis</i>	northern waterthrush	G5	S1B	S2B	LR	270.7 ac	U1	4	2					

Species			Habitat and Ranking								Species Sensitivity Factor				
GROUP	SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK VA	S-RANK WV	STATUS	POTENTIAL HABITAT ON FS	UNIT RANK	GLOBAL CONSERVATION IMPORTANCE RATING	REGIONAL CONSERVATION IMPORTANCE RATING	SEDIMENT	HABITAT COMPLEXITY	TEMP.	ACID DEPOSITION	PASSAGE
crayfish	<i>Cambarus monongalensis</i>	A Crayfish	G5	S1?	S3	LR	17.6 mi	U1	4	3	x	x	x	x	
fish	<i>Anguilla rostrata</i>	American eel	G4	S5	S2	SMC	145.6 mi	U4	4	3	x	x		x	x
fish	<i>Cottus cf. cognatus</i>	Checkered sculpin	G4Q	-	-	LR	Riparian	U3	4	4	x	X	x	x	x
fish	<i>Salvelinus fontinalis</i>	Brook trout	G5	S4	S5	MIS	1,119.9 mi	U5	3	1	x	x	x	x	x
insect/	<i>Aeshna canadensis</i>	Canada darner	G5	S1	S1	LR	34.7 ac	U1	4	2			x		
insect/	<i>Aeshna tuberculifera</i>	black-tipped darner	G4	S2S3	S2	LR	89.4 ac	U2	4	2			x		
insect/	<i>Aeshna verticalis</i>	green-striped darner	G5	S1	S2	LR	34.7 ac	U1	4	2			x		
insect/	<i>Anax longipes</i>	comet darner	G5	S3	S1	LR	49.4 ac	U1	4	2			x		
insect/	<i>Calopteryx amata</i>	Superb jewelwing	G4	S1	-	LR	17.6 mi	U1	4	2	x	x	x		
insect/	<i>Calopteryx angustipennis</i>	Appalachian jewelwing	G4	S2	S2	LR	.09 mi	U1	4	3	x	x	x	x	
insect/	<i>Celithemis martha</i>	Martha's penant	G4	S2	-	LR	54.7 ac	U1	4	2			x		
insect/	<i>Cordulegaster diastatops</i>	delta-spotted spiketail	G5	S1	S2	LR	10.23 mi	U1	4	2	x	x	x	x	
insect/	<i>Enallagma annexum</i> (AKA <i>cyathigerum</i>)	northern bluet	G5	S1	S2	LR	34.7 ac	U1	4	2			x		
insect/	<i>Epitheca canis</i>	beaverpond baskettail	G5	S1	S1S2	LR	34.7 ac	U1	4	2			x		
insect/	<i>Gomphus adelphus</i>	mustached clubtail	G4	S1	S2	LR	23.9 mi	UP	4	4	x	x			
insect/	<i>Gomphus quadricolor</i>	rapids clubtail	G3/G4	S2	S2S3	LR	23.9 mi	UP	4	4	x	x			
insect/	<i>Ladona julia</i> (AKA <i>Libellula julia</i>)	chalk-fronted corporal skimmer	G5	S1	S2	LR	34.7 ac	U1	4	2			x		

Species			Habitat and Ranking								Species Sensitivity Factor				
GROUP	SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK VA	S-RANK WV	STATUS	POTENTIAL HABITAT ON FS	UNIT RANK	GLOBAL CONSERVATION IMPORTANCE RATING	REGIONAL CONSERVATION IMPORTANCE RATING	SEDIMENT	HABITAT COMPLEXITY	TEMP.	ACID DEPOSITION	PASSAGE
insect/	<i>Lanthus parvulus</i>	double-striped clubtail	G4	S2	S2	LR	13.2 mi	U1	4	2	x	x	x	x	
insect/	<i>Lestes disjunctus</i>	northern spreadwing	G5	S2	S2S3	LR	34.7 ac	U1	4	3			x		
insect/	<i>Leucorrhinia ihudsonica</i>	Hudsonian whiteface	G5	S1	S1	LR	34.7 ac	U1	4	2			x		
insect/	<i>Nehalennia irene</i>	sedge sprite	G5	S1	S3	LR	34.7 ac	U1	4	2			x		
insect/	<i>Neurocordulia yamaskanensis</i>	stygian shadowdragon	G5	S2	S2	LR	34.5 mi	UP	4	4	x	x	x		
insect/	<i>Rhionaeschna mutata</i> (AKA <i>Aeshna mutata</i>)	spatterdock darner	G3G4	S2	S1	LR	49.4 ac	U1	4	3			x		
insect/	<i>Somatochlora elongata</i>	Ski-tipped emerald	G5	S1S2	S2	LR	34.7 ac	U1	4	2			x		
insect/	<i>Sympetrum obtrusum</i>	white-faced meadowhawk	G5	S1	S2	LR	34.7 ac	U1	4	2			x		
insect	<i>Autochton cellus</i>	Golden banded skipper	G5	S3	S1S2	LR	Riparian	U2	3	2					
insect	<i>Boloria selene</i>	Silver-bordered fritillary	G5	S2	S3	LR	Riparian	U2	2	1					
insect	<i>Colias interior</i>	Pink-edged sulphur	G5	S1S2	S2	LR	Riparian	U1	4	3					
insect	<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	G1/G3	S1	-	LR	17.6 mi	U1	2	1	x	x	x	x	
insect	<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	G5	S1	SNR	LR	34.7 ac	U1	4	2			x		
insect	<i>Speyeria atlantis</i>	Atlantis fritillary	G5	S2	S3	LR	Riparian	U1	3	2					
mammal	<i>Castor canadensis</i>	beaver	G5	S5	S5	SMC	Riparian	U3	4	4					
mammal	<i>Lontra canadensis</i>	river otter	G5	S4	S1	LR	Riparian	U3	4	3					
mussel	<i>Villosa constricta</i>	Notched Rainbow	G3	S3	-	LR	33.1 mi	UP	4	3	x	x		x	
reptile	<i>Clemmys guttata</i>	spotted turtle	G5	S4	S1	LR	6.45 ac	U1	4	4					

Species			Habitat and Ranking								Species Sensitivity Factor				
GROUP	SCIENTIFIC NAME	COMMON NAME	G-RANK	S-RANK VA	S-RANK WV	STATUS	POTENTIAL HABITAT ON FS	UNIT RANK	GLOBAL CONSERVATION IMPORTANCE RATING	REGIONAL CONSERVATION IMPORTANCE RATING	SEDIMENT	HABITAT COMPLEXITY	TEMP.	ACID DEPOSITION	PASSAGE
reptile	<i>Glyptemys insculpta</i>	wood turtle	G4	S2	S2	LR	217.6 mi	U2	4	2	x	x	x	x	
plant	<i>Alnus incana ssp. rugosa</i>	speckled alder	G5T5	S2	S4	LR	Riparian	U1	4	4					
plant	<i>Arethusa bulbosa</i>	Dragon's mouth	G4	SSH	-	LR	Riparian	UH	5	5					
plant	<i>Eurybia radula</i>	rough-leaved aster	G5	S1	S4	LR	Riparian	UP	4	4					
plant	<i>Bromus ciliatus</i>	fringed brome grass	G5	S1	S4	LR	Riparian	UP	4	4					
plant	<i>Calopogon tuberosus</i>	tuberous grass pink	G5	S2	S1	LR	Riparian	UP	4	3					
plant	<i>Carex aquatilis</i>	water sedge	G5	S1	S1	LR	Riparian	U1	4	2					
plant	<i>Carex arctata</i>	Black sedge	G5	S1	S1	LR	Riparian	U1	4	2					
plant	<i>Carex barrattii</i>	Barratt's sedge	G4	S2	-	LR	Riparian	U1	3	2					
plant	<i>Carex buxbaumii</i>	Buxbaum's sedge	G5	S2	S2	LR	Riparian	U1	4	3					
plant	<i>Carex conoidea</i>	field sedge	G5	S1S2	S1	LR	Riparian	UP	4	2					
plant	<i>Carex cristatella</i>	crested sedge	G5	S2	S4	LR	Riparian	UP	4	3					
plant	<i>Carex interior</i>	inland sedge	G5	S1	S1	LR	Riparian	UP	4	4					
plant	<i>Carex lasiocarpa var. americana</i>	slender sedge	G5T5	S1	S1	LR	Riparian	U1	4	3					
plant	<i>Carex schweinitzii</i>	Schweinitz's sedge	G3G4	S1	-	LR	Riparian	UP	4	4					
plant	<i>Carex vesicaria</i>	inflated sedge	G5	S1S2	S2	LR	Riparian	U1	4	3					
plant	<i>Cyperus dentatus</i>	toothed flatsedge	G4	S1	SNR	LR	Riparian	UP	4	4					
plant	<i>Cypripedium reginae</i>	showy lady's-slipper	G4	S1	S1	LR	Riparian	U1	4	3					

Species			Habitat and Ranking								Species Sensitivity Factor				
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plant	<i>Echinodorus tenellus</i>	dwarf burhead	G5?	S1	–	LR	Riparian	UH	4	4					
plant	<i>Eleocharis compressa</i>	flattened spikerush	G4	S2	S2	LR	Riparian	U1	4	2					
plant	<i>Eleocharis melanocarpa</i>	black-fruited spikerush	G4	S2	–	LR	Riparian	U1	3	2					
plant	<i>Eleocharis robbinsii</i>	Robbins spikerush	G4G5	S1	–	LR	Riparian	U1	4	3					
plant	<i>Elymus canadensis</i>	nodding wild rye	G5	S2?	S5	LR	Riparian	UP	4	4					
plant	<i>Epilobium leptophyllum</i>	linear-leaved willow-herb	G5	S2	S3	LR	Riparian	U1	4	3					
plant	<i>Equisetum sylvaticum</i>	Woodland horsetail	G5	S1	S1	LR	Riparian	U1	4	4					
plant	<i>Eriocaulon aquaticum</i>	white buttons	G5	S1	–	LR	Riparian	U1	4	3					
plant	<i>Eupatorium maculatum</i>	spotted joe-pye weed	G5	S2	S1	LR	Riparian	UP	4	4					
plant	<i>Glyceria acutiflora</i>	sharp-scaled manna-grass	G5	S3	S2	LR	Riparian	U2	4	3					
plant	<i>Glyceria grandis</i>	American manna-grass	G5	S1	S2	LR	Riparian	U1	4	3					
plant	<i>Huperzia appalachiana</i>	Appalachian fir clubmoss	G5	S2	–	LR	Riparian	UP	4	4					
plant	<i>Hypericum boreale</i>	northern St. John's-wort	G5	S2	SH	LR	Riparian	U1	4	4					
plant	<i>Hypericum ellipticum</i>	pale St. John's-wort	G5	SH	S4	LR	Riparian	UNP	5	5					
plant	<i>Isoetes lacustris</i>	lake quillwort	G5	S1?	–	LR	Riparian	U1	4	4					
plant	<i>Juncus brachycephalus</i>	small-head rush	G5	S2	–	LR	Riparian	U1	4	3					
plant	<i>Juncus brevicaudatus</i>	narrow-panicked rush	G5	S2	S4	LR	Riparian	U1	4	4					

Species			Habitat and Ranking								Species Sensitivity Factor				
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plant	<i>Lachnanthes caroliniana</i>	Carolina redroot	G4	SH	–	LR	Riparian	UH	5	5					
plant	<i>Liparis loeselii</i>	Loesel's twayblade	G5	S2	S3	LR	Riparian	U1	4	3					
plant	<i>Lycopodiella inundata</i>	northern bog clubmoss	G5	S1	S2?	LR	Riparian	UP	4	4					
plant	<i>Lythrum alatum</i>	winged loosestrife	G5	S2	S2	LR	Riparian	UP	4	4					
plant	<i>Muhlenbergia glomerata</i>	marsh muhly	G5	S2	SNR	LR	Riparian	U1	4	4					
plant	<i>Osmunda cinnamomea</i> var. <i>glandulosa</i>	glandular cinnamon fern	G5TNR	SNR	SNR	LR	Riparian	U1	3	2					
plant	<i>Panicum hemitomon</i>	maidencane	G5?	S2	–	LR	Riparian	U1	4	3					
plant	<i>Parnassia grandiflora</i>	Large-leaved grass-of-parnassus	G3	S2	S1	LR	Riparian	UP	4	4					
plant	<i>Platanthera grandiflora</i>	large purple fringed orchid	G5	S1	S4	LR	Riparian	U1	4	4					
plant	<i>Platanthera peramoena</i>	purple fringeless orchis	G5	S2	S4	LR	Riparian	U1	4	3					
plant	<i>Poa palustris</i>	fowl bluegrass	G5	S1S2	S4	LR	Riparian	U1	4	4					
plant	<i>Polanisia dodecandra</i>	common clammy-weed	G5	S1	SNA	LR	Riparian	UP	4	4					
plant	<i>Potamogeton amplifolius</i>	Large leaf pondweed	G5	S1S2	S4	LR	Riparian	U2	4	4					
plant	<i>Potamogeton oakesianus</i>	Oakes pondweed	G4	S2	SH	LR	Riparian	U1	4	3					
plant	<i>Ribes americanum</i>	Wild black currant	G5	S1	S4	LR	Riparian	U1	4	4					
plant	<i>Sabatia campanulata</i>	slender marsh rose-pink	G5	S2	–	LR	Riparian	U1	3	3					

Species			Habitat and Ranking								Species Sensitivity Factor				
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plant	<i>Sagittaria calycina</i> var <i>calycina</i>	long-lobed arrowhead	G5T5?	S1	S2	LR	Riparian	U1	4	2					
plant	<i>Sagittaria rigida</i>	sessile-fruited arrowhead	G5	S1	SNA	LR	Riparian	UP	4	3					
plant	<i>Schoenoplectus subterminalis</i>	water bulrush	G4G5	S1S2	–	LR	Riparian	U1	4	4					
plant	<i>Scirpus torreyi</i>	Torrey's bulrush	G5?	S1	S1	LR	Riparian	UP	4	3					
plant	<i>Solidago rupestris</i>	riverbank goldenrod	G4?	S1	–	LR	Riparian	U1	4	2					
plant	<i>Solidago uliginosa</i>	bog goldenrod	G4G5	S2	S4	LR	Riparian	U1	4	3					
plant	<i>Sparganium chlorocarpum</i>	narrow-leaf burreed	G5	S1		LR	Riparian	U2	4	3					
plant	<i>Spartina pectinata</i>	freshwater cordgrass	G5	S2	S4	LR	Riparian	UP	4	4					
plant	<i>Sphagnum russowii</i>	Russow's peatmoss	G5	S1S2	-	LR	Riparian	U2	4	3					
plant	<i>Spiranthes lucida</i>	shining ladies'-tresses	G5	S1	S1S2	LR	Riparian	UP	4	4					
plant	<i>Spiranthes ochroleuca</i>	yellow nodding ladies'-tresses	G4	S1	S5	LR	Riparian	U1	3	3					
plant	<i>Triadenum fraseri</i> (<i>Hypericum</i> v.)	Fraser's marsh St. John's-wort	G5	S1	S4	LR	Riparian	UP	4	4					
plant	<i>Triantha racemosa</i>	coastal false-asphodel	G5	S1	–	LR	Riparian	U1	4	4					
plant	<i>Vaccinium macrocarpon</i>	large cranberry	G4	S2	S2	LR	Riparian	U1	4	3					
plant	<i>Verbena scabra</i>	sandpaper vervain	G5	S2	S1	LR	Riparian	UP	4	4					
plant	<i>Veronica scutellata</i>	marsh speedwell	G5	S1	S2	LR	Riparian	UP	4	4					

Species			Habitat and Ranking								Species Sensitivity Factor				
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plant	<i>Viburnum lentago</i>	nannyberry	G5	S1	S1S2	LR	Riparian	UP	4	4					
plant	<i>Vicia americana</i>	American purple vetch	G5	S1S2	S4	LR	Riparian	UP	4	4					
plant	<i>Woodwardia virginica</i>	Virginia chainfern	G5	S5	SNR	LR	Riparian	U1	4	4					

*G-Rank = global rank; S-Rank VA= State rank in Virginia; S-Rank WV=State rank in West Virginian; Unit Rank=Rank of rarity on the GWNF (U1=critically imperiled, U2=imperiled, U3=vulnerable, U4=apparently secure, U5=secure, UU=unrankable, UH=historical, UX=presumed extirpated, UP=possibly present, UNP=not present, UNR=not ranked, UNA=not applicable)

**Sensitivity factors were not assigned to those species with "riparian" as potential habitat.

Table H-5. Changes* to Viability by Forest Plan Alternative**

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
<i>Pleurobema collina</i>	James spiny mussel	Potts Creek	C	0	+	+	+	+	+	+	+
		Cowpasture River	C	0	+	+	+	+	+	+	+
		Catawba Creek-James River	E	0	+	+	+	+	+	+	+
		Craig Creek	C	0	+	+	+	+	+	+	+
		Calfpasture River	C	0	+	+	+	+	+	+	+
		Pedlar River-James River	C	0	+	+	+	+	+	+	+
<i>Helenium virginicum</i>	Virginia sneezeweed	Back Creek-South River	B	0	+	+	0	+	+	+	+
		Naked Creek-South Fork Shenandoah River	C	0	+	+	0	+	+	+	+
<i>Helonias bullata</i>	swamp pink	Back Creek-South River	B	0	+	+	0	+	+	+	+
		Irish Creek-South River	B	0	+	+	0	+	+	+	+
<i>Scirpus ancistrochaetus</i>	northeastern bulrush	Dry River-North River	D	0	+	+	0	+	+	+	+
		Back Creek-South River	E	0	+	+	0	+	+	+	+
		Naked Creek-South Fork Shenandoah River	E	0	+	+	0	+	+	+	+
		Potts Creek	D	0	+	+	0	+	+	+	+
		Back Creek-Jackson River	E	0	+	+	0	+	+	+	+
<i>Notropis semperasper</i>	Roughhead shiner	Dunlap Creek	C	0	+	+	0	+	+	+	+
		Potts Creek	C	0	+	+	0	+	+	+	+
		Back Creek-Jackson River	B	0	+	+	0	+	+	+	+
		Wilson Creek-Jackson River	C	0	+	+	0	+	+	+	+
		Cowpasture River	B	0	+	+	0	+	+	+	+
		Catawba Creek-James River	C	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+
		Calfpasture River	C	0	+	+	0	+	+	+	+
<i>Noturus gilberti</i>	Orange-fin madtom	Cowpasture River	C	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+
<i>Hydraena maureenae</i>	Maureen's shale stream beetle	Shoemaker River-North Fork Shenandoah River	D	0	+	+	0	+	+	+	+
		Wilson Creek-Jackson River	E	0	+	+	0	+	+	+	+

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
		Cowpasture River	B	0	+	+	0	+	+	+	+
		Craig Creek	E	0	+	+	0	+	+	+	+
		Calfpasture River	D	0	+	+	0	+	+	+	+
<i>Cicindela ancocisconensis</i>	Appalachian tiger beetle	Wilson Creek-Jackson River	E	0	+	+	0	+	+	+	+
		Cowpasture River	D	0	+	+	0	+	+	+	+
<i>Sorex palustris punctulatus</i>	southern water shrew	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
		Back Creek-Jackson River	D	0	+	+	0	+	+	+	+
<i>Alasmidonta varicosa</i>	Brook floater	Gooney Run-South Fork Shenandoah River	E	0	+	+	0	+	+	+	+
		Smith Creek-North Fork Shenandoah River	E	0	+	+	0	+	+	+	+
		Stony Creek-North Fork Shenandoah River	E	0	+	+	0	+	+	+	+
<i>Elliptio lanceolata</i>	Yellow lance	Wilson Creek-Jackson River	C	0	+	+	0	+	+	+	+
		Cowpasture River	C	0	+	+	0	+	+	+	+
		Catawba Creek-James River	E	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+
		Maury River	C	0	+	+	0	+	+	+	+
		Pedlar River-James River	C	0	+	+	0	+	+	+	+
<i>Fusconaia masoni</i>	Atlantic pigtoe	Catawba Creek-James River	E	0	+	+	+	+	+	+	+
		Craig Creek	C	0	+	+	+	+	+	+	+
		Calfpasture River	E	0	+	+	+	+	+	+	+
<i>Lasmigona subviridis</i>	Green floater	Stony Creek-North Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Pedlar River-James River	C	0	+	+	0	+	+	+	+
		Tye River	C	0	+	+	0	+	+	+	+
<i>Villosa constricta</i>	Notched Rainbow	Potts Creek	C	0	+	+	0	+	+	+	+
		Cowpasture River	C	0	+	+	0	+	+	+	+
		Catawba Creek-James River	C	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
		Maury River	C	0	+	+	0	+	+	+	+
		Pedlar River-James River	C	0	+	+	0	+	+	+	+
<i>Peltigera hydrothyrta</i>	waterfan	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
		Middle River	B	0	+	+	0	+	+	+	+
		Stony Creek-North Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Cowpasture River	B	0	+	+	0	+	+	+	+
		Irish Creek-South River	A	0	+	+	0	+	+	+	+
		Tye River	A	0	+	+	0	+	+	+	+
		Buffalo River	A	0	+	+	0	+	+	+	+
<i>Ambystoma tigrinum</i>	eastern tiger salamander	Back Creek-South River	B	0	+	+	0	+	+	+	+
<i>Cambarus monongalensis</i>	A Crayfish	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
<i>Anguilla rostrata</i>	American eel	Middle River	C	0	+	+	0	+	+	+	+
		Dry River-North River	C	0	+	+	0	+	+	+	+
		Back Creek-South River	C	0	+	+	0	+	+	+	+
		Naked Creek-South Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Gooney Run-south Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Smith Creek-North Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Stony Creek-North Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Cedar Creek	A	0	+	+	0	+	+	+	+
		Craig Creek	E	0	+	+	0	+	+	+	+
		Pedlar River-James River	C	0	+	+	0	+	+	+	+
		Tye River	A	0	+	+	0	+	+	+	+
		Buffalo River	A	0	+	+	0	+	+	+	+
		Rockfish River	C	0	+	+	0	+	+	+	+
<i>Salvelinus fontinalis</i>	Brook trout	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
		South Fork South Branch Potomac River	B	0	+	-	0	+	+	+	+
		Cacapon River	B	0	+	-	0	+	+	+	+
		Dry River-North River	A	0	+	-	0	+	+	+	+
		Back Creek-South River	B	0	+	-	0	+	+	+	+
		Naked Creek-South Fork Shenandoah River	B	0	+	+	0	+	+	+	+

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
		Gooney Run-south Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Shoemaker River-North Fork Shenandoah River	B	0	+	-	0	+	+	+	+
		Smith Creek-North Fork Shenandoah River	B	0	+	-	0	+	+	+	+
		Stony Creek-North Fork Shenandoah River	A	0	+	-	0	+	+	+	+
		Cedar Creek	B	0	+	-	0	+	+	+	+
		Dunlap Creek	B	0	+	-	0	+	+	+	+
		Potts Creek	B	0	+	-	0	+	+	+	+
		Back Creek-Jackson River	A	0	+	-	0	+	+	+	+
		Wilson Creek-Jackson River	A	0	+	-	0	+	+	+	+
		Cowpasture River	A	0	+	-	0	+	+	+	+
		Catawba Creek-James River	C	0	+	-	0	+	+	+	+
		Craig Creek	B	0	+	-	0	+	+	+	+
		Calfpasture River	A	0	+	-	0	+	+	+	+
		Little Calfpasture River	B	0	+	-	0	+	+	+	+
		Maury River	B	0	+	+	0	+	+	+	+
		Irish Creek-South River	A	0	+	-	0	+	+	+	+
		Pedlar River-James River	B	0	+	+	0	+	+	+	+
		Tye River	A	0	+	+	0	+	+	+	+
		Buffalo River	B	0	+	+	0	+	+	+	+
		Rockfish River	B	0	+	+	0	+	+	+	+
<i>Cottus cf. cognatus</i>	Checkered sculpin	Cacapon River	C	0	+	-	0	+	+	+	+
<i>Aeshna canadensis</i>	Canada darner	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Aeshna tuberculifera</i>	black-tipped darner	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
		Dry River-North River	B	0	+	+	0	+	+	+	+
		Back Creek-South River	B	0	+	+	0	+	+	+	+
		Naked Creek-South Fork Shenandoah River	D	0	+	+	0	+	+	+	+
		Potts Creek	B	0	+	+	0	+	+	+	+
		Wilson Creek-Jackson River	C	0	+	+	0	+	+	+	+
		Catawba Creek-James River	E	0	+	+	0	+	+	+	+
<i>Aeshna verticalis</i>	green-striped darner	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
<i>Anax longipes</i>	comet darter	Back Creek-South River	B	0	+	+	0	+	+	+	+
<i>Calopteryx amata</i>	Superb jewelwing	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Calopteryx angustipennis</i>	Appalachian jewelwing	Stony Creek-North Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Cowpasture River	B	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+
		Maury River	C	0	+	+	0	+	+	+	+
<i>Celithemis martha</i>	Martha's penant	Back Creek-South River	B	0	+	+	0	+	+	+	+
<i>Cordulegaster diastatops</i>	delta-spotted spiketail	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
<i>Enallagma annexum</i> (AKA <i>cyathigerum</i>)	northern bluet	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Epitheca canis</i>	beaverpond baskettail	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Gomphus adelphus</i>	mustached clubtail	Cowpasture River	C	0	+	+	0	+	+	+	+
		Calfpasture River	C	0	+	+	0	+	+	+	+
<i>Gomphus quadricolor</i>	rapids clubtail	Cowpasture River	C	0	+	+	0	+	+	+	+
		Craig Creek	C	0	+	+	0	+	+	+	+
		Calfpasture River	C	0	+	+	0	+	+	+	+
<i>Ladona julia</i> (AKA <i>Libellula julia</i>)	chalk-fronted corporal skimmer	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Lanthus parvulus</i>	double-striped clubtail	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
<i>Lestes disjunctus</i>	northern spreadwing	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
		Back Creek-Jackson River	C	0	+	+	0	+	+	+	+
		Wilson Creek-Jackson River	C	0	+	+	0	+	+	+	+

Scientific Name	Common Name	Watershed	Viability outcome from Table H-3	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alts. H and I
<i>Leucorrhinia hudsonica</i>	Hudsonian whiteface	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Nehalennia irene</i>	sedge sprite	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Neurocordulia yamaskanensis</i>	stygian shadowdragon	Stony Creek-North Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Wilson Creek-Jackson River	C	0	+	+	0	+	+	+	+
<i>Rhionaeschna mutata</i> (AKA <i>Aeshna mutata</i>)	spatterdock darner	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
		Potts Creek	C	0	+	+	0	+	+	+	+
<i>Somatochlora elongata</i>	Ski-tipped emerald	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Sympetrum obtrusum</i>	white-faced meadowhawk	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Isonychia hoffmani</i>	Hoffman's Isonychia mayfly	North Fork South Branch Potomac River	B	0	+	+	0	+	+	+	+
<i>Nemotaulius hostilis</i>	a limnephilid caddisfly	North Fork South Branch Potomac River	D	0	+	+	0	+	+	+	+
<i>Clemmys guttata</i>	spotted turtle	Back Creek-South River	D	0	+	+	0	+	+	+	+
<i>Glyptemys insculpta</i>	wood turtle	South Fork South Branch Potomac River	C	0	+	+	0	+	+	+	+
		Cacapon River	B	0	+	+	0	+	+	+	+
		Shoemaker River-North Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Smith Creek-North Fork Shenandoah River	C	0	+	+	0	+	+	+	+
		Stony Creek-North Fork Shenandoah River	B	0	+	+	0	+	+	+	+
		Cedar Creek	B	0	+	+	0	+	+	+	+

* +, increased protection for aquatic and riparian habitat from current plan over the planning period
 -, decreased protection for aquatic and riparian habitat from current plan over the planning period
 0, no change in protection for aquatic and riparian habitat from current plan over the planning period

**Birds and non-TE plants and mammals were not included in this analysis because species occurrence locations were not readily available in GIS format. See Terrestrial Ecological Analysis.