

Appendix F: No Effects Determinations (Update 11 March 2022)

Appendix D is a complete list of species considered for this consultation, including the regions and forests where they occur or may occur, and the retardant application potential for those units. This appendix lists those species for which the use of aerially applied retardant would have no effect on the species or its designated critical habitat. The tables are presented by species group and summarize the rationale behind the no effect determination. Additional information is located in the project record.

Amphibians

Scientific Name	Common Name	Status	Rationale
<i>Bufo baxteri</i>	Wyoming toad	E	species does not occur on National Forest System lands
<i>Necturus alabamensis</i>	black warrior dog	E, CH	unit does not use retardant, habitat in avoidance area
<i>Plethodon netting</i>	Cheat Mountain salamander	T	unit does not use retardant
<i>Plethodon shenandoah</i>	Shenandoah salamander	E	unit does not use retardant, species not known to occur on forest lands
<i>Rana sevosus (Lithobates sevosus)</i>	dusky gopher frog	E, CH	unit does not use retardant

Birds

Scientific Name	Common Name	Status	Rationale
<i>Accipiter striatus venator</i>	Puerto Rican sharp-shinned hawk	E	unit does not use retardant
<i>Amazona vittate</i>	Puerto Rican parrot	E	unit does not use retardant
<i>Buteo platypterus brunnescens</i>	Puerto Rican broad-winged hawk	E	unit does not use retardant
<i>Calidris canutus rufa</i>	rufa red knot	T	species occurs on units that do not use retardant or with very low application potential, habitat in avoidance area
<i>Campephilus principalis</i>	ivory-billed woodpecker	E	unit does not use retardant
<i>Charadrius melodus</i>	piping plover	T, E, CH	habitat in avoidance area, retardant application not likely in habitat
<i>Charadrius nivosus nivosus</i>	western snowy plover	T, CH	unit does not use retardant
<i>Grus americana</i>	whooping crane	E	habitat in avoidance area, retardant use not likely in habitat
<i>Grus canadensis pulla</i>	Mississippi sandhill crane	E	unit does not use retardant

Scientific Name	Common Name	Status	Rationale
<i>Mycteria americana</i>	wood stork	T	species occurs on units that do not use retardant or with very low application potential, habitat in avoidance area
<i>Rallus obsoletus yumanensis</i>	Yuma Ridgeways rail	E	habitat in avoidance area, retardant use not likely in habitat
<i>Setophaga angelae</i>	elfin-woods warbler	T	unit does not use retardant
<i>Sterna dougallii</i>	roseate tern	E	habitat in avoidance area, retardant use not likely in habitat

Bivalves

Scientific Name	Common Name	Status	Rationale
<i>Alasmidonta atropurpurea</i>	Cumberland elktoe	E, CH	unit does not use retardant, habitat in avoidance area
<i>Cyprogenia cf. aberti</i>	Ouchita fanshell	PT, PCH	unit does not use retardant, habitat in avoidance area
<i>Cyprogenia stegaria</i>	fanshell	E, XN	unit does not use retardant, habitat in avoidance area
<i>Dromus dromas</i>	dromedary pearlymussel	E, XN	unit does not use retardant, habitat in avoidance area
<i>Epioblasma brevidens</i>	Cumberlandian combshell	E, XN, CH	units do not use retardant, habitat in avoidance area
<i>Epioblasma penita</i>	southern combshell	E	unit does not use retardant, habitat in avoidance area
<i>Epioblasma torulosa gubernaculum</i>	green-blossom pearlymussel	E	unit does not use retardant, habitat in avoidance area
<i>Epioblasma torulosa rangiana</i>	northern riffleshell	E	unit does not use retardant, habitat in avoidance area
<i>Fusconaia cor</i>	shiny pigtoe	E, XN	unit does not use retardant, habitat in avoidance area
<i>Hamiota australis</i>	southern sandshell	T	unit does not use retardant, habitat in avoidance area
<i>Hamiota perovalis</i>	orangenacre mucket	T, (CH)	unit does not use retardant, habitat in avoidance area
<i>Hemistema lata</i>	cracking pearlymussel	E, XN	unit does not use retardant, habitat in avoidance area
<i>Lampsilis powellii</i>	Arkansas fatmucket	T	unit does not use retardant, habitat in avoidance area
<i>Lampsilis rafinesqueana</i>	Neosho mucket	E, CH	unit does not use retardant, habitat in avoidance area
<i>Lampsilis streckeri</i>	speckled pocketbook	E	unit does not use retardant, habitat in avoidance area

Scientific Name	Common Name	Status	Rationale
<i>Lasmigona decorata</i>	Carolina heelsplitter	E, CH	unit does not use retardant, habitat in avoidance area
<i>Lemiox rimosus</i>	birdwing pearlymussel	E, XN	unit does not use retardant, habitat in avoidance area
<i>Margaritifera hembeli</i>	Louisiana pearlshell	T	unit does not use retardant, habitat in avoidance area
<i>Margaritifera marrianae</i>	Alabama Pearlshell	E	unit does not use retardant, habitat in avoidance area
<i>Plethobasus cooperianus</i>	orangefoot pimpleback	E	unit does not use retardant, habitat in avoidance area
<i>Pleurobema clava</i>	clubshell	E	unit does not use retardant, habitat in avoidance area
<i>Pleurobema collina</i>	James spiny mussel	E	unit does not use retardant, habitat in avoidance area
<i>Pleurobema furvum</i>	dark pigtoe	E, CH	unit does not use retardant, habitat in avoidance area
<i>Pleurobema plenum</i>	rough pigtoe	E, XN	unit does not use retardant, habitat in avoidance area
<i>Pleurobema strodeanum</i>	fuzzy pigtoe	T	unit does not use retardant, habitat in avoidance area
<i>Potamilus capax</i>	fat pocketbook	E	unit does not use retardant, habitat in avoidance area
<i>Potamilus inflatus</i>	inflated (Alabama) heelsplitter	T	unit does not use retardant, habitat in avoidance area
<i>Ptychobranhus jonesi</i>	southern kidneyshell	E	unit does not use retardant, habitat in avoidance area
<i>Quadrula cylindrica strigillata</i>	rough rabbitsfoot	E, (CH)	unit does not use retardant, habitat in avoidance area
<i>Quadrula fragosa</i>	winged mapleleaf	E, XN	unit does not use retardant, habitat in avoidance area
<i>Quadrula intermedia</i>	Cumberland monkeyface	E, XN	unit does not use retardant, habitat in avoidance area
<i>Quadrula sparsa</i>	Appalachian monkeyface	E, XN	unit does not use retardant, habitat in avoidance area
<i>Reginaia rotulata</i>	Round ebonyshell	E, CH	unit does not use retardant, habitat in avoidance area
<i>Villosa choctawensis</i>	Choctaw bean	E	unit does not use retardant, habitat in avoidance area
<i>Villosa fabalis</i>	rayed bean	E	unit does not use retardant, habitat in avoidance area
<i>Villosa perpurpurea</i>	purple bean	E, (CH)	unit does not use retardant, habitat in avoidance area

Crustaceans

Scientific Name	Common Name	Status	Rationale
<i>Antrolana lira</i>	Madison Cave isopod	T	unit does not use retardant, habitat in avoidance area
<i>Cambarus aculabrum</i>	Benton County Cave crayfish	E	unit does not use retardant, habitat in avoidance area
<i>Cambarus callainus</i>	Big Sandy crayfish	T	unit does not use retardant, habitat in avoidance area
<i>Cambarus zophonastes</i>	Hell Creek Cave crayfish	E	unit does not use retardant, habitat in avoidance area

Fish

Scientific Name	Common Name	Status	Rationale
<i>Chrosomus cumberlandensis</i>	blackside dace	T	unit does not use retardant, habitat in avoidance area
<i>Cottus paulus</i>	pygmy sculpin	T	unit does not use retardant, habitat in avoidance area
<i>Erimystax cahni</i>	slender chub	T	unit does not use retardant, habitat in avoidance area
<i>Etheostoma moorei</i>	yellowcheek darter	E, (CH)	unit does not use retardant, habitat in avoidance area
<i>Etheostoma osburni</i>	candy darter	E, CH	unit does not use retardant, habitat in avoidance area
<i>Etheostoma phytophilum</i>	rush darter	E, (CH)	unit does not use retardant, habitat in avoidance area
<i>Etheostoma spilotum</i>	Kentucky arrow darter	T, CH	unit does not use retardant, habitat in avoidance area
<i>Etheostoma susanae</i>	Cumberland darter	E, CH	unit does not use retardant, habitat in avoidance area
<i>Hypomesus transpacificus</i>	delta smelt	T, (CH)	Species occurs downstream of National Forest Systems lands, with dams and large reservoirs in the intervening rivers
<i>Notropis albizonatus</i>	palezone shiner	E	unit does not use retardant, habitat in avoidance area
<i>Notropis cahabae</i>	Cahaba shiner	E	unit does not use retardant, habitat in avoidance area
<i>Percina aurora</i>	pearl darter	T, CH	unit does not use retardant, habitat in avoidance area
<i>Percina pantherina</i>	leopard darter	T	unit does not use retardant, habitat in avoidance area
<i>Percina rex</i>	Roanoke logperch	E	unit does not use retardant, habitat in avoidance area

Scientific Name	Common Name	Status	Rationale
<i>Scaphirhynchus suttkusi</i>	Alabama sturgeon	E, CH	unit does not use retardant, habitat in avoidance area

Gastropods

Scientific Name	Common Name	Status	Rationale
<i>Elimia crenatella</i>	lacy elimia	T	unit does not use retardant, habitat in avoidance area
<i>Leptoxis ampla</i>	round rocksnail	T	unit does not use retardant, habitat in avoidance area
<i>Leptoxis taeniata</i>	painted rocksnail	T	unit does not use retardant, habitat in avoidance area
<i>Lepyrium showalteri</i>	flat pebblesnail	E	unit does not use retardant, habitat in avoidance area
<i>Lioplax cyclostomaformis</i>	cylindrical lioplax	E	unit does not use retardant, habitat in avoidance area
<i>Tulotoma magnifica</i>	Tulotoma snail	T	unit does not use retardant, habitat in avoidance area

Insects

Scientific Name	Common Name	Status	Rationale
<i>Boloria acrocnemata</i>	Uncompahgre fritillary	E	unit has very low retardant application potential and application not likely in alpine habitat
<i>Brychius hungerfordi</i>	Hungerfords's crawling water beetle	E	unit does not use retardant, habitat in avoidance area
<i>Euphydryas editha taylori</i>	Taylor's checkerspot	E, CH	unit does not use retardant
<i>Lycæides melissa samuelis</i>	Karner blue butterfly	E	unit does not use retardant
<i>Neonympha mitchellii</i>	Mitchell's satyr	E	unit does not use retardant
<i>Speyeria zerene hippolyta</i>	Oregon silverspot	E, CH	unit does not use retardant

Mammals

Scientific Name	Common Name	Status	Rationale
<i>Puma concolor coryi</i>	Florida panther	E	species does not occur on National Forest System lands at this time (iPaC), retardant application not likely in swampy habitat

Plants

Scientific Name	Common Name	Status	Rationale
<i>Aconitum noveboracense</i>	Northern wild monkshood	T	no retardant use
<i>Aeschynomene virginica</i>	Sensitive joint-vetch	T	suspected on National Forests in North Carolina, habitat surveyed
<i>Apios priceana</i>	Price's potato-bean	T	no retardant use
<i>Minuartia (Arenaria) cumberlandensis</i>	Cumberland sandwort	E	no retardant use
<i>Arenaria paludicola</i>	Marsh sandwort	E	Suspected on San Bernardino, ongoing surveys
<i>Asplenium scolopendrium</i> var. <i>americanum</i>	Hart's tongue fern	T	no retardant use
<i>Astragalus applegatei</i>	Applegate's milk-vetch	E	suspected on Klamath, habitat not likely occupied
<i>Astragalus lentiginosus</i> var. <i>coachella</i>	Coachella Valley milk-vetch	E	Suspected on San Bernardino, ongoing surveys
<i>Betula uber</i>	Virginia round-leaf Birch	T	no retardant use
<i>Boechera serotina</i>	shale barren rockcress	E	no retardant use
<i>Callicarpa ampla</i>	Capa rosa	E	no retardant use
<i>Cirsium loncholepis</i>	La Graciosa thistle	T, (CH)	suspected on Los Padres, ongoing surveys
<i>Cirsium pitcheri</i>	Pitcher's thistle	T	no retardant use, application not likely in habitat
<i>Clematis socialis</i>	Alabama leather flower	E	no retardant use
<i>Clitoria fragrans</i>	small sweet-scented pigeon wings	T	National Forests in Florida with very low application potential, suspected habitat surveyed
<i>Dalea foliosa</i>	Leafy prairie clover	E	no retardant use
<i>Eremalche kernensis</i> (<i>Eremalche parryi</i> ssp. <i>kernensis</i>)	Kern mallow	E	no retardant use
<i>Eugenia haematocarpa</i>	Uvillo	E	no retardant use
<i>Fremontodendron mexicanum</i>	Mexican flannelbush	E, CH	suspected on Cleveland, ongoing surveys
<i>Geocarpon minimum</i>	Geocarpon	T	suspected on Ozark, no retardant use
<i>Hexastylis naniflora</i>	Dwarf-flowered heartleaf	T	suspected habitat on National Forests in North Carolina, habitat surveyed
<i>Hymenoxys (Tetraneuris) herbacea</i>	Lakeside daisy	T	no retardant use

Scientific Name	Common Name	Status	Rationale
<i>Hymenoxys texana</i>	Texas prairie dawn-flower	E	National Forests and Grasslands in Texas with very low retardant use, not found on National Forest Service lands (near Davy Crockett).
<i>Ilex sintenisii</i>	Sintenis' holly (Cuero de Sapo)	E	no retardant use
<i>Iliamna corei</i>	Peter's mountain-mallow	E	Suspected on George Washington and Jefferson, ongoing surveys
<i>Iris lacustris</i>	Dwarf lake iris	T	no retardant use
<i>Isoetes louisianensis</i>	Louisiana quillwort	E	no retardant use
<i>Leavenworthia crassa</i>	fleshy-fruit glade cress	E	no retardant use
<i>Lepanthes eltoroensis</i>	Luquillo Mountain babyboot orchid	E	no retardant use
<i>Lepidium papilliferum</i>	Slick spot peppergrass	T	Suspected on the Boise, habitat surveyed
<i>Lesquerella (Physaria) filiformis</i>	Missouri bladder-pod	E	no retardant use
<i>Lesquerella lyrata</i>	Lyrate bladderpod	T	no retardant use
<i>Lilium occidentale</i>	Western lily	E	no retardant use
<i>Lindera melissifolia</i>	Pondberry	E	no retardant use
<i>Lomatium cookii</i>	Cook's lomatium	E	Suspected on Rogue River-Siskiyou, if located in future occurrence would be avoidance area mapped
<i>Marshallia mohrii</i>	Mohr's Barbara's buttons	T	no retardant use
<i>Rorippa (Nasturtium) gambelii</i>	Gambel's watercress	E	Potential to occur on San Bernardino, no known occurrences
<i>Orcuttia californica</i>	California Orcutt grass	E	Habitat suspected on National Forest lands
<i>Oxypolis canbyi</i>	Canby's dropwort	E	no retardant use
<i>Oxytropis campestris</i> var. <i>chartacea</i>	Fassett's locoweed	T	no retardant use
<i>Pediocactus despainii</i>	San Rafael cactus	E	Habitat suspected on Fishlake, ongoing surveys
<i>Pediocactus winkleri</i>	Winkler cactus	T	Habitat suspected on Manti-LaSal, ongoing surveys
<i>Penstemon penlandii</i>	Penland beardtongue	E	Potential to occur but not known on National Forest lands
<i>Phacelia formosula</i>	North Park phacelia	E	Potential to occur but not known on National Forest lands
<i>Plagiobothrys hirtus</i>	Rough popcorn flower	E	Suspected on Umpqua in Oregon, habitat surveyed

Scientific Name	Common Name	Status	Rationale
<i>Platanthera leucophaea</i>	Eastern prairie white-fringed orchid	T	no retardant use
<i>Pleodendron macranthum</i>	Chupacallos	E	no retardant use
<i>Ptilimnium nodosum</i>	Harperella	E	no retardant use
<i>Pseudobahia peirsonii</i>	San Joaquin adobe sunburst	E	Suspected on Sequoia, ongoing surveys
<i>Ribes echinellum</i>	Florida gooseberry	T	no retardant use
<i>Sagittaria fasciculata</i>	Bunched arrowhead	E	Suspected on National Forests in North Carolina, habitat surveyed
<i>Sagittaria secundifolia</i>	Kral's water plantain	T	no retardant use
<i>Sarracenia rubra ssp. alabamensis</i>	Alabama canebrake pitcher plant	E	no retardant use
<i>Sarracenia rubra ssp. jonesii</i>	Mountain sweet pitcher plant	E	no retardant use
<i>Sarracenia oreophila</i>	Green pitcher plant	E	no retardant use on National Forests in Alabama, suspected only on Chattahoochee and National Forests in North Carolina
<i>Schwalbea americana</i>	American chaffseed	E	no retardant use
<i>Scirpus ancistrochaetus</i>	Northeastern bulrush	E	no retardant use
<i>Scutellaria montana</i>	Large flowered skullcap	T	no retardant use
<i>Sidalcea keckii</i>	Keck's checkermallow	E, (CH)	Suspected on Sierra and Sequoia, no occurrences on or adjacent to forests
<i>Sidalcea nelsoniana</i>	Nelson's checker mallow	T	no retardant use
<i>Sisyrinchium dichotomum</i>	White irisette	E	Suspected on National Forests in North Carolina, habitat surveyed
<i>Oligoneuron (Solidago) houghtonii</i>	Houghton's goldenrod	T	no retardant use
<i>Styrax portoricensis</i>	Palo de Jazmin	E	no retardant use
<i>Ternstroemia luquillensis</i>	Palo colorado	E	no retardant use
<i>Ternstroemia subsessilis</i>	El Yunque colorado	E	no retardant use
<i>Thelypteris pilosa var. alabamensis</i>	Alabama streak-sorus fern	T	no retardant use
<i>Trillium persistens</i>	Persistent trillium	E	suspected on Francis Marion and Sumter and Chatahoochee-Oconee, ongoing surveys

Reptiles

Scientific Name	Common Name	Status	Rationale
<i>Alligator mississippiensis</i>	American alligator	TSA	species occurs on unit that does not use retardant or with very low application potential, habitat in avoidance area
<i>Clemmys muhlenbergii</i>	bog turtle	TSA	unit has very low retardant application potential and application not likely in habitat, habitat in avoidance area
<i>Epicrates inornatus</i>	Puerto Rican boa	E	unit does not use retardant
<i>Gopherus polyphemus</i>	gopher tortoise	T	units do not use retardant
<i>Graptemys flavimaculata</i>	yellow-blotched map turtle	T	unit does not use retardant, habitat in avoidance areas
<i>Pituophis melanoleucus lodingi</i>	black pinesnake	T	unit does not use retardant
<i>Pituophis ruthveni</i>	Louisiana pinesnake	T	unit does not use retardant
<i>Plestiodon (Neoseps) reynoldsi</i>	sand skink	T	unit has very low retardant application potential, application not likely in habitat
<i>Sistrurus catenatus</i>	eastern massassauga rattlesnake	T	units do not use retardant
<i>Sternotherus depressus</i>	flattened musk turtle	T	unit does not use retardant, habitat in avoidance area