

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	Scientific_Name	Common_Name	Grouping	Type	Tier	COR	Habitats	Threat_Code	Threat_Description	Threat_Long	Actions	Working_Lands	Notes
										Illegal harvesting of terrestrial animals or animal products (e.g., feathers) for personal, commercial or persecution purposes, or actions that would be interpreted as abuse or harassment of wildlife. E.g., hunters killing coyotes or birds of prey, people deliberately harming snakes out of fear, illegal collection of seabirds or shorebird egg collection, illegal wildlife trade for skins, meat or the pet trade. / /			
2	Hyla gratiosa	Barking treefrog	Amphibian	Frog	III	a	Riparian and Floodplains, Ponds	5.1.4	Poaching/Persecution of Terrestrial Animals / /		Continue maintaining "no possession" regulations (5.1.4)		
3	Plethodon sherando	Big levels salamander	Amphibian	Salamander	I	c	Forests and Woodlands, Other Subterranean,	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
4	Plethodon jacksoni	Blacksburg salamander	Amphibian	Salamander	I	c	Forests and Woodlands, Other Subterranean	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
5	Desmognathus orestes	Blue ridge dusky salamander	Amphibian	Salamander	IV	c	Forests and Woodlands, Headwater Streams	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
6	Eurycea wilderae	Blue Ridge two-lined salamander	Amphibian	Salamander	III	a	Forests and Woodlands	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
										Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors’ housing, hospitals / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). /	Avoid residential or commercial development near occupied habitat (1.1.1), Avoid "swamp logging" and other timber harvest activities that could alter the habitat and make it more favorable for other larger and more aggressive species of Ranid (i.e. northern green frog). (5.3.1)		
7	Lithobates virgatipes	Carpenter frog	Amphibian	Frog	III	a	Non-tidal Wetlands	1.1.1, 5.3.1, 8.1.3	Dense Housing and Urban Areas / Complete Removal of the Forest Cover / Aquatic Animals				
										Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors’ housing, hospitals / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5).	Avoid residential or commercial development near occupied habitat (1.1.1), Avoid "swamp logging" and other timber harvest activities that could alter the habitat and make it more favorable for other larger and more aggressive species of Ranid (i.e. northern green frog). (5.3.1)		
8	Necturus maculosus maculosus	Common mudpuppy	Amphibian	Aq. Salamander	III	a	Creeks and Rivers	1.1.1, 5.3.1, 9.3.2	Dense Housing and Urban Areas / Complete Removal of the Forest Cover / Soil Erosion, Sedimentation				
										Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / infrastructure network for transporting oil and natural has products aboveground or underground, including seismic lines, but excluding extraction sites (Threat 3.1) /	Avoid timber harvests within occupied habitat (5.3.1), Avoid oil & gas pipelines through occupied habitat (4.2.2)		
9	Plethodon punctatus	Cow Knob salamander	Amphibian	Salamander	I	a	Forests and Woodlands Other Subterranean, Riparian	5.3.1, 4.2.2,	Complete Removal of the Forest Cover / Oil and Gas Pipelines /				
										Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid clear-cutting suitable and/or occupied habitats (5.3.1)		
10	Plethodon kentucki	Cumberland plateau salamander	Amphibian	Salamander	IV	c	Forests and Woodlands	5.3.1	Complete Removal of the Forest Cover / /				
										infrastructure network for transporting oil and natural has products aboveground or underground, including seismic lines, but excluding extraction sites (Threat 3.1) / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). /	Avoid oil & gas pipelines through occupied habitat (4.2.2), Avoid timber harvests within occupied habitat (5.3.1)		
11	Plethodon dixi	Dixie Cavern salamander	Amphibian	Salamander	I	c	Forests and Woodlands, Caves and Karst, Other Subterranean	4.2.2, 5.3.1,	Oil and Gas Pipelines / Complete Removal of the Forest Cover /				

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1	Scientific_Name	Common_Name	Grouping	Type	Tier	COR	Habitats	Threat_Code	Threat_Description	Threat_Long	Actions	Working_Lands	Notes
12	Necturus punctatus	Dwarf waterdog	Amphibian	Aq. Salamander	III	a	Riparian and Floodplains, Creeks and Rivers	1.1.1, 5.3.1, 9.3.2	Dense Housing and Urban Areas / Complete Removal of the Forest Cover / Soil Erosion, Sedimentation	Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors' housing, hospitals / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5).	Avoid residential or commercial development near occupied habitat (1.1.1), Avoid "swamp logging" and other timber harvest activities that could alter the habitat and make it more favorable for other larger and more aggressive species of Ranid (i.e. northern green frog). (5.3.1)		
13	Cryptobranchus alleganiensis	Eastern hellbender	Amphibian	Aq. Salamander	I	a	Riparian and Floodplains, Creeks and Rivers, Large Rivers	5.1.4, 9.3.2, 8.4.2	Poaching/Persecution of Terrestrial Animals / Soil Erosion, Sedimentation / Viral Pathogens	Illegal harvesting of terrestrial animals or animal products (e.g., feathers) for personal, commercial or persecution purposes, or actions that would be interpreted as abuse or harassment of wildlife. E.g., hunters killing coyotes or birds of prey, people deliberately harming snakes out of fear, illegal collection of seabirds or shorebird egg collection, illegal wildlife trade for skins, meat or the pet trade. / Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5). / e.g., ranavirus in amphibians, rabies in raccoons.	Continue maintaining "no possession" regulations (5.1.4) Maintain and/or increased forested buffers along occupied habitat. (9.3.2) Continue to monitor hellbender populations for disease and other health related issues. (8.4.2)	Timbered Forested Uplands	
14	Siren intermedia	Eastern lesser siren	Amphibian	Aq. Salamander	III	a	Creeks and Rivers, Ponds, Artificial Impoundments	1.1.1, 5.3.1, 9.3.2	Dense Housing and Urban Areas / Complete Removal of the Forest Cover / Soil Erosion, Sedimentation	Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors' housing, hospitals / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5).	Avoid residential or commercial development near occupied habitat (1.1.1), Avoid "swamp logging" and other timber harvest activities that could alter the habitat and make it more favorable for other larger and more aggressive species of Ranid (i.e. northern green frog). (5.3.1)		
15	Pseudotriton montanus	Eastern mud salamander	Amphibian	Salamander	IV	a	Forests and Woodlands, Headwater Streams, Non-tidal Wetlands	9.3.2, 7.2.4,	Soil Erosion, Sedimentation / Drainage in Agricultural Environments /	Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5). / Construction and maintenance of channels that drain surface waters in agricultural environments. Excludes the use/management of culverts (Threat 7.2.3). Excludes erosion/sedimentation that are associated with the drainage system (Threat 9.3.2). /	Maintain and/or increased forested buffers along occupied habitat. Avoid the ditching and draining of isolated wetlands (i.e. seeps, springs, etc.) (9.3.2), Maintain and/or restore natural hydrologic processes within occupied and historic habitats. (7.2.4)		

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	Scientific_Name	Common_Name	Grouping	Type	Tier	COR	Habitats	Threat_Code	Threat_Description	Threat_Long	Actions	Working_Lands	Notes
16	Ambystoma tigrinum	Eastern tiger salamander	Amphibian	Salamander	I	a	Forests and Woodlands, Savannas, Ponds, Artificial Impoundments	5.1.4, 1.1.1, 7.1.2	Poaching/Persecution of Terrestrial Animals / Dense Housing and Urban Areas / Suppression in the Fire Regime	Illegal harvesting of terrestrial animals or animal products (e.g., feathers) for personal, commercial or persecution purposes, or actions that would be interpreted as abuse or harassment of wildlife. E.g., hunters killing coyotes or birds of prey, people deliberately harming snakes out of fear, illegal collection of seabirds or shorebird egg collection, illegal wildlife trade for skins, meat or the pet trade. / Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors' housing, hospitals / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Continue maintaining "no possession" regulations (5.1.4), Avoid residential or commercial development near known breeding sites. (1.1.1), When possible, restore the natural fire regime within occupied areas (7.1.2)	Timbered Forested Uplands	
17	Siren lacertina	Greater siren	Amphibian	Aq. Salamander	IV	a	Creeks and Rivers, Ponds, Non-tidal Wetlands, Artificial Impoundments	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid "swamp logging" and other timber harvest activities within the riparian area that could increase siltation into waterways. (5.3.1)		
18	Aneides aeneus	Green salamander	Amphibian	Salamander	III	b	Forests and Woodlands, Cliff and Talus	5.3.2, 6.1.3,	Partial Removal of the Forest Cover / Recreational Use of Cliffs and Rock Faces /	Partial cutting of the forest leaving a certain amount of cover. E.g., shelterwood cutting, selection cutting. / e.g., rock climbing, hang-gliding /	Avoid removal of vegetation adjacent to suitable and/or occupied habitats (5.3.2), Avoid rocking climbing and similar recreational activities that might impact suitable habitat (6.1.3)		
19	Pseudacris ocularis	Little grass frog	Amphibian	Frog	IV	a	Grasslands, Shrublands, Savannas, Ponds, Non-tidal Wetlands, Artificial Impoundments	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Restore the natural fire regime within occupied areas (7.1.2), Maintain and/or develop open grassy habitats within occupied areas. Restore the natural fire regime (7.3.2)		
20	Ambystoma mabeei	Mabee's salamander	Amphibian	Salamander	II	a	Forests and Woodlands	7.3.2, 1.1.1, 7.1.2	Vegetation Succession / Dense Housing and Urban Areas / Suppression in the Fire Regime	Natural vegetation succession causing habitat loss for species of early successional habitats. / Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors' housing, hospitals / Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures.	Maintain and/or develop open grassy habitats within occupied areas (7.3.2), Avoid residential or commercial development near occupied habitat (1.1.1), When possible, restore the natural fire regime within occupied areas (7.1.2)	Timbered Forested Uplands	
21	Stereochilus marginatus	Many-lined salamander	Amphibian	Salamander	IV	a	Creeks and Rivers, Ponds, Non-tidal Wetlands, Artificial Impoundments	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid "swamp logging" and other timber harvest activities within the riparian area that could increase siltation into waterways. (5.3.1)		
22	Ambystoma talpoideum	Mole salamander	Amphibian	Salamander	II	a	Forests and Woodlands, Ponds	5.3.1, 8.1.3, 1.1.2	Complete Removal of the Forest Cover / Aquatic Animals / Low-Density Housing Areas	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / / Extensive development that is residential (including resorts), where the spacing allows ecological functions to continue to some extent. This type of development is seen particularly in rural and agroforestry areas. E.g., residential buildings in agricultural areas, cottages, vacation homes near water bodies, ecotourism lodges, fishing resorts, backcountry ski lodges.	Avoid timber harvests within occupied habitat and maintain sufficient forested buffer (5.3.1), Re-create semi-permanent, forested, fishless, breeding ponds and pools within the range of existing populations (8.1.3), Pursue the protection of priority populaitons and landowner education campaign (1.1.2)	Timbered Forested Uplands	

	A	B	C	D	E	F	G	H	L	P	T	U	V
1	Scientific_Name	Common_Name	Grouping	Type	Tier	COR	Habitats	Threat_Code	Threat_Description	Threat_Long	Actions	Working_Lands	Notes
23	Pseudacris kalmi	New Jersey chorus frog	Amphibian	Frog	IV	c	Grasslands, Shrublands, Savannas, Artificial Impoundments	7.3.2	Vegetation Succession / /	Natural vegetation succession causing habitat loss for species of early successional habitats. / /	Maintain and/or develop open grassy habitats within occupied areas (7.3.2). Restore the natural fire regime (1.2).		
24	Desmognathus organi	Northern pygmy salamander	Amphibian	Salamander	III	c	Forests and Woodlands	5.3.1, 11.1.1,	Complete Removal of the Forest Cover / Changes in Vegetation Communities /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Avoid timber harvests in high elevation spruce-fir habitats (5.3.1), Reduce greenhouse gas emissions (11.1.1)		
25	Anaxyrus quercicus	Oak toad	Amphibian	Frog	II	a	Savannas, Ponds	7.1.2, 5.3.1, 7.2.5	Suppression in the Fire Regime / Complete Removal of the Forest Cover / Drainage in Forest Environments	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Construction and maintenance of channels that drain surface waters in forest environments. Excludes erosion/sedimentation that is associated with this drainage system (Threat 9.3.2).	Restore the natural fire regime within occupied areas (7.1.2), Avoid large scale timber harvests within occupied habitat, Maintain and/or restore natural hydrologic processes within occupied and historic habitats. (7.2.5)		
26	Plethodon hubrichti	Peaks of Otter salamander	Amphibian	Salamander	I	a	Other Subterranean,	5.3.1, 11.1.1,	Complete Removal of the Forest Cover / Changes in Vegetation Communities /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Major changes in an ecosystem resulting in changes to vegetation communities distinguished from natural vegetation succession, which may threaten open-country species (Threat 7.3.2). E.g., migration of deciduous trees towards the boreal forest, rising sea levels, desertification, thawing permafrost (in tundra), coral bleaching. /	Avoid timber harvests within occupied habitat (5.3.1), Reduce greenhouse gas emissions (11.1.1)		
27	Plethodon virginia	Shenandoah Mountain salamander	Amphibian	Salamander	III	c	Forests and Woodlands	5.3.1, 8.1.1, 1.1.1	Complete Removal of the Forest Cover / Terrestrial Animals / Dense Housing and Urban Areas	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / / Medium- to high-density development for residential use and buildings for related services. Allows very little to no maintenance of ecological functions. E.g., urban areas, suburbs, villages, schools, libraries, seniors’ housing, hospitals	Avoid timber harvests within occupied habitat (5.3.1), Continue treatments to control hemlock woolly adelgid infestations (8.1.1), Avoid residential and commercial development within occupied habitat (1.1.1)		
28	Plethodon shenandoah	Shenandoah salamander	Amphibian	Salamander	I	c	Forests and Woodlands	11.3.1, 11.1.1, 11.4.4	Changes in pH of habitats / Recreational Trails / Terrestrial Animals	e.g., ocean acidification / Creation of trails in parks (see Parks and sports fields, Threat 1.3.1) or areas outside the urban environment for walking and recreation. Includes the creation and maintenance of trials in recreational parks as well as private properties. Excludes activities that are related to the use of the trail (e.g., hiking, Threat 6.1.2). /	Reduce greenhouse gas emissions (11.3.1), Reduce greenhouse gas emissions (11.1.1), Reduce greenhouse gas emissions (11.4.4)		
29	Desmognathus marmoratus	Shovel-nosed salamander	Amphibian	Salamander	III	a	Headwater Streams, Creeks and Rivers	9.3.2, 9.5.1,	Soil Erosion, Sedimentation / Acid Rain /	Erosion and sedimentation that are due to agricultural or silvicultural activities, regardless of the presence of local drainage systems (threat 7.2.4 and 7.2.5). / /	Maintain and/or increased forested buffers along occupied habitat(9.3.2), Eliminate or drastically reduce the use of fossil fuels (9.5.1),		
30	Pseudacris nigrita	Southern chorus frog	Amphibian	Frog	IV	c	Grasslands, Shrublands, Savannas, Arificial Impoundments	7.1.2, 7.3.2,	Suppression in the Fire Regime / Vegetation Succession /	Intervention aimed at preventing and putting out forest fire (fire management). E.g., putting out forest fires, controlled burning, creating firebreaks and trenches, and other measures. / Natural vegetation succession causing habitat loss for species of early successional habitats. /	Restore the natural fire regime within occupied areas (7.1.2)Maintain and/or develop open grassy habitats within occupied areas. Restore the natural fire regime. (7.3.2)		

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1	Scientific_Name	Common_Name	Grouping	Type	Tier	COR	Habitats	Threat_Code	Threat_Description	Threat_Long	Actions	Working_Lands	Notes
31	Desmognathus auriculatus	Southern dusky salamander	Amphibian	Salamander	III	b	Forests and Woodlands	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid "swamp logging" and other timber harvest activities within the riparian area that could increase siltation into waterways. (5.3.1)		
32	Plethodon ventralis	Southern zigzag salamander	Amphibian	Salamander	II	c	Forests and Woodlands, Non-tidal Wetlands	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
33	Plethodon welleri	Weller's salamander	Amphibian	Salamander	II	b	Forests and Woodlands, Other Subterranean	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
34	Plethodon wehrlei	Werhle salamander	Amphibian	Salamander	III	b	Forests and Woodlands	5.3.1	Complete Removal of the Forest Cover / /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / /	Avoid timber harvests within occupied habitat (5.3.1)		
35	Plethodon pauleyi	Yellow-spotted woodland salamander	Amphibian	Salamander	I	c	Forests and Woodlands, Other Subterrenean,	4.1.1	Roads / /	/ /	Identify occupied habitats and inform VDOT of locations as to avoid and/or minimize impacts to occupied sites. (4.1.1)		
36	Plethodon yonahlossee	Yonahlossee salamander	Amphibian	Salamander	IV	c	Forests and Woodlands	5.3.1, 5.1.4,	Complete Removal of the Forest Cover / Poaching/Persecution of Terrestrial Animals /	Cutting removing the majority of the forest cover. E.g., clear-cutting and related cuts (CT, CRS, CPRS, CPHRS, CPPTM). / Illegal harvesting of terrestrial animals or animal products (e.g., feathers) for personal, commercial or persecution purposes, or actions that would be interpreted as abuse or harassment of wildlife. E.g., hunters killing coyotes or birds of prey, people deliberately harming snakes out of fear, illegal collection of seabirds or shorebird egg collection, illegal wildlife trade for skins, meat or the pet trade. /	Avoid timber harvests within occupied habitat (5.3.1), Continue maintaining "no possession" regulations (5.1.4)		