

Appendix C

Rare Species By Tennessee Watersheds (Within the Project Area)



Huc 8 and Huc 12 are hydrologic unit codes, which is a numbering convention for watersheds in the U.S.

Huc 8	Huc 8 Name	Huc 12	Huc 12 Name	Type	Category	Scientific Name	Common Name	Life Span	Length	Weight	Sex	Age	Notes	Notes
6010201	Ft. Loudoun/Watts Bar	60102010208	Turkey Creek	Vascular Plant	Flowering Plant	<i>Lathyrus palustris</i>	Marsh Pea	G5	S1	--	--	S	Wet Woods & Marshes	Possible
6010201	Ft. Loudoun/Watts Bar	60102010208	Turkey Creek	Vascular Plant	Flowering Plant	<i>Spiranthes odorata</i>	Ladies'-tresses	G5	S1	--	--	E	Swamps, Pond Margins	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Cyprogonia stegaria</i>	Fanshell	G1Q	S1	LE	LE	E	Medium to large streams and rivers with coarse sand and gravel substrates.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Dromus dromas</i>	Pearl-mussel	G1	S1	LE	LE	E	Medium-large rivers with riffles and shoals w/ relatively firm rubble, gravel, and stable substrates; Tennessee & Cumberland systems.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Obovata retusa</i>	Ring Pink	G1	S1	LE	LE	E	Large rivers in gravel and sand bars; Tennessee & Cumberland river watersheds; many historic locations currently inundated.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Fusconia cuneolus</i>	Fine-eyed Pigtoe	G1	S1	LE	LE	E	Riffles of fords and shoals of mod gradient streams in firm cobble and gravel substrates; middle & upper Tennessee River watershed.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>Euphbia schreberi</i>	Schreber's Aster	G4	S1	--	--	S	Meadow Woods & Seepage Slopes	Upland
6010201	Ft. Loudoun/Watts Bar	60102010208	Turkey Creek	Vascular Plant	Flowering Plant	<i>Monotropa odorata</i>	Sweet Pinesap	G3	S2	--	--	T	Piney Woods	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Fish	<i>Cyprinella elongatus</i>	Blue Sucker	G3G4	S2	--	--	T	Switch waters over firm substrates in big rivers; Aquatic	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Mammal	<i>Sorex dispar</i>	Shrew	G4	S2	--	--	D	Mountainous, forested areas with loose talus; east Tennessee.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Mammal	<i>Myotis grisescens</i>	Gray Myotis	G3	S2	LE	LE	E	Cave obligate year-round; frequents forested areas; migratory.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Lampsilis abrupta</i>	Pink Mucket	G2	S2	LE	LE	E	Generally a large river species, preferring sand/gravel or rocky substrates with moderate currents; Tennessee & Cumberland river systems.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Quadrula cylindrica</i>	Rough Rabbitfoot	G3G4T2	S2	LE	LE	E	Small-medium sized rivers, in clear, shallow riffles with sand/gravel substrates; Tenn. & Cumberland river systems; upland form.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>io fluviatilis</i>	Spiry River Snail	G2	S2	--	--	--	Shallow waters of shoals that are rapid to moderate and well-oxygenated; Tennessee River & main tributaries; E Tennessee.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>Diervilla lonicera</i>	Honeysuckle	G5	S2	--	--	T	Rocky Woodlands And Bluffs	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>Lonicera dioica</i>	Honeysuckle	G5	S2	--	--	S	Mountain Woods And Thickets	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>Fothergilla major</i>	Small-headed	G3	S2	--	--	T	Rocky Slopes And River Banks	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>Delphinium</i>	Rush	G5	S2	--	--	S	Seeps And Wet Bluffs	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	<i>exaltatum</i>	Tall Larkspur	G3	S2	--	--	E	Glades And Barrens	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Fish	<i>Carpiodes velifer</i>	Highfin Carpsucker	G4G5	S2S3	--	--	D	Large rivers, mostly in Tennessee River drainage.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Cumberlandia monodonta</i>	Spectaclecase	G3	S2S3	LE	LE	--	Medium to large rivers; in substrates from mud and sand to gravel, cobble, and boulders; Cumberland and Tennessee river systems.	Aquatic
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Invertebrate Animal	Mollusc	<i>Pleurobassus cyphus</i>	Sheepnose	G3	S2S3	LE	LE	--	Large to medium-sized rivers, in riffles and coarse sand/gravel substr.; TN & Cumberland river systems incl KY Reservoir, W Uplands & Rim.	Aquatic

Note: A description of federal and state ranks and status codes follows this list.

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Huc 8	Huc 8 Name	Huc 12	Huc 12 Name	Type	Category	Scientific Name	Common Name	Global Rank	State Rank	Fed Status	State Status	Habitat Description	Wetland Flag
6010201	R. Loudoun/Watts Bar	60102010208	Turkey Creek	Vertebrate Animal	Fish	Hemibarbus flammeus	Flame Chub	G3	S3	--	D	Springs and spring-fed streams with lush aquatic vegetation; Tennessee & middle Cumberland river watersheds.	Aquatic
6010201	R. Loudoun/Watts Bar	60102010207	Ten Mile Creek	Vascular Plant	Flowering Plant	Hydrophyllum virginianum	Waterleaf	G5	S3	--	T	Alluvial Woods	Possible
6010207	Lower Clinch River	60102070202	Beaver Creek Lower	Vertebrate Animal	Bird	Tyto alba	Barn Owl	G5	S3	--	D	Open and partly open country, often around human habitations; farms.	Upland
6010207	Lower Clinch River	60102070202	Beaver Creek Lower	Vascular Plant	Flowering Plant	Aureolaria patula	Spreading False-foxglove	G3	S3	--	S	Oak Woods And Edges	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Bird	Tyto alba	Barn Owl	G5	S3	--	D	Open and partly open country, often around human habitations; farms.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Bird	Ophibiscus attenuatus	Eastern Slender Glass Lizard	G5	S3	--	D	Dry upland areas including brushy, cut-over woodlands and grassy fields; nearby statewide but obscure; fossorial.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Reptile	Pituophis melanoleucus melanoleucus	Northern Pine Snake	G4T4	S3	--	T	well-drained sandy soils in pine/oak woods; dry mountain ridges; E portions of west TN, E to lower elev of the Appalachians.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Plant; Gymnosperm	Thuja occidentalis	Northern White Cedar	G5	S3	--	S	Calcareous Rocky Seeps, Cliffs	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Cimicifuga rubrifolia	Bugbane	G3	S3	--	T	Rich Woods	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Juglans cinerea	Butternut	G4	S3	--	T	Rich Woods And Hollows	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Aureolaria patula	Spreading False-foxglove	G3	S3	--	S	Oak Woods And Edges	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Lilium canadense	Canada Lily	G5	S3	--	T	Rich Woods And Seeps	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Lilium michiganense	Michigan Lily	G5	S3	--	T	Swamps And Open Wet Woods	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Bird	Dendroica cerulea	Cerulean Warbler	G4	S3B	--	D	Mature deciduous forest, particularly in floodplains or mesic conditions.	Upland
6010207	Lower Clinch River	60102070202	Beaver Creek Lower	Vascular Plant	Flowering Plant	Panax quinquefolius	American Ginseng	G3G4	S3S4	--	S-CE	Rich Woods	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vascular Plant	Flowering Plant	Panax quinquefolius	American Ginseng	G3G4	S3S4	--	S-CE	Rich Woods	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Napaeozapus insignis	Woodland Jumping Mouse	G5	S4	--	D	Deciduous and coniferous forests with herbaceous groundcover; middle and east Tennessee.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Sorex cinereus	Cinereus Shrew	G5	S4	--	D	Rich woodlands of many types; open fields; middle and east Tennessee.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Sorex longirostris	Southeastern Shrew	G5	S4	--	D	Various habitats including wet meadows, damp woods, and uplands; statewide.	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Sorex fumeus	Smoky Shrew	G5	S4	--	D	Damp wooded areas including coniferous or mixed forests; middle and east Tennessee.	Upland
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Synaptomys cooperi	Southern Bog Lemming	G5	S4	--	D	Marshy meadows, wet bays, & rich upland forests.	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Vertebrate Animal	Mammal	Zapus hudsonius	Meadow Jumping Mouse	G5	S4	--	No	Open grassy fields often abundant in thick vegetation near water bodies; statewide.	Possible
6010207	Lower Clinch River	60102070202	Beaver Creek Lower	Other (Ecological)	Heron Roostery	Carver alpeicola	Foxtail Sedge	G5	SH	--	W-H	Wet Meadows And Swamps	Possible
6010207	Lower Clinch River	60102070404	Clinch River-Conner Creek	Other (Ecological)	Heron Roostery	Heron roostery	Heron Roostery	G4R	SNR	--	--	--	--

Note: A description of federal and state ranks and status codes follows this list.

Description of Federal and State Ranks & Status Codes

GLOBAL RANK - The global or world-wide rank of a species which is a non-legal rank indicating the rarity and vulnerability of a species

G1	Extremely rare and critically imperiled in the world with five or fewer occurrences, or very few remaining individuals, or because of some special condition where the species is particularly vulnerable to extinction
G2	Very rare and imperiled within the world, six to twenty occurrences, or few remaining individuals, or because of some factor(s) making it vulnerable to extinction
G3	Rare and uncommon in its range or found locally in a restricted range, generally from 21-100 occurrences
G4	Widespread, abundant, and apparently secure globally, but with cause for long-term concern
G5	Demonstrably widespread and secure globally
GH	Of historical occurrence throughout its range, e.g. formally part of the established biota, with the expectation that it may be rediscovered
GU	Can not be ranked using available information
GX	Believed to be extirpated throughout its range
HYB	Hybrid within its range in Tennessee
SSYN	Synonym for another species
_Q	Questionable taxonomy (GRANKs only)
_T#	Subspecific taxon rank (GRANKs only)

STATE RANK - The state rank of a species in Tennessee. Like the G_rank this is a non-legal rank indicating the rarity and vulnerability of a species at the state level.

S1	Extremely rare and critically imperiled in the state with five or fewer occurrences, or very few remaining individuals, or because of some special condition where the species is particularly vulnerable to extinction
S2	Very rare and imperiled within the state, six to twenty occurrences, or few remaining individuals, or because of some factor(s) making it vulnerable to extinction
S3	Rare and uncommon in the state, from 21-100 occurrences
S4	Widespread, abundant, and apparently secure within the state, but with cause for long-term concern
S5	Demonstrably widespread and secure in the state
SH	Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered
SU	Can not be ranked using available information
SX	Believed to be extirpated from the state
S#S#	Denotes a “range rank” because the rarity of the species is uncertain (e.g. S1S3)
S?, S_?	Unranked at this time or rank uncertain
SE	Exotic species established in the state
SE#	Exotic numeric (e.g. the Asian clam <i>Corbicula fluminea</i> would be SE5)
SP	Potentially occurring in Tennessee, but not yet documented by DNH
_N	Occurs in Tennessee in a non-breeding status (mostly applies to vertebrates)

Description of Federal and State Ranks & Status Codes

_B	Breeds in Tennessee
SA	Accidental or casual in the state (several birds)
SR	Reported from the state, but insufficient data to assign rank
SRF	Reported falsely from the state
HYB	Hybrid within its range in Tennessee
SSYN	Synonym for another species
_Q	Questionable taxonomy (GRANKs only)
_T#	Subspecific taxon rank (GRANKs only)

FEDERAL STATUS - The federal listing under the U.S. Endangered Species Act

LE, Listed Endangered	Taxon is threatened by extinction throughout all or a significant portion of its range
E/SA, Endangered by Similarity of Appearance	Taxon is treated as an endangered species because it may not be easily distinguished from a listed species
LT, Listed Threatened	Taxon is likely to become an endangered species in the foreseeable future
T/SA, Threatened by Similarity of Appearance	Taxon is treated as a threatened species because it may not be easily distinguished from a listed species
PE, Proposed Endangered	Taxon proposed for listing as endangered
PT, Proposed Threatened	Taxon proposed for listing as threatened
C, Candidate species***	Taxon for which the USFWS has sufficient information to support proposals to list the species as threatened or endangered, and for which the Service anticipates a listing proposal
(PS) Partial Status (based on taxonomy)	Taxon which is listed in part of its range, but for which Tennessee <u>subspecies</u> are not included in the Federal designation
(PS:status) Partial Status (based on political boundaries)	Taxon which is listed in part of its range, but for which Tennessee <u>populations</u> are not included in the Federal designation e.g. (PS:LE)
(XN) Non-essential experimental population in portion of range	Taxon which has been introduced or re-introduced in an area from which it has been extirpated, and for which certain provisions of the Act may not apply

Description of Federal and State Ranks & Status Codes

STATE STATUS -The legal listing in Tennessee

E, Endangered	Any species or subspecies whose prospects of survival or recruitment within the state are in jeopardy or are likely to become so within the foreseeable future
T, Threatened	Any species or subspecies that is likely to become an endangered species within the foreseeable future
D, Deemed in Need of Management	Any species or subspecies of nongame wildlife which the executive director of the TWRA believes should be investigated in order to develop information relating to populations, distribution, habitat needs, limiting factors, and other biological and ecological data to determine management measures necessary for their continued ability to sustain themselves successfully. This category is analogous to "Special Concern."
S, Special Concern	Any species or subspecies of plant that is uncommon in Tennessee, or has unique or highly specific habitat requirements or scientific value and therefore requires careful monitoring of its status.

Additional Modifiers for Plants

PE, Proposed Endangered	Any species or subspecies of plant nominated by the Scientific Advisory Committee to be added to the list of Tennessee's endangered species. After approval by the commissioner of the Dept. of Environment & Conservation and the concurrence of the commissioner of Agriculture, these plants will formally become State endangered.
PT, Proposed Threatened	Any species or subspecies of a plant nominated by the Scientific Advisory Committee to be added to the list of Tennessee threatened species. After a public hearing, these plants will formally become State threatened.
E-PT, Endangered-Proposed Threatened	Species which are currently on the state list of endangered plants, but are proposed by the Scientific Advisory Committee to be down-listed to threatened. After approval by the commissioner of the Dept. of Environment & Conservation and the concurrence of the commissioner of Agriculture, these plants will formally become State threatened.
E-PS, Endangered Proposed Special Concern	Species which are currently on the state list of endangered plants, but are proposed by the Scientific Advisory Committee to be down-listed to special concern. After approval by the commissioner of the Dept. of Environment & Conservation and the concurrence of the commissioner of Agriculture, these plants will formally become State special concern.
T-PE, Threatened Proposed Endangered	Species which are currently on the state list of threatened plants, but are proposed by the Scientific Advisory Committee to be listed on the state endangered list. After approval by the commissioner of the Dept. of Environment & Conservation and the concurrence of the commissioner of Agriculture, these plants will formally become State endangered.

Description of Federal and State Ranks & Status Codes

T-PS, Threatened Proposed Special Concern	Species which are currently on the state list of threatened plants, but are proposed by the Scientific Advisory Committee to be down-listed to special concern. After a public hearing, these plants will formally become State special concern.
P, Possibly Extirpated	Species or subspecies that have not been seen in Tennessee for the past 20 years. May no longer occur in Tennessee.
C, Commercially Exploited	Due to large numbers being taken from the wild and propagation or cultivation insufficient to meet market demand. These plants are of long-term conservation concern, but the Division of Natural Heritage does not recommend they be included in the normal environmental review process.