

Appendix F

Fish and Wildlife

Table F-1 Representative Wildlife Species in the Project Region

Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Mammals				
Opossum	<i>Didelphis virginiana</i>	R	U	X
Armadillo	<i>Dasypus novemcinctus</i>	R	U	X
Eastern mole	<i>Scalopus aquaticus</i>	R	U	X
Least shrew	<i>Cryptotis parva</i>	R	U	
Eastern short-tailed shrew	<i>Blarina carolinensis</i>	R	U	
Least shrew	<i>Cryptotis parva</i>	R	U	
Big brown bat	<i>Eptesicus fuscus</i>	R	U	
Silver-haired bat	<i>Lasionycteris noctivagans</i>	R	U	
Hoary bat	<i>Lasiurus cinereus</i>	R	U	
Red bat	<i>L. borealis</i>	R	U	
Seminole bat	<i>L. seminoleus</i>	R	U	
Hoary bat	<i>L. cinereus</i>	R	U	
Silver-haired bat	<i>Lasionycteris noctivagans</i>	R	M-A	
Evening bat	<i>Nycticeius humeralis</i>	R	U	
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>	R	U	
Eastern pipistrelle	<i>Pipistrellus subflavus</i>	R	U	
Raccoon	<i>Procyon lotor</i>	R	U	X
Ringtail	<i>Bassariscus astutus</i>	R	U	
Long-haired weasel	<i>Mustela frenata</i>	R	B	
Mink	<i>M. vison</i>	R	B	
River otter	<i>Lutra canadensis</i>	R	A	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Eastern spotted skunk	<i>Spilogale putorius</i>	R	G	
Striped skunk	<i>Mephitis mephitis</i>	R	U	X
Gray fox	<i>Urocyon cinereoargenteus</i>	R	M	X
Red Fox	<i>Vulpes vulpes</i>	R	U	
Coyote	<i>Canis latrans</i>	R	U	X
Bobcat	<i>F. rufus</i>	R	U	X
Cougar	<i>Felis concolor</i>	R	U	
Southern flying squirrel	<i>Glaucomys volans</i>	R	M	
Fox squirrel	<i>Sciurus niger</i>	R	U	X
Gray squirrel	<i>S. carolinensis</i>	R	B	X
Louisiana pocket gopher	<i>Geomys breviceps</i>	R	U	X
Hispid pocket mouse	<i>Perognathus hispidus</i>	R	G	
Beaver	<i>Castor canadensis</i>	R	A	X
Marsh rice rat	<i>Oryzomys palustris</i>	R	G/A	
Fulvous harvest mouse	<i>Reithrodontomys fulvescens</i>	R	G	X
Eastern harvest mouse	<i>R. humulis</i>	R	G	
Pygmy mouse	<i>Baiomys taylori</i>	R	G	
Deer mouse	<i>Peromyscus maniculatus</i>	R	M	
White-footed mouse	<i>P. leucopus</i>	R	M	X
Cotton mouse	<i>P. gossypinus</i>	R	M	X
Golden mouse	<i>Ochrotomys nutalli</i>	R	M	X
Cotton rat	<i>Sigmodon hispidus</i>	R	G	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Woodland vole	<i>Microtus pinetorum</i>	R	G-M	
Eastern woodrat	<i>Neotoma floridana</i>	R	M	X
House mouse	<i>Mus musculus</i>	R	D	
Norway rat	<i>Rattus norvegicus</i>	R	D	
Roof rat	<i>R. rattus</i>	R	D	
Nutria	<i>Myocaster coypus</i>	R	A	
Black-tailed jackrabbit	<i>Lepus californicus</i>	R	G	X
Eastern cottontail	<i>Sylvilagus floridanus</i>	R	G	X
Swamp rabbit	<i>S. aquaticus</i>	R	B	X
Feral hog	<i>Sus scrofa</i>	R	U	X
White-tailed deer	<i>Odocoileus virginianus</i>	R	U	X
Birds				
Common loon	<i>Gavia immer</i>	M	A	
Eared grebe	<i>Podiceps nigricollis</i>	Y	A	
Horned grebe	<i>P. auritus</i>	M	A	
Pied-billed grebe	<i>P. podiceps</i>	Y	A	
Anhinga	<i>Anhinga anhinga</i>	S	A	
Cormorant	<i>Phalacrocorax</i> sp.	Y	A	X
Least bittern	<i>Ixobrychus exilis</i>	S	A-R	
American bittern	<i>Botaurus lentiginosus</i>	Y	A-R	
Black-crowned night heron	<i>Nysticorax</i> sp.	S	A-R	
Yellow-crowned night heron	<i>N. violacea</i>	S	A-R	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Green-backed heron	<i>Butorides striatus</i>	S	A-R	X
Tricolored heron	<i>Egretta tricolor</i>	M	A-R	
Little blue heron	<i>E. caerulea</i>	S	A-R	
Snowy egret	<i>E. thula</i>	S	A-R	
Cattle egret	<i>Bubulcus ibis</i>	Y	R-G	X
Great egret	<i>Casmerodius albus</i>	Y	A-R	X
Great blue heron	<i>Ardea herodias</i>	Y	A-R	X
White ibis	<i>Eudocimus albus</i>	M	R-A	
White-faced Ibis	<i>Plegadis chihi</i>	S	R-A	
Roseate spoonbill	<i>Ajaia ajaja</i>	M	R-A	
Sandhill crane	<i>Grus canadensis</i>	W	A-R	
Canada goose	<i>Branta canadensis</i>	W	A-R-G	X
White-fronted goose	<i>Anser albifrons</i>	M	A-R-G	
Snow goose	<i>Chen caerulescens</i>	M	A-R-G	X
Mallard	<i>Anas platyrhynchos</i>	W	A	X
Gadwall	<i>A. stepera</i>	W	A	X
Green-winged teal	<i>A. crecca</i>	W	A	
American wigeon	<i>A. americana</i>	W	R-A	X
Northern pintail	<i>A. acuta</i>	W	A	X
Northern shoveler	<i>A. clypeata</i>	W	A	
Blue-winged teal	<i>A. discors</i>	W	A	
Cinnamon teal	<i>A. cyanoptera</i>	W	A	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Ruddy duck	<i>Oxyura jamaicensis</i>	W	A	
Fulvous whistling duck	<i>Dendrocygna bicolor</i>	Y	A	
Black-bellied whistling duck	<i>D. autumnalis</i>	Y	U	
Wood duck	<i>Aix sponsa</i>	W	A	X
Canvasback	<i>Aythya valisineria</i>	W	A	
Redhead	<i>A. americana</i>	W	A	
Ring-necked duck	<i>A. collaris</i>	W	A	
Lesser scaup	<i>A. affinis</i>	W	A	
Greater scaup	<i>A. marila</i>	M	A	
Bufflehead	<i>Bucuphala albeola</i>	W	A	
Common goldeneye	<i>B. clangula</i>	W	A	
Ruddy duck	<i>Oxyura jamaicensis</i>	M	A	
Common merganser	<i>Mergus merganser</i>	W	A	
Red-breasted merganser	<i>M. serrator</i>	W	A	
Hooded merganser	<i>Lophodyts cucullatus</i>	W	A	X
King rail	<i>Rallus elegans</i>	S	R	
Virginia rail	<i>R. limicola</i>	M	R	
Sora	<i>Porzana carolina</i>	W	R	
Yellow rail	<i>Coturnicopos noveboracensis</i>	M	R	
Purple gallinule	<i>Porphyryula martinica</i>	S	R-A	
Common moorhen	<i>Gallinula chloropus</i>	S	A	
American coot	<i>Fulica americana</i>	Y	A	

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American avocet	<i>Recurvirostra americana</i>	M	A-R	
Black-necked stilt	<i>Himantopus mexicanus</i>	M	R	
Killdeer	<i>Charadrius vociferus</i>	Y	R-G	X
Long-billed curlew	<i>Numenius americanus</i>	W	R	
Willet	<i>Catoptrophorus semipalmat</i>	M	R	
Wilson's phalarope	<i>Phalaropus tricolor</i>	M	R	
Greater yellowlegs	<i>Tringa melanoleuca</i>	W	R	
Lesser yellowlegs	<i>T. flavipes</i>	W	R	
Western sandpiper	<i>Calidris mauri</i>	W-M	R	
Spotted sandpiper	<i>Actitis macularia</i>	W	R	
Short-billed dowitcher	<i>Limnodromus griseus</i>	M	R	
Long-billed dowitcher	<i>L. scolopaceus</i>	M	R	
Common snipe	<i>Gallinago gallinago</i>	W	R-S	
American woodcock	<i>Scolopax minor</i>	W	S	X
Least sandpiper	<i>Calidris minutilla</i>	W	R	
Ring-billed gull	<i>Larus delawarensis</i>	M-W	A	
Herring gull	<i>L. argentatus</i>	M-W	A	
Franklin's gull	<i>L. pipixcan</i>	M	A	
Forster' s tern	<i>Sterna forsteri</i>	M	A	
Least tern	<i>S. antillarum</i>	S	A	
Turkey vulture	<i>Cathartes aura</i>	Y	U	X
Black vulture	<i>Coragyps atratus</i>	Y	U	X

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Mississippi kite	<i>Ictinia mississippiensis</i>	S	S	
Northern harrier	<i>Circus cyaneus</i>	W	R-G	X
Sharp-shinned hawk	<i>Accipiter striatus</i>	W	S	X
Cooper's hawk	<i>A. cooperii</i>	Y	R-S	X
Red-shoulder hawk	<i>Buteo lineatus</i>	Y	R-S	X
Red-tailed hawk	<i>B. jamaicensis</i>	Y	U	X
Swainson's hawk	<i>B. swainsoni</i>	S	U	X
Broad-winged hawk	<i>B. platypterus</i>	M	W	
Rough-legged hawk	<i>B. lagopus</i>	W	U	
American kestrel	<i>Falco sparverius</i>	Y	U	X
Merlin	<i>F. columbarius</i>	W	U	
Bobwhite quail	<i>Colinus virginiana</i>	Y	U	X
Wild turkey	<i>Meleagris gallopavo</i>	Y	S	
Rock dove	<i>Columba livia</i>	Y	U	
Mourning dove	<i>Zenaidura macroura</i>	Y	U	X
White-winged dove	<i>Zenaida asiatica</i>	S	U	
Ground dove	<i>Columbina passerina</i>	Y	U	
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	S	U	X
Black-billed cuckoo	<i>C. erythrophthalmus</i>	M	W	
Roadrunner	<i>Geococcyx californicus</i>	Y	S	X
Common barn owl	<i>Tyto alba</i>	Y	U	
Short-eared owl	<i>Asio flammeus</i>	W	U	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Long-eared owl	<i>A. otus</i>	W	W	
Great horned owl	<i>Bubo virginiana</i>	Y	U	
Barred owl	<i>Strix varia</i>	Y	R-S	X
Screech owl	<i>Otus asio</i>	Y	U	
Chuck-will's window	<i>Caprimulgus carolinensis</i>	S	S	
Whip-poor-will	<i>C. vociferus</i>	M	W	
Common nighthawk	<i>Chordeiles minor</i>	S	S	X
Chimney swift	<i>Chaetura pelagica</i>	S	S	X
Ruby-throated hummingbird	<i>Archilochus colubris</i>	S	S	X
Black-chinned hummingbird	<i>A. alexandri</i>	S	R-S	X
Belted kingfisher	<i>Ceryle alcyon</i>	W	R-A	X
Pileated woodpecker	<i>Dryocopus pileatus</i>	Y	W	
Red-bellied woodpecker	<i>Melanerpes carolinus</i>	Y	S	X
Red-headed woodpecker	<i>M. erythrocephalus</i>	Y	W	
Northern flicker	<i>Colaptes auratus</i>	W	S	X
Yellow-bellied sapsucker	<i>Sphyrapicus varius</i>	W	S	X
Downy woodpecker	<i>Picoides pubescens</i>	Y	U	X
Ladder-backed woodpecker	<i>P. scalaris</i>	Y	S	
Eastern kingbird	<i>Tyrannus tyrannus</i>	S	R-S	X
Western kingbird	<i>T. verticalis</i>	S	S	
Scissor-tailed flycatcher	<i>T. forficatus</i>	S	S-G	X
Great-crested flycatcher	<i>T. crinitus</i>	S	S	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	S	S	
Eastern wood peewee	<i>Contopus virens</i>	S	S	
Eastern phoebe	<i>Sayornis phoebe</i>	W	U	
Acadian flycatcher	<i>Empidonax virescens</i>	S	S	
Horned lark	<i>Eremophila alpestris</i>	Y	U	
Tree swallow	<i>Tachycienta bicolor</i>	M	R-S	
Purple martin	<i>Progne subis</i>	S	U	X
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	S	U	
Cliff swallow	<i>Hirundo pyrrhonota</i>	S	R	X
Barn swallow	<i>H. rustica</i>	S	U	X
Bluejay	<i>Cyanocitta cristata</i>	Y	U	X
American crow	<i>Corvus brachyrhynchos</i>	Y	U	X
Tufted titmouse	<i>Parus bicolor</i>	Y	S-R	X
Carolina chickadee	<i>P. carolinensis</i>	Y	S	X
Brown creeper	<i>Certhia americana</i>	W	S	X
White-breasted nuthatch	<i>Sitta carolinensis</i>	Y	S	
Red-breasted nuthatch	<i>S. canadensis</i>	Y	S	
House wren	<i>Troglodytes aedon</i>	W	S	
Winter wren	<i>T. troglodytes</i>	W	S-R	
Carolina wren	<i>Thryothorus ludovicianus</i>	Y	S-R	X
Bewick's wren	<i>T. bewickii</i>	Y	S-R	X
Marsh wren	<i>Cistothorus palustris</i>	W	R	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Golden-crowned kinglet	<i>Regulus satrapa</i>	W	S	X
Ruby-crowned kinglet	<i>R. calendula</i>	W	S	X
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	W	S	
Eastern bluebird	<i>Sialia sialis</i>	Y	S	X
Wood thrush	<i>Hylocichia mustelina</i>	S	R-S	
Hermit thrush	<i>Catharus guttatus</i>	W	S	X
Swainson's thrush	<i>C. ustulatus</i>	M	W-R	
Gray-cheeked thrush	<i>C. minimum</i>	M	W	
Veery	<i>C. fuscescens</i>	M	W-R	
American robin	<i>Turdus migratorius</i>	W	U	X
Loggerhead shrike	<i>Lanius ludovicianus</i>	Y	U	
Gray catbird	<i>Dumetella carolinensis</i>	S	S	
Northern mockingbird	<i>Mimus polyglottos</i>	Y	U	X
Brown thrasher	<i>Taxostoma rufum</i>	W	U	X
Water pipit	<i>Anthus spinoletta</i>	W	U	
Sprague's pipit	<i>A. spragueii</i>	W	G	
Cedar waxwing	<i>Bombycilla cedrorum</i>	W	S	
Starling	<i>Sturnus vulgaris</i>	Y	U	X
White-eyed vireo	<i>Vireo griseus</i>	S	S	
Yellow-throated vireo	<i>V. flavifrons</i>	S	W	
Bell's vireo	<i>V. belli</i>	S	S	
Solitary vireo	<i>V. solitarius</i>	W	S	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Red-eyed Vireo	<i>V. olivaceus</i>	S	S	
Warbling vireo	<i>V. gilvus</i>	S	W	
Orange-crowned warbler	<i>Vermivora celata</i>	W	S	
Nashville warbler	<i>V. ruficapilla</i>	M	W	
Tennessee warbler	<i>V. peregrina</i>	M	W	
Prothonotary warbler	<i>Protonotaria citrea</i>	M-S	R,W	
Northern parula	<i>Parula americana</i>	S	S-R	
Black-and-white warbler	<i>Mniotilta varia</i>	W	W	
Yellow-rumped warbler	<i>Dendroica coronata</i>	W	W	X
Yellow-throated warbler	<i>D. dominica</i>	S	W	
Yellow warbler	<i>D. petechia</i>	M	R	
Black-throated green warbler	<i>D. virens</i>	M	W	
Blackpoll warbler	<i>D. striata</i>	M	W	
Pine warbler	<i>D. pinus</i>	W	W	
Palm warbler	<i>D. palmarum</i>	M	W	
Ovenbird	<i>Seiurus aurocapillus</i>	M	W	
Kentucky warbler	<i>Oporornis formosus</i>	S	G	
Wilson's warbler	<i>Wilsonia pusilla</i>	W	S-R	
Common yellowthroat	<i>Geothlypis trichas</i>	Y	G	
Yellow-breasted chat	<i>Icteria virens</i>	S	S	
Northern cardinal	<i>Cardinalis cardinalis</i>	Y	U	X
Blue grosbeak	<i>Guiraca caerulea</i>	S	S	

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Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Rosebreasted grosbeak	<i>Pheucticus ludovicianus</i>	M	W	
Evening grosbeak	<i>Hesperiphona vespertina</i>	W	W	
Indigo bunting	<i>Passerina eyanea</i>	S	S	X
Painted bunting	<i>P. ciris</i>	S	S	X
Lark bunting	<i>Calamospiza melanocorys</i>	W	G	
Rufus-sided towhee	<i>Pipilo erythrophthalmus</i>	W	R-S	X
Grasshopper sparrow	<i>Ammodramus savannarum</i>	Y	G	
Leconte' s sparrow	<i>A. leconteii</i>	W	G-R	
Vesper sparrow	<i>Pooecetes gramineus</i>	W	G	X
Savannah sparrow	<i>Passerculus sandwichensis</i>	W	G-R	X
Fox sparrow	<i>Passerella iliaca</i>	W	W	
Song sparrow	<i>Melospiza melodia</i>	W	R-S	X
Lark sparrow	<i>Chondestes grammacus</i>	Y	G-S	X
Black-throated sparrow	<i>Amphispiza bilineata</i>	Y	S	X
Field sparrow	<i>Spizella pusilla</i>	W	S-G	X
Chipping sparrow	<i>S. passerina</i>	W	G	X
Dark-eyed junco	<i>Junco hyemalis</i>	W	S	
White-throated sparrow	<i>Zonotrichia albicollis</i>	W	S	X
White-crowned sparrow	<i>Z. leucophrys</i>	W	S	X
Harris sparrow	<i>Z. querula</i>	W	W	
Lincoln's sparrow	<i>Melospiza lincolni</i>	W	S-R	
Swamp sparrow	<i>M. georgiana</i>	W	S-R	

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Chestnut-collared longspur	<i>Calcarius ornatus</i>	W	G	
Dickcissel	<i>Spiza americana</i>	S	G	X
Eastern meadowlark	<i>Sturnella magna</i>	Y	G	X
Red-winged blackbird	<i>Agelaius phoeniceus</i>	Y	R	X
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	W	U	X
Rusty blackbird	<i>E. carolinus</i>	M,W	S	
Yellow-headed blackbird	<i>Xanthocephalus xanthoceph</i>	W	R	
Brown-headed cowbird	<i>Molothrus ater</i>	Y	S	X
Common grackle	<i>Quiscalus quiscula</i>	Y	U	X
Great-tailed grackle	<i>Q. mexicanus</i>	Y	R-S	
Orchard oriole	<i>Icterus spurius</i>	S	U	X
Northern oriole	<i>I. galbula</i>	S	S	
Summer tanager	<i>Piranga rubra</i>	S	S	X
House sparrow	<i>Passer domesticus</i>	Y	U	X
Pine siskin	<i>Carduelis pinus</i>	W	S	X
American goldfinch	<i>C. tristis</i>	W	S	
House finch	<i>Carpodacus mexicanus</i>	Y	U	
Purple finch	<i>C. purpureus</i>	W	U	X
Amphibians and Reptiles³				
Eastern spadefoot	<i>Scaphiopus holbrooki</i>	R	W-G	
Green treefrog	<i>Hyla cinera</i>	R	W-R	X
Gray treefrog	<i>H. versicolor</i>	R	W-R	X

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Squirrel treefrog	<i>H. squirella</i>	R	R-A	
Spring peeper	<i>H. crucifer</i>	R	R-A	X
Strecker's chorus frog	<i>Pseudacris streckeri</i>	R	R-A	X
Upland chorus frog	<i>P. triseriata</i>	R	R-A	
Northern cricket frog	<i>Acris crepitans</i>	R	R-A	
Great Plains narrowmouth toad	<i>Gastrophryne olivacea</i>	R	UX	
Eastern narrowmouth toad	<i>G. carolinensis</i>	R	UX	
Gulf Coast toad	<i>Bufo valliceps</i>	R	UX	
East Texas (Woodhouse's) toad	<i>B. woodhousei</i>	R	UX	X
Southern leopard frog	<i>Rana sphenocephala</i>	R	R-A	X
Bullfrog	<i>R. catesbeiana</i>	R	R-A	X
Bronze frog	<i>R. clamitans</i>	R	R-A	
Pickerel frog	<i>R. palustris</i>	R	R-A	
Crawfish frog	<i>R. areolata</i>	R	R-A	
Tiger salamander	<i>Ambystoma tigrinum</i>	R	A	
Smallmouth salamander	<i>A. texanum</i>	R	A	
Spotted salamander	<i>A. maculatum</i>	R	A	
Marbled salamander	<i>A. opacum</i>	R	A	
Dusky salamander	<i>Desmognathus auriculatus</i>	R	A	
Three-toed amphiuma	<i>Amphiuma tridactylum</i>	R	A	
Lesser siren	<i>Siren intermedia</i>	R	A	
Central newt	<i>Notophthalmus viridescens</i>	R	A	

Table F-1 Representative Wildlife Species in the Project Region

Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Dwarf salamander	<i>Eurycea quadridigitata</i>	R	A	
Common snapping turtle	<i>Chelydra serpentina</i>	R	A	X
Stinkpot	<i>Sternotherus ordoratus</i>	R	A	
Razorback musk turtle	<i>S. carinatus</i>	R	A	
Mississippi mud turtle	<i>Kinosternon subrubrum</i>	R	A	
Mississippi map turtle	<i>Graptemys kohni</i>	R	A	
Slider	<i>Chrysemys concinna</i>	R	A	X
Red-eared Turtle	<i>C. scripta</i>	R	A	X
Chicken turtle	<i>Deirochelys reticularia</i>	R	A	
Ornate box turtle	<i>Terrapene ornata</i>	R	UX	
Three-toed box turtle	<i>T. carolina</i>	R	UX	
Spiny softshell	<i>Trionyx spiniferus</i>	R	A	
Smooth softshell	<i>T. muticus</i>	R	A	X
American alligator	<i>Alligator mississippiensis</i>	R	A	
Green anole	<i>Anolis carolinensis</i>	R	W	X
Eastern fence lizard	<i>Sceloporus undulatus</i>	R	W-G	X
Prairie skink	<i>Eumeces septentrionalis</i>	R	G-W	
Broadhead skink	<i>E. laticeps</i>	R	W	
Five-lined skink	<i>E. fasciatus</i>	R	W	X
Ground skink	<i>Scinella lateralis</i>	R	W	X
Six-lined racerunner	<i>C. sexlineatus</i>	R	G-W	X
Slender glass lizard	<i>Ophisaurus attenuatus</i>	R	G	

Table F-1 Representative Wildlife Species in the Project Region

Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Mediterranean gecko	<i>Hemidactylus turcicus</i>	R	* I	
Eastern yellow-bellied racer	<i>Coluber constrictor</i>	R	UX	
Texas rat snake	<i>Elaphe obsoleta</i>	R	UX	
Great Plains rat snake	<i>E. guttata</i>	R	W-G	X
Eastern hognose snake	<i>Heterodon platyrhinos</i>	R	W-G	
Western hognose snake	<i>H. nasicus</i>	R	W-G	
Louisiana milksnake	<i>Lampropeltis triangulum</i>	R	W-R	
Speckled kingsnake	<i>L. getulus</i>	R	G-W	
Prairie kingsnake	<i>L. calligaster</i>	R	G	
Eastern coachwhip	<i>Masticophis flagellum</i>	R	S-G	
Yellow-bellied water snake	<i>Nerodia erythrogaster</i>	R	A-R	
Broadbanded water snake	<i>N. faciata</i>	R	A-R	X
Diamondback water snake	<i>N. rhombifera rhombifera</i>	R	A-R	X
Glossy water snake	<i>N. rigida</i>	R	A-R	
Graham's water snake	<i>N. grahami</i>	R	A-R	
Rough green snake	<i>Opheodrys aestivas</i>	R	G-R	
Texas brown snake	<i>Storeria dekayi texana</i>	R	W-G	
Flat-headed snake	<i>Tantilla gracilis</i>	R	W-G	
Western ribbon snake	<i>Thamnophis proximus</i> sp.	R	UX	
Texas coral snake	<i>Micrurus fulvius tenere</i>	R	UX	
Southern copperhead	<i>Agkistrodon contortrix</i>	R	UX	X
Western cottonmouth	<i>A. piscivorus</i>	R	U	X

Table F-1 Representative Wildlife Species in the Project Region

Common Name	Scientific Name	Likely Seasonal Occurrence ¹	General Habitat ²	Observed in the Rusk Permit Area
Pygmy rattlesnake	<i>Sistrurus miliarius</i>	R	UX	
Red-bellied Snake	<i>S. occipitomaculata</i>	R	W	
Graham's crayfish snake	<i>Regina grahami</i>	R	R-A	
Glossy crayfish snake	<i>R. rigida</i>	R	R-A	
Garter snake	<i>Thamnophis sirtallis</i>	R	R-UX	
Lined snake	<i>Tropidoclonion lineatum</i>	R	W-G	
Rough earth snake	<i>Virginia striatula</i>	R	W-G	
Smooth earth snake	<i>V. valeriae</i>	R	W-G	
Ringneck snake	<i>Diadophis punctatus</i>	R	W	
Mud snake	<i>Farancia abacura</i>	R	W	

¹ A = Aquatic, B = Bottomland forest, D = Human habitations, G = Grasslands, HR = Historical records, M = Mixed forest (lowland and upland), R = Riparian, S = Mixed shrubs, U = Universally found in all habitats, UX = Universally found in all habitats except aquatic, W = Woodland or forest.

² M = Potential migratory visitor, R = Resident, S = Spring, W = Winter, Y = Year round.

³ Based on Conant (1975) and Dixon (1987).

Source: Sabine 2009a.

Table F-2 Results of Baseline Fish Surveys

Common Name	Scientific Name	Pond Monitoring Station Data (numbers)			Stream Monitoring Station Data (numbers)		
		A-1	A-2	A-3	S-1	S-2	S-3
Sunfishes							
Flier sunfish	<i>Centrarchus macropterus</i>					17	9
Redbreast sunfish	<i>Lepomis auritus</i>				1		
Bluegill	<i>L. cyanellus</i>	24	24	52	26	2	16
Warmouth	<i>L. gulosus</i>	5	8	1		9	9
Dollar sunfish	<i>L. marginatus</i>	1		3			6
Longear sunfish	<i>L. megalotus</i>				24	2	27
Redear sunfish	<i>L. microlophus</i>	1			3		4
Spotted sunfish	<i>L. punctatus</i>	19			1		1
Bantam sunfish	<i>L. symmetricus</i>	1					
Largemouth bass – adult	<i>Micropterus salmoides</i>	2	1	1	3	2	1
Largemouth bass – YOY	<i>M. salmoides</i>			7	3		
Spotted bass	<i>M. punctulatus</i>				1		
White crappie	<i>Pomoxis annularis</i>		19		1	1	5
Black crappie	<i>P. nigromaculatus</i>		2		1		4
Hybrid sunfish					1	3	
Minnnows							
Common carp	<i>Cyprinus carpio</i>		1				1
Golden shiner	<i>Notemigonus crysoleucas</i>					1	
Weed shiner	<i>Notropis texanus</i>						

Table F-2 Results of Baseline Fish Surveys

Common Name	Scientific Name	Pond Monitoring Station Data (numbers)			Stream Monitoring Station Data (numbers)		
		A-1	A-2	A-3	S-1	S-2	S-3
Killfishes							
Golden topminnow	<i>Fundulus chrysotus</i>	6			1		2
Blackstripe topminnow	<i>F. notatus</i>	7		8	5		
Silversides							
Brook silversides	<i>Labidesthes sicculus</i>	1					1
Livebearers							
Mosquitofish	<i>Gambusia</i> spp.		1	2			6
Gars							
Spotted gar	<i>Lepisosteus oculatus</i>				4		2
Longnose gar	<i>L. osseus</i>	1					
Bowfins							
Bowfin	<i>Amia calva</i>	1			1	4	1
Pirate Perches							
Pirate perch	<i>Aphredoderus sayanus</i>		1		2	2	2
Pikes							
Redfin pickerel	<i>Esox americanus</i>					1	
Herrings							
Gizzard shad	<i>Dorosoma cepedianum</i>				1		4
Suckers							
Spotted sucker	<i>Ameiurus melas</i>				1		
Lake chubsucker	<i>Erimyzon sucetta</i>					5	2

Table F-2 Results of Baseline Fish Surveys

Common Name	Scientific Name	Pond Monitoring Station Data (numbers)			Stream Monitoring Station Data (numbers)		
		A-1	A-2	A-3	S-1	S-2	S-3
Catfishes							
Yellow bullhead	<i>Ameiurus natalis</i>				1		
Channel catfish	<i>Ictalurus punctatus</i>				1		
Perches							
Slough darter	<i>Etheostoma chlorosomum</i>						1
Total Number		69	57	74	82	49	104
Number of Species		12	8	7	20	12	20

Source: Sabine 2009a.

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Mammals						
Red wolf (<i>Canis rufus</i>)	--	E	Although presumed to be extirpated throughout Texas, this species was formerly known to occur within central Texas ranging to the east into Florida. This species occupies brushy and forested areas, as well as coastal prairies.	Low. This species is presumed to be extirpated although suitable habitat may exist	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009
Rafinesque's big-eared bat (<i>Corynorhinus rafinesquii</i>)	--	T	A permanent resident known to occur along the eastern edge of Texas (including Hardin, Jasper, and Liberty counties), this species roosts in tree cavities of bottomland hardwoods, in concrete culverts, and abandoned man-made structures.	Low. Although outside of this species known range, suitable roosting habitat is present within the study area and cumulative effects study area.	No.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009
Black bear (<i>Ursus americanus</i>)	T/SA	T	An occasional transient into northwestern Texas, this species inhabits bottomland hardwoods and large tracts of inaccessible forested areas.	Low. Potential for occurring infrequently as a transient within the study area and the cumulative effects study area.	No.	TPWD 2010; USFWS 2009; Sabine 2010a; NatureServe 2009; TXNDD 2009
Louisiana black bear (<i>Ursus americanus luteolus</i>)	T	--	An occasional transient into northeastern Texas, this species inhabits bottomland hardwoods and large tracts of inaccessible forested areas.	Low. Potential for occurring infrequently as a transient within the study area and the cumulative effects study area.	No.	USFWS 2009; Sabine 2010a; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Bachman's sparrow (<i>Aimophila aestivalis</i>)	--	T	Historically a permanent resident in eastern Texas, this species inhabits open pine woods with scattered bush and grass understory within the Pineywoods region, brushy or overgrown grassy hillsides, overgrown fields with thickets and brambles, grassy orchards, and remnant grasslands within the Post Oak Savannah region. The species nests on the ground against a grass tuft or under low shrub cover. Breeding range once extended from the Midwest south to the Gulf of Mexico, and east to the Atlantic Coast; however this area has been much reduced and Bachman's sparrow is only known to breed in Virginia and West Virginia. Approximate breeding period may begin as early as mid-April through August (NatureServe Explorer 2009d). A historic species siting was recorded in the South Hallsville No. 1 Mine permit area immediately north of the Rusk Permit Area.	Low. Potential for occurring infrequently within the study area and cumulative effects study area during migration or as a winter resident.	No.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009; Sabine 2010d

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Piping plover (<i>Charadrius melodus</i>)	T	T	Known within eastern Texas, this species is a wintering migrant along the Texas Gulf Coast occupying beaches and bayside mud or salt flat habitats. Breeds in the northern Great Plains region from southern Alberta, northern Saskatchewan, southern Manitoba, northwestern Ontario, south to eastern Montana, the Dakotas, southeastern Colorado (Andrews and Righter 1992), Iowa, Minnesota, and Nebraska; sporadic nesting occurs in Oklahoma; Formerly throughout much of the Great Lakes region, now locally only in northern Michigan. On the Atlantic coast from Newfoundland, southeastern Quebec, and New Brunswick to North Carolina. Breeding period is from mid-April through September.	Low. Potential for occurring infrequently within the study area and the cumulative effects study area during migration. Low potential for occurrence during winter. The study area and the cumulative effects study area are outside of the species breeding range. No critical habitat occurs within the study area or the cumulative effects study area.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2010; USFWS 2009; Sabine 2010a; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Peregrine falcon (<i>Falco peregrines</i>)	DL	T	This species is a year-round resident and local breeder in west Texas, nesting in tall cliff eyries. This species winters along the Texas Gulf Coast occupying a wide range of habitats during migration, including urban settings and concentrations along coastal and barrier island habitats. A low-altitude migrant, stopovers include lake shores, coastlines, and barrier islands. Breeding range extends from the northwest coast of Canada south through the Pacific Coast states, including west Texas. Breeding may also occur in South America. Breeding period is approximately April through September (NatureServe Explorer 2009e,f).	Low. Potential for occurring infrequently within the study area and the cumulative effects study area during migration or as a winter resident.	No.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
American peregrine falcon (<i>Falco peregrines anatum</i>)	DL	T	This subspecies migrates across the state from more northern breeding areas in the U.S. and Canada to wintering areas along the coast and farther south. This species also is a resident breeder in west Texas. This species occupies a wide range of habitats during migration, including urban settings and concentrations along coastal and barrier island habitats. A low-altitude migrant, stopovers include lake shores, coastlines, and barrier islands. Breeding range extends from the northwest coast of Canada south through the Pacific Coast states, including west Texas. Breeding may also occur in South America. Breeding period is approximately April through September (NatureServe Explorer 2009e,f).	Low. Potential for occurring infrequently within the study area and the cumulative effects study area during migration or as a winter resident.	No.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Bald eagle (<i>Haliaeetus leucocephalus</i>)	DL	T	Occurs year-round in Texas as migrants, breeders, and/or winter residents. This species has been documented within Rusk and Panola counties. This species is found primarily near rivers and large lakes, nesting in tall trees or on cliffs near water and communally roosts, especially in the winter, and may occur along the Sabine River and its tributaries. Breeding range extends from Alaska and Canada south along Pacific states through Baja California (both coasts), Sonora, New Mexico, Arizona, Texas Gulf Coast, and Florida (including the Keys); very local in Great Basin and prairie and plains regions in interior North America, where breeding range recently has expanded to include Nebraska and Kansas. Breeding period is October through July in Texas (TPWD 2010). Known nest sites identified approximately 5 miles southwest of Rusk Permit Area. Species sightings recorded in the South Hallsville No. 1 Mine permit area immediately north of the Rusk Permit Area.	High. Potential for occurring infrequently within the study area and the cumulative effects study area.during migration or as a winter resident. Potential occurrence of foraging or roosting individuals or breeding pairs in the study area during the breeding season.	No.	TPWD 2010; USFWS 2009; Sabine 2010a; TXNDD 2009; Sabine 2010d

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Wood stork (<i>Mycteria americana</i>)	--	T	A vagrant species throughout northeastern Texas, this species is found foraging in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds. This species breeds in Mexico and migrates into the Gulf States in search of mud flats and other wetlands, even those associated with forested areas. Although the species formerly nested in Texas, there have been no breeding records since 1960. Wood storks breed in South America and along the Gulf coast (mainly in the Florida Everglades). Their nesting is tied to receding water levels and concentration of food sources, regardless of date (NatureServe Explorer 2009g). Species sitings recorded in the South Hallsville No. 1 Mine permit area immediately north of the Rusk Permit Area.	Low. Potential for occurring infrequently as a transient within the study area and the cumulative effects study area. Although outside of this species documented breeding range, potential feeding habitat may occur within the study area and the cumulative effects study area.	No.	TPWD 2010; Sabine 2010a; NatureServe 2009; TXNDD 2009; Sabine 2010d

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Red-cockaded woodpecker (<i>Picoides borealis</i>)	E	E	Historically present within Texas, this species is presumed to be extirpated throughout portions of its range, extending into Texas. This species inhabits cavity nests in older pines (60+ years) and forages in younger pines (30+ years). This species prefers longleaf, shortleaf, and loblolly pines. Fragmented breeding populations are found in Arkansas, Missouri, Oklahoma, the Gulf states, and north along the Atlantic Coast to North Carolina. Breeding period is approximately mid-April through August.	Low. Potential for occurring infrequently within the study area and the cumulative effects study area due to lack of suitable habitat.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely.	TPWD 2010; USFWS 2009; NatureServe 2009; TXNDD 2009
Interior least tern (<i>Sterna antillarum athalassos</i>)	E	E	Historically present within Texas, this subspecies is listed only when more than 50 miles inland from a coastline. This species nests along sand and gravel bars within braided streams and rivers and occasionally on man-made structures (e.g., inland beaches, wastewater treatment plants, gravel mines, etc). The interior population (<i>athalassos</i>) breeds from Montana and North Dakota, east to southwestern Indiana, central Kentucky, and western Tennessee, west to eastern Colorado, and south to Texas. Breeding begins in mid-April and extends through August.	Low. Potential for occurring infrequently within the study area and the cumulative effects study area due to known species distribution and lack of suitable habitat. No critical habitat occurs within the study area or the cumulative effects study area.	No.	TPWD 2010; USFWS 2009; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status¹	State Status¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Fish						
Creek chubsucker (<i>Erimyzon oblongus</i>)	--	T	Known within tributaries of the Red, Sabine, Neches, Trinity, and San Jacinto rivers, this species inhabits small rivers and creeks of various types; seldom occurs in impoundments; and prefers headwaters, but seldom occurs in springs. Spawns in river mouths or pools, riffles, lake outlets, upstream creeks. Young typically occur in headwater rivulets or marshes.	Low to Moderate. Potential for occurring within tributaries of the Sabine River within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009
Blackside darter (<i>Percina maculate</i>)	--	T	Known within the Red, Sulfur, and Cypress River basins, this species occupies clear, gravelly streams and prefers pools with some current, or even quiet pools to swift riffles.	Low. Although suitable habitat exists within the study area and the cumulative effects study area, this species' known range does not extend into the study area or the cumulative effects study area.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range.	TPWD 2010; NatureServe 2009; TXNDD 2009
Paddlefish (<i>Ployodon spathula</i>)	--	T	Known within the Sabine and Neches river drainages, this species prefers large, free-flowing rivers, but will frequent impoundments with access to spawning sites. The species spawns in fast, shallow water over gravel bars where larvae may drift from reservoir to reservoir.	Moderate to High. Potential for occurring in the Sabine River within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Bluehead shiner (<i>Pteronotropis hubbsi</i>)	--	T	Known within the Big Cypress Bayou in Harrison County, this species occupies quiet, backwater areas of small to medium-sized, sluggish streams and oxbow lakes having mud or mud-sand bottom. The water is typically tannin-stained with heavy growth of submergent or semi-emergent vegetation.	Low. Although suitable habitat exists within the study area and cumulative effects study area, these areas are outside of the known range for this species.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range.	TPWD 2010; NatureServe 2009; TXNDD 2009
Reptiles						
Northern scarletsnake (<i>Cemophora coccinea copei</i>)	--	T	Known within eastern Texas, including the Lower Sabine watershed, this semi-fossorial species inhabits mixed hardwood scrub on sandy soils. This species is active between April-September.	Low. Although suitable habitat exists within the study area and the cumulative effects study area, these areas are outside of the known range for this species.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range.	TPWD 2010; NatureServe 2009; TXNDD 2009

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Timber/canebrake rattlesnake (<i>Crotalus horridus</i>)	--	T	A permanent resident within eastern Texas, this species inhabits swamps, floodplains, upland pine and deciduous woodlands, riparian zones, and abandoned farmland preferring dense cover (i.e., grapevines or palmetto). Also associated with limestone bluffs, sandy soil, or black clay. Species siting recorded in the South Hallsville No. 1 Mine permit area immediately north of the Rusk Permit Area.	Low to Moderate. Suitable habitat exists within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; Sabine 2010d
Alligator snapping turtle (<i>Macrochelys temminckii</i>)	--	T	Known within Harrison, Rusk, and Panola counties and within the middle and lower Sabine watersheds, this species inhabits perennial waterbodies including deep water of rivers, canals, lakes, and oxbows, swamps, bayous, ponds near deep running water, and sometimes brackish coastal water. This species prefers water with a mud substrate and abundant aquatic vegetation. This species is active between March-October and may migrate several miles along rivers. Species sitings are recorded in the South Hallsville No. 1 Mine immediately north of the Rusk Permit Area.	Moderate to High. Suitable habitat exists within the study area and the cumulative effects study area. In addition, populations have been identified in Martin Lake, approximately 3 miles south of the study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; Sabine 2010d

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status¹	State Status¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Texas horned lizard (<i>Phrynosoma cornutum</i>)	--	T	A permanent resident throughout Texas, this species inhabits open, arid, and semi-arid regions with sparse vegetation including grass, cactus, scattered brush, or scrubby trees. This species burrows into soil, enters rodent burrows, or hides under rocks when inactive. This species breeds between March-September.	None. Suitable habitat is not present within the study area or the cumulative effects study area.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely.	TPWD 2010; NatureServe 2009; TXNDD 2009
Louisiana pine snake (<i>Pituophis ruthveni</i>)	C	T	A permanent resident in extreme east-central Texas, this species inhabits mixed deciduous-longleaf pine woodlands. This species breeds between April-September.	Low. Although suitable habitat exists within the study area and the cumulative effects study area, these areas are outside of the known range of this species.	No.	TPWD 2010; USFWS 2009; NatureServe 2009; TXNDD 2009
Invertebrates						
Texas pigtoe (<i>Fusconaia askewi</i>)	--	T	Known within east Texas river basins including the Sabine, Trinity, and San Jacinto rivers, this species inhabits rivers with mixed mud, sand, and fine gravel substrates in protected areas associated with fallen trees or other structures. Occurrence documented in the Sabine River during CNG baseline survey.	High. Occurs in the Sabine River within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; CNG 2010

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Sandbank pocketbook (<i>Lampsilis satura</i>)	--	T	Known within east Texas within the Sulfur River basin south through the San Jacinto River basin and within the Neches River, this species inhabits small to large rivers with moderate flows and swift currents with gravel, gravel-sand, and sand substrates. One shell found in the Sabine River during CNG baseline survey.	Moderate. Potential for occurring within the tributaries of, or within, the Sabine River within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; CNG 2010
Southern hickorynut (<i>Obovaria jacksoniana</i>)	--	T	Known within the Neches, Sabine, and Cypress river basins, this species occupies medium-sized waterbodies with low to moderate current and gravel substrates.	Low. Potential for occurring within the tributaries of, or within, the Sabine River within the study area and the cumulative effects study area. Not detected in the Sabine River during CNG 2010 baseline survey.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; CNG 2010
Louisiana pigtoe (<i>Pleurobema riddellii</i>)	--	T	Historically known within the Sabine, Neches, and Trinity river basins and presumed extirpated, this species inhabits streams and moderate-sized rivers, usually flowing water on substrates of mud, sand, and gravel; not generally known from impoundments.	Low. Potential for occurring within the tributaries of, or within, the Sabine River within the study area and the cumulative effects study area. Not detected in the Sabine River during CNG 2010 baseline survey.	No.	TPWD 2010; TPWD 2010; NatureServe 2009; TXNDD 2009; CNG 2010

Table F-3 Summary of Special Status Wildlife, Fish, Reptile, and Invertebrate Species

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Texas heelsplitter (<i>Potamilus amphichaenus</i>)	--	T	Known within the Sabine, Neches, and Trinity river basins, this species inhabits quiet waters (including reservoirs) with mud or sand substrates. Occurrence documented in the Sabine River during CNG baseline survey.	High. Occurs in the Sabine River within the study area and the cumulative effects study area.	No.	TPWD 2010; NatureServe 2009; TXNDD 2009; CNG 2010

¹ C = Candidate for listing as threatened or endangered.

DL = Delisted.

E = Endangered.

T = Threatened.

T/SA = Threatened by similarity of appearance.

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Mammals						
Southeastern myotis bat (<i>Myotis austroriparius</i>)	--	Rare	A permanent resident in east Texas and known within Panola County, this species roosts in tree cavities of bottomland hardwoods, in concrete culverts, and in abandoned man-made structures.	Low. Suitable roosting and foraging habitat is present within the study area and cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009
Plains spotted skunk (<i>Spilogale putorius interrupta</i>)	--	Rare	A resident in eastern Texas, this species inhabits open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; preferring wooded, brushy areas and tallgrass prairie.	Low. Potential for occurring infrequently within the study area and the cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Henslow's sparrow (<i>Ammodramus henslowii</i>)	--	Rare	Although presumed to be extirpated throughout Texas, this species was formerly documented as a breeding and non-breeding resident in east Texas. Wintering individuals (not flocks) may be found in weedy fields or cut-over areas where bunchgrasses occur along with vines and brambles. A key component of this species habitat is bare ground. Breeding range extends throughout the Midwest states, north to New York and south to Missouri and Oklahoma. Breeding period is from mid-April through September.	Low. This species is presumed to be extirpated and, although suitable habitat may exist, no records of the Henslow's sparrow have been documented within the study area or the cumulative effects study area.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species' known range.	TPWD 2009; NatureServe 2009; TXNDD 2009

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Arctic peregrine falcon <i>(Falco peregrinus tundrius)</i> ak	--	Rare	This subspecies migrates across the state from more northern breeding areas in the U.S. and Canada to winter along the coast in west Texas. This species occupies a wide range of habitats during migration, including urban settings and along coastal and barrier island habitats. A low-altitude migrant, stopovers include lake shores, coastlines, and barrier islands. Breeding range is contained within the arctic islands and tundra regions of Alaska, Canada, and Greenland. Breeding period is late April through August (NatureServe Explorer 2009u).	Low. Potential for occurring infrequently within the study area and the cumulative effects study area during migration or as a winter resident.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Fish						
Western sand darter (<i>Ammocrypta clara</i>)	--	Rare	Known within the Neches, Red River, and Sabine River basins in east Texas, this species inhabits clear to slightly turbid water of medium to large rivers that have moderate to swift currents, primarily over extensive areas of sandy substrate.	Low. Suitable habitat is present within the study area and cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009
Orangebelly darter (<i>Etheostoma radiosum</i>)	--	Rare	Known from the headwaters of the Red through the Angelina River basins in the extreme northeastern Texas extending into Oklahoma and Arkansas, this species inhabits habitats ranging from high gradient streams to more sluggish lowland streams, preferring gravel and rubble riffles. This species' eggs are buried in gravel and riffle raceways, with post-larvae inhabiting quiet waters and progressively moving into faster water as they mature.	Low. Suitable habitat is present within the study area and cumulative effects study area.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Ironcolor shiner (<i>Notropis chalybaeus</i>)	--	Rare	Known within the Big Cypress Bayou and Sabine River basins along the Texas-Louisiana border, this species inhabits pools and slow runs of low gradient small acidic streams with sandy substrates and clear, well vegetated water. This species' spawning period extends from April-September.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009
Taillight shiner (<i>Notropis maculatus</i>)	--	Rare	Known within the headwaters of the Sulfur River, Big Cypress Bayou, and the Sabine River, this species typically inhabits large sluggish, mud-bottomed small to large streams and lakes, usually with some aquatic vegetation, This species spawning period extends from March-October in backwaters and pools.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Reptiles						
Sabine map turtle (<i>Graptemys ouachitensis sabinensis</i>)	--	Rare	Known within the Sabine River system, this species inhabits rivers and related tributaries, ponds and reservoirs with abundant aquatic vegetation, often basking on fallen logs and exposed roots. This species' breeding and egg-laying period extends from March-May, with hatchlings appearing in early fall.	Low. Potential for occurring within the Sabine River or its tributaries within the study area and the cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009
Invertebrates						
Rock pocketbook (<i>Arcidens confragosus</i>)	--	Rare	Known within the east Texas River basins, from the Red through Guadalupe River basins, this species inhabits medium to large rivers in standing or slow flowing water tolerating moderate currents and some reservoirs with mud, sand, and gravel substrates. Occurrence documented in the Sabine River during CNG baseline survey.	High. Occurs within the study area and cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status¹	State Status¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Wabash pigtoe (<i>Fusconaia flava</i>)	--	Rare	Known within the east Texas River basins, including the Red, Sabine, Neches, Trinity, and San Jacinto rivers, this species inhabits creeks to large rivers with moderate to swift current velocities in mud, sand, and gravel substrates in all habitats except deep shifting sands. Found elsewhere in reservoirs and lakes with no flow.	Low. Suitable habitat is present within the study area and cumulative effects study area. Not detected in the Sabine River during CNG 2010 baseline survey.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010
Plain pocketbook (<i>Lampsilis cardium</i>)	--	Rare	Known within the Red and Cypress River basins, this species inhabits small creeks and large rivers with flowing waters, occasionally oxbows or slackwater areas of sandy-bottomed rivers and reservoirs on sand, sand-gravel, or sand-mud substrates.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range. Not detected in the Sabine River during CNG 2010 baseline survey.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010
Wartyback (<i>Quadrula nodulata</i>)	--	Rare	Known within the Red, Sabine, and Neches river basins, this species inhabits medium to large rivers with gravel or sand-gravel substrates.	Low. Suitable habitat is present within the study area and cumulative effects study area. Not detected in the Sabine River during CNG 2010 baseline survey.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status ¹	State Status ¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Common pimpleback (<i>Quadrula pustulosa</i>)	--	Rare	Known within the Red River downstream of Lake Texoma and possibly Big Cypress Bayou and lower Sulfur River basins, this species inhabits small streams to larger rivers, and is associated with most substrate types except deep shifting sands.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range. Not detected in the Sabine River during CNG 2010 baseline survey.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010
Creepers (<i>Strophitus undulatus</i>)	--	Rare	Known within the Colorado, Guadalupe, San Antonio, Neches (historic), and Trinity (historic) River basins, this species inhabits small to large streams, preferring gravel or gravel and mud substrate in flowing water.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range. Not detected in the Sabine River during CNG 2010 baseline survey.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010
Pistolgrip (<i>Tritogonia verrucosa</i>)	--	Rare	Known within east and central Texas in the San Antonio River and the Cypress Bayou systems including the Red River drainage as well as the Sabine River. This species inhabits stable substrate, rock, hard mud, silt, and soft bottoms, often buried deeply. Occurrence documented in the Sabine River during CNG baseline survey.	High. Occurs within the study area and cumulative effects study area.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010.

Table F-4 Summary of Wildlife, Fish, Reptile, and Invertebrate Species of Special Concern

Common Name (Scientific Name)	Federal Status¹	State Status¹	Range and Habitat Association	Potential for Occurrence Within the Study Area and Cumulative Effects Area	Eliminated from Detailed Analysis (yes/no and rationale)	References
Fawnsfoot (<i>Truncilla donaciformis</i>)	--	Rare	Known within the Red (historic), Cypress (historic), Sabine (historic), Neches, Trinity, Brazos, and San Jacinto River basins, this species inhabits small and large rivers with still to swiftly flowing water with sand, mud, rocky mud, sand and gravel, or silt and cobble bottoms.	Low. Potential for occurring within the Sabine River or its tributaries within the study area and the cumulative effects study area. Not detected in the Sabine River during CNG 2010 baseline survey.	No.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010
Little spectaclecase (<i>Villosa lienosa</i>)	--	Rare	Known within the San Jacinto River drainage, this species inhabits small creeks to medium-sized rivers, usually along the banks in slower currents.	Low. Although suitable habitat is present, the potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely due to the species known range. Not detected in the Sabine River during CNG 2010 baseline survey.	Yes. The potential occurrence of this species within the study area or cumulative effects study area is extremely unlikely based on the species known range.	TPWD 2009; NatureServe 2009; TXNDD 2009; CNG 2010

¹ The USFWS Arlington Field Office does not maintain a separate species of concern list (USACE 2010).