

PREPARERS

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Appendix A

**Bird Species Listings For
Marais des Cygnes NWR Area**

MARAIS DES CYGNES NATIONAL WILDLIFE REFUGE

The Refuge is managed primarily for migratory birds. A secondary function is to provide an opportunity for the public to observe, study, harvest, and enjoy wildlife and plants in their natural environment.

January and February are good months to observe Bald Eagles. April and May are the best months for observing passerines, as the Refuge is an outstanding migration corridor for warblers. These months are also good for marsh birds, including egrets, herons, and shorebirds. March, October, and November are good times to observe the peak concentrations of waterfowl. During the winter, clouds of wintering sparrows can be observed in the upland areas.

CHECKLIST:

The following tabulation lists 317 birds that have been found in the area of the Refuge, including 109 species which are probably nesters on the Refuge (*).

Seasonal occurrence and relative abundance is coded as follows:

SEASONS:

S --Spring (March-May)
 Su --Summer (June-August)
 F --Fall (September-November)
 W --Winter (December-February)

SEASONAL ABUNDANCE:

a--abundant	occurring in large numbers
c--common	certain to be seen in suitable habitat
u--uncommon	present but not certain to be seen
o--occasional	seen only a few times during a season
r--rare	seen at intervals of 2 to 5 years
x--accidental	straggler or out of normal range

	S	Su	F	W
LOONS				
___ Common Loon	u	r	u	
GREBES				
___ *Pied-billed grebe	c	o	c	o
___ Horned grebe	o	o		
___ Red-necked grebe	x			
___ Eared grebe	o	u		
___ Western grebe	r			

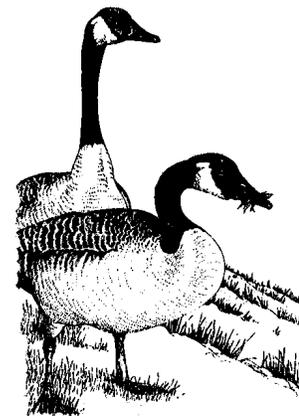


Grebe

	S	SU	F	W
__ Clark's grebe	x			
PELICANS				
__ American white pelican	c	o	c	
__ Brown pelican	x			
CORMORANTS				
__ *Double-crested cormorant	c	u	c	
__ Neotropical cormorant	r	r	r	
__ Anhinga	x	x		
HERONS AND ALLIES				
__ American bittern	u	o	u	
__ *Least bittern	o	o	r	
__ *Great blue heron	c	c	c	u
__ Great egret	u	u	u	
__ Snowy egret	u	u	u	
__ *Little blue heron	u	u	c	
__ Cattle egret	o	o	o	
__ *Green heron	c	c	c	
__ Black-crowned night-heron	c	u	c	
__ *Yellow-crowned night-heron	u	u	u	
__ White ibis	x	x		
__ White-faced ibis	r	r	r	
__ Wood stork		x		
__ *Turkey vulture	u	c	u	o
__ Fulvous whistling-duck			x	
__ Black-bellied whistling-duck			x	
SWANS				
__ Tundra swan	r		r	o
GEESE				
__ Greater white-fronted goose	c	c	u	u
__ Snow goose	a	a	a	
__ Ross's goose	o		o	o
__ Brant	a		a	a
__ *Canada goose	a	u	a	a
DUCKS				
__ *Wood duck	c	c	c	r
__ Green-winged teal	a	o	a	o

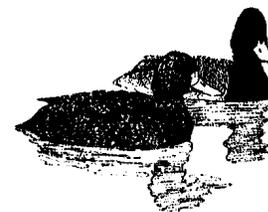


Pelican



Canada Geese

	S	SU	F	W
___ American black duck	r		r	r
___ *Mallard	a	u	a	a
___ Northern pintail	a	o	a	u
___ *Blue-winged teal	a	u	a	a
___ Cinnamon teal	x	x	x	
___ Northern shoveler	c	o	c	r
___ Gadwall	c	r	c	r
___ American wigeon	a	r	a	u
___ Canvasback	u	r	u	r
___ Redhead	c	r	c	r
___ Ring-necked duck	c	r	c	r
___ Greater scaup	r	r	r	r
___ Lesser scaup	a	r	a	r
___ Oldsquaw			x	x
___ Black scoter	r		r	
___ Surf scoter	r		r	
___ White-winged scoter	r		r	r
___ Common goldeneye	u			u
___ Bufflehead	u		u	u
___ *Hooded merganser	u	r	u	u
___ Common merganser	a	c	a	
___ Red-breasted merganser	r		r	
___ Ruddy duck	u	r	u	u



Scaup

OSPREY

___ Osprey	u	o	u	o
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KITE

___ Mississippi kite	r	r		
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HAWKS, EAGLES

___ Bald eagle	u		u	u
___ Northern harrier	c	u	c	c
___ Sharp-shinned hawk	u	r	u	u
___ Cooper's hawk	o	o	u	o
___ Northern goshawk				r
___ *Red-shoulder hawk	r	r	r	
___ *Broad-winged hawk	u	r	u	
___ *Swainson's hawk	u	o	u	
___ *Red-tailed hawk	a	a	a	a
___ Ferruginous hawk	r	r		
___ Rough-legged hawk	u	u	c	c
___ Golden eagle	o	r	o	o

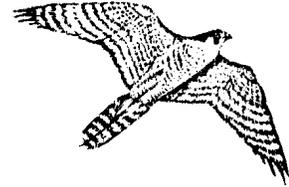


Bald Eagle

S SU F W

FALCONS

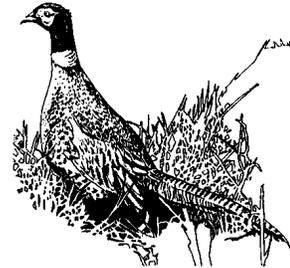
___ *American kestrel	c	c	c	c
___ Merlin	u	u	u	r
___ Peregrine falcon	r	r	r	o
___ Prairie falcon	r			r



Peregrine Falcon

GALLINACEOUS BIRDS

___ *Ring-necked pheasant	o	o	o	o
___ Greater prairie-chicken	c	c	c	c
___ *Wild turkey	u	u	u	u
___ *Northern bobwhite	a	a	a	a



Ring-necked Pheasant

RAILS

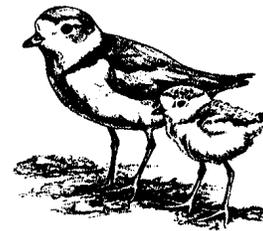
___ Yellow rail	r		r	
___ King rail		u		
___ Virginia rail	r	u	r	r
___ Sora	c	u	c	u
___ Purple gallinule		r		
___ Common moorhen	r	r		
___ *American coot	a	a	a	r

CRANES

___ Sandhill crane	c	r	c	r
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PLOVERS

___ Black-bellied plover	u	o	o	
___ American golden-plover	u	o	u	r
___ Snowy plover	r	r		
___ Semipalmated plover	u	u	u	
___ Piping plover	r	r		
___ *Killdeer	a	a	a	u



Plover

AVOCETS

___ American avocet	c	c	c	
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SANDPIPERS

___ Greater yellowlegs	u	o	u	
___ Lesser yellowlegs	c	o	c	o
___ Solitary sandpiper	u	u		
___ Willet	o	u	o	
___ Spotted sandpiper	c	r	c	
___ *Upland sandpiper	a	a	c	
___ Long-billed curlew	r	r		
___ Hudsonian godwit	u	r	r	

	S	SU	F	W
___ Marbled godwit	u	o	u	
___ Ruddy turnstone	x			
___ Sanderling	r	r		
___ Semipalmated sandpiper	c	r	c	
___ Western sandpiper	u	r	o	
___ Least sandpiper	c	o	c	
___ White-rumped sandpiper	u	o	u	
___ Baird's sandpiper	c	r	c	
___ Pectoral sandpiper	u	o	u	
___ Dunlin	o	r	o	
___ Stilt sandpiper	u	r	u	
___ Buff-breasted sandpiper	r	u	u	
___ Ruff	x			
___ Long-billed dowitcher	a	u	a	
___ Common snipe	c	r	c	r
___ *American woodcock	r	r	r	
 PHALAROPES				
___ Wilson's phalarope	c	o	c	
___ Red phalarope	r	r	r	
 GULLS				
___ Franklin's gull	a	a	a	
___ Little gull	r		r	
___ Bonaparte's gull	r	r	o	
___ Ring-billed gull	c	c	c	u
___ Herring gull	u	r	u	u
___ Glaucous gull				r
 TERNES				
___ Caspian tern	o	o		
___ Common tern	r		r	
___ Forster's tern	u	u	u	
___ Least tern	r	r		
___ Black tern	c	u	u	
 DOVES				
___ *Rock dove	u	u	u	u
___ *Mourning dove	a	a	a	o

S SU F W

CUCKOOS

___ *Black-billed cuckoo	c	u	u	
___ *Yellow-billed cuckoo	c	c	c	
___ Greater roadrunner	r	r	r	r

OWLS

___ *Common barn owl	o	o	u	o
___ *Eastern screech owl	c	c	c	c
___ *Great horned owl	a	a	a	a
___ Snowy owl				r
___ Burrowing owl	o	o		
___ *Barred owl	c	c	c	c
___ Long-eared owl	u	r	r	u
___ Short-eared owl	u	u	u	
___ Northern saw-whet owl	r			r



Great Horned Owl

GOATSUCKERS

___ *Common nighthawk	c	c	c	
___ Common poorwill	c	c	c	
___ *Chuck-will's-widow	c	c	c	
___ *Whip-poor-will	u	o	u	

SWIFTS

___ *Chimney swift	c	c	c	
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HUMMINGBIRDS

___ Magnificent hummingbird	x			
___ Ruby-throated hummingbird	u	u	u	

KINGFISHERS

___ *Belted kingfisher	c	c	c	o
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WOODPECKERS

___ *Red-headed woodpecker	c	c	c	u
___ *Red-bellied woodpecker	a	a	a	a
___ Yellow-bellied sapsucker	u	u	u	u
___ *Downy woodpecker	a	a	a	a
___ *Hairy woodpecker	c	c	c	c
___ *Northern flicker	c	c	c	c
___ *Pileated woodpecker	u	u	u	u



Woodpeckers

S SU F W

FLYCATCHERS

___ Olive-sided flycatcher	u	u	u	
___ *Eastern wood-pewee	c	c	c	
___ Yellow-bellied flycatcher	r	r		
___ *Acadian flycatcher	u	u	u	
___ Alder flycatcher	u	u		
___ Willow flycatcher	c	c	c	
___ Least flycatcher	c	c	c	
___ *Eastern phoebe	c	c	c	
___ *Great crested flycatcher	c	c	c	
___ *Western kingbird	c	c	u	
___ *Eastern kingbird	a	a	a	
___ *Scissor-tailed flycatcher	c	c	c	



Kingbird

LARKS

___ *Horned lark	a	c	a	a
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SWALLOWS

___ *Purple martin	c	c	c	
___ *Tree swallow	c	r	c	
___ *Northern rough-winged swallow	c	u	c	
___ Bank swallow	c	c	c	
___ *Cliff swallow	c	c	c	
___ *Barn swallow	a	a	a	

JAYS AND CROWS

___ *Blue jay	a	a	a	a
___ Pinyon jay				r
___ Clark's nutcracker	x		x	x
___ *American crow	c	c	c	c

CHICKADEES

___ *Black-capped chickadee	a	a	a	a
___ *Eastern Tufted titmouse	c	c	c	c

NUTHATCHES

___ Red-breasted nuthatch	o	u		
___ *White-breasted nuthatch	c	u	c	c
___ Pygmy nuthatch	x			x

S SU F W

CREEPERS

___ Brown creeper u u u

WRENS

___ Rock wren r r
 ___ *Carolina wren c c c c
 ___ *Bewick's wren c r c
 ___ *House wren a a c
 ___ Winter wren u u u r
 ___ Sedge wren u u u
 ___ Marsh wren u r u r

THRUSHES, BLUEBIRDS, KINGLETS

___ Golden-crowned kinglet c c c u
 ___ Ruby-crowned kinglet c u c r
 ___ *Blue-gray gnatcatcher c c c
 ___ *Eastern bluebird c c c u
 ___ Mountain bluebird u u u
 ___ Townsend's solitaire r r u
 ___ Veery u
 ___ Gray-cheeked thrush u
 ___ Swainson's thrush a u a
 ___ Hermit thrush u u u r
 ___ *Wood thrush u c u
 ___ *American robin a a a u

THRASHERS, MOCKINGBIRD

___ *Gray catbird c c c r
 ___ *Northern mockingbird c c c u
 ___ *Brown thrasher c a a r

PIPITS

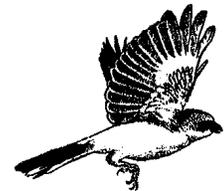
___ American pipit u u o
 ___ Sprague's pipit u u r

WAXWINGS

___ Cedar waxwing c c c

SHRIKES

___ Northern shrike u r
 ___ *Loggerhead shrike c c c r



Loggerhead Shrike

S SU F W

STARLINGS

___ *European starling a a a a

VIREOS

___ *White-eyed vireo u u o
 ___ *Bell's vireo c c c
 ___ Blue-headed vireo c c
 ___ *Yellow-throated vireo u u o
 ___ *Warbling vireo c c c
 ___ Philadelphia vireo u o
 ___ *Red-eyed vireo u u

WARBLERS

___ Blue-winged warbler r r r
 ___ Golden-winged warbler r r
 ___ Tennessee warbler c u u
 ___ Orange-crowned warbler c r c r
 ___ Nashville warbler c c
 ___ *Northern parula u r u
 ___ *Yellow warbler c u c
 ___ Chestnut-sided warbler u o u
 ___ Magnolia warbler u o u
 ___ Cape may warbler r
 ___ Black-throated blue warbler r r
 ___ Yellow-rumped warbler a r a r
 ___ Black-throated green warbler u o u
 ___ Blackburnian warbler u o u
 ___ Yellow-throated warbler r
 ___ Pine warbler x
 ___ Prairie warbler r r r
 ___ Palm warbler r r
 ___ Bay-breasted warbler r r
 ___ Blackpoll warbler u r
 ___ Cerulean warbler u
 ___ *Black-and-white warbler c u c
 ___ American redstart c r o
 ___ *Prothonotary warbler u u o
 ___ Worm-eating warbler x
 ___ Ovenbird c r c
 ___ Northern waterthrush u o u
 ___ *Louisiana waterthrush u r u
 ___ *Kentucky warbler u u u
 ___ Connecticut warbler r
 ___ Mourning warbler c c

	S	SU	F	W
___ *Common yellowthroat	a	c	c	
___ Hooded warbler	r			
___ Wilson's warbler	c		c	
___ Canada warbler	u		u	
___ *Yellow-breasted chat	u	u	u	

TANAGERS

___ *Summer tanager	u	u	u	
___ Scarlet tanager	u	r	u	

GROSBEAKS/BUNTINGS

___ *Northern cardinal	c	c	c	c
___ *Rose-breasted grosbeak	c	u	c	
___ Black-headed grosbeak	u	u	u	
___ *Blue grosbeak	u	u	o	
___ Lazuli bunting	u	r	u	
___ *Indigo bunting	c	c	c	
___ *Painted bunting	o	u	r	
___ *Dickcissel	c	c	c	

TOWHEES AND SPARROWS

___ *Eastern towhee	c	u	c	u
___ American tree sparrow	a	a	a	
___ *Chipping sparrow	c	c	c	
___ Clay-colored sparrow	c	u	c	
___ *Field sparrow	c	u	c	r
___ Vesper sparrow	c	c	c	
___ *Lark sparrow	c	c	c	
___ Savannah sparrow	c	u	c	r
___ Baird's sparrow	x		x	
___ *Grasshopper sparrow	c	c	c	
___ Henslow's sparrow	r	r	r	
___ Le Conte's sparrow	u	u	u	u
___ Nelson's sharp-tailed sparrow	r			
___ Fox sparrow	u		u	u
___ Song sparrow	c	c	c	c
___ Lincoln's sparrow	c	c	c	r
___ Swamp sparrow	c		c	u
___ White-throated sparrow	c		c	u
___ White-crowned sparrow	c	u	c	c
___ Harris' sparrow	a		c	c
___ Dark-eyed junco	c	r	c	c
___ McCown's longspur	o		o	o
___ Lapland longspur	c		c	u



Le Conte's Sparrow

	S	SU	F	W
___ Smith's longspur	u		u	r
___ Chestnut-collared longspur	r		r	r
___ Snow bunting				r

BLACKBIRDS AND ORIOLES

___ Bobolink	o	r	r	
___ *Red-winged blackbird	a	a	a	a
___ *Eastern meadowlark	a	a	a	a
___ Western meadowlark	u	o	o	u
___ Yellow-headed blackbird	u	u		
___ Rusty blackbird	u	u	u	
___ Brewer's blackbird	u		u	u
___ *Great-tailed grackle	r	r	r	r
___ *Common grackle	a	a	a	u
___ *Brown-headed cowbird	a	c	a	c
___ *Orchard oriole	c	c	u	
___ *Baltimore oriole	a	a	u	



Bobolink

FINCHES

___ Common redpoll				r
___ Purple finch	u		u	u
___ *House finch	u	u	u	u
___ Pine siskin	o	r	o	u
___ *American goldfinch	c	c	c	c
___ Red crossbill				r

SPARROW

___ *House sparrow	a	a	a	a
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Acknowledgments:

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Appendix B
Vertebrates (other than birds)
of Linn County, Kansas
Kansas Natural Heritage Inventory

Vertebrates of Linn County, Kansas
Kansas Natural Heritage Inventory

Name	Common Name	SRank
Amphibia		
<i>Ambystoma texanum</i>	Smallmouth Salamander	S5
<i>Ambystoma tigrinum</i>	Tiger Salamander	S5
<i>Necturus maculoslis</i>	Mudpuppy	S5
<i>Notophthalmus viridescens</i>	Eastern Newt	S1
<i>Bufo americanus</i>	American Toad	S5
<i>Bufo woodhousii</i>	Woodhouse's Toad	S5
<i>Acris crepitans</i>	Blanchard's Cricket Frog	S5
<i>Hyla chrysoscelis</i>	Cope's Gray Treefrog	S5
<i>Hyla versicolor</i>	Gray Treefrog	S4
<i>Pseudacris triseriata</i>	Western Chorus Frog	S5
<i>Gastrophryne olivacea</i>	Great Plains Narrowmouth Toad	S5
<i>Rana areolata</i>	Northern Crawfish Frog	S3
<i>Rana blairi</i>	Plains Leopard Frog	S5
<i>Rana catesbeiana</i>	Bullfrog	S5
<i>Rana sphenoccephala</i>	Southern Leopard Frog	S5
Mammalia		
<i>Didelphis virginiana</i>	Virginia Opossum	S5
<i>Blarina hylophaga</i>	Elliot's Short-Tailed Shrew	S4
<i>Cryptotis parva</i>	Least Shrew	S5
<i>Scalopus aquaticus</i>	Eastern Mole	S5
<i>Myotis lucifugus</i>	Little Brown Myotis	S3 S4
<i>Eptesicus fuscus</i>	Big Brown Bat	S5
<i>Dasyopus novemcinctus</i>	Nine-Banded Armadillo	S3
<i>Sylvilagus floridanus</i>	Eastern Cottontail	S5
<i>Lepus californicus</i>	Black-tailed Jackrabbit	S4 S5
<i>Tamias striatus</i>	Eastern Chipmunk	S1
<i>Marmota monax</i>	Woodchuck	S4
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel	S2
<i>Spermophilus tridecemlineatus</i>	Thirteen-lined Ground Squirrel	S5
<i>Sciurus carolinensis</i>	Eastern Gray Squirrel	S5
<i>Sciurus niger</i>	Eastern Fox Squirrel	S5
<i>Glaucomys volans</i>	Southern Flying Squirrel	S2 S3
<i>Castor canadensis</i>	American Beaver	S5
<i>Reithrodontomys fulvescens</i>	Fulvous Harvest Mouse	S2 S3
<i>Reithrodontomys megalotis</i>	Western Harvest Mouse	S5
<i>Reithrodontomys montanus</i>	Plains Harvest Mouse	S5

Vertebrates of Linn County, Kansas
Kansas Natural Heritage Inventory

Name	Common Name	SRank
<i>Peromyscus leucopus</i>	White-Footed Mouse	S5
<i>Peromyscus maniculatus</i>	Deer Mouse	S5
<i>Sigimodon hispidus</i>	Hispid Cotton Rat	S5
<i>Neotoma floridana</i>	Eastern Woodrat	S5
<i>Microtus ochrogaster</i>	Prairie Vole	S5
<i>Microtus pinetorum</i>	Woodland Vole	S5
<i>Ondatra zibethicus</i>	Common Muskrat	S5
<i>Synaptomys cooperi</i>	Southern Bog Lemming	S3?
<i>Zapus hudsonius</i>	Meadow Jumping Mouse	S3
<i>Canis latrans</i>	Coyote	S5
<i>Vulpes vulpes</i>	Red Fox	S4
<i>Urocyon cinereoargenteus</i>	Common Gray Fox	S3
<i>Procyon lotor</i>	Common Raccoon	S5
<i>Mustela frenata</i>	Long-tailed Weasel	S3
<i>Mustela nivalis</i>	Least Weasel	S3
<i>Mustela vison</i>	Mink	S3
<i>Taxidea taxus</i>	American Badger	S3
<i>Spilogale putorius</i>	Eastern Spotted Skunk	S2
<i>Mephitis mephitis</i>	Striped Skunk	S5
<i>Felis concolor</i>	Mountain Lion	SH
<i>Odocoileus virginianus</i>	White-tailed Deer	S5

Osteichthyes

<i>Polyodon spathula</i>	Paddlefish	S3
<i>Lepisosteus oculatus</i>	Spotted Gar	S1 S2
<i>Lepisosteus osseus</i>	Longnose Gar	S5
<i>Lepisosteus platostomus</i>	Shortnose Gar	S4
<i>Dorosoma cepedianum</i>	Gizzard Shad	S5
<i>Campostoma anomalum</i>	Central Stoneroller	S5
<i>Ctenopharyngodon idella</i>	Grass Carp	SE
<i>Cyprinus carpio</i>	Common Carp	SE
<i>Nocomis biguttatus</i>	Horneyhead Chub	S1 S2
<i>Notemigonus crysoleucas</i>	Golden Shiner	S5
<i>Notropis atherinoides</i>	Emerald Shiner	S5
<i>Notropis buechanani</i>	Ghost Shiner	S5
<i>Notropis rusellus</i>	Rosyface Shiner	S4
<i>Notropis stramineus</i>	Sand Shiner	S5
<i>Phenacosius mirabilis</i>	Suckermouth Minnow	S5

Vertebrates of Linn County, Kansas
Kansas Natural Heritage Inventory

Name	Common Name	SRank
<i>Pimephales notatus</i>	Bluntnose Minnow	S5
<i>Pimephales promelas</i>	Fathead Minnow	S5
<i>Pimephales vigilax</i>	Bullhead Minnow	S5
<i>Semotilus atromaculatus</i>	Creek Chub	S5
<i>Cyprinella lutrensis</i>	Red Shiner	S5
<i>Lythrurus umbratilis</i>	Redfin Shiner	S5
<i>Macrhyssopsis storeriana</i>	Silver Chub	S3 S4
<i>Carpionodes carpio</i>	River Carpsucker	S5
<i>Catostomus commersoni</i>	White Sucker	S5
<i>Ictiobus bubalus</i>	Smallmouth Buffalo	S5
<i>Ictiobus cyprinellus</i>	Bigmouth Buffalo	S5
<i>Ictiobus niger</i>	Black Buffalo	Ss
<i>Moxostoma erythrurum</i>	Golden Redhorse	S5
<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	S5
<i>Ictalurus furcatus</i>	Blue Catfish	S5
<i>Ictalurus punctatus</i>	Channel Catfish	S5
<i>Noturus flavus</i>	Stonecat	S5
<i>Noturus gyrinus</i>	Tadpole Madtom	S2 S3
<i>Noturus nocturnus</i>	Freckled Madtom	S4
<i>Noturus exilis</i>	Slender Madtom	S4
<i>Pylodictis olivaris</i>	Flathead Catfish	S5
<i>Ameiurus melas</i>	Black Bullhead	S5
<i>Ameiurus natalis</i>	Yellow Bullhead	S5
<i>Ameiurus nebulosus</i>	Brown Bullhead	SE
<i>Fundulus notatus</i>	Blackstripe Topminnow	S5
<i>Labidesthes sicculus</i>	Brook Silverside	S4
<i>Lepomis cyanellus</i>	Green Sunfish	S5
<i>Lepomis gulosus</i>	Warmouth	S4 S5
<i>Lepomis humilis</i>	Orangespotted Sunfish	S5
<i>Lepomis macrochirus</i>	Bluegill	S5
<i>Lepomis megalotis</i>	Longear Sunfish	S5
<i>Micropterus dolomieu</i>	Smallmouth Bass	S3 S4
<i>Micropterus salmoides</i>	Largemouth Bass	S5
<i>Pomoxis annularis</i>	White Crappie	S5
<i>Pomoxis nigromaculatus</i>	Black Crappie	SE
<i>Etheostoma blennioides</i>	Greenside Darter	S2
<i>Etheostoma flabellare</i>	Fantail Darter	S3
<i>Etheostoma nigrum</i>	Johnny Dater	S3 S4
<i>Etheostoma spectabile</i>	Orangethroat Darter	S5
<i>Perca flavescens</i>	Yellow Perch	SE

Vertebrates of Linn County, Kansas
 Kansas Natural Heritage Inventory

Name	Common Name	SRank
<i>Percina caprodes</i>	Logperch	S5
<i>Percina phoxocephala</i>	Slenderhead Darter	S5
<i>Stizostedion vitreum</i>	Walleye	S5
<i>Aplodinotus grunniens</i>	Freshwater Drum	S5

Reptilia

<i>Chelydra serpentina</i>	Common Snapping Turtle	S5
<i>Chrysemys picta</i>	Western Painted Turtle	S5
<i>Graptemys geographica</i>	Common Map Turtle	S2
<i>Graptemys pseudogeographica</i>	Ouachita Map Turtle	S4
<i>Terrapene carolina</i>	Three-toed Box Turtle	S4
<i>Terrapene ornata</i>	Ornate Box Turtle	S5
<i>Pseudemys scripta</i>	Red-eared Slider	S5
<i>Trionyx muticus</i>	Midland Smooth Softshell	S4
<i>Trionyx spiniferus</i>	Western Spiny Softshell	S5
<i>Ophisaurus attenuatus</i>	Western Slender Glass Lizard	S5
<i>Crotaphytus collaris</i>	Eastern Collared Lizard	S4
<i>Sceloporus undulatus</i>	Eastern Fence Lizard	S5
<i>Eumeces anthracinus</i>	Southern Coal Skink	S5
<i>Eumeces fasciatus</i>	Five-Lined Skink	S5
<i>Eumeces laticeps</i>	Broadhead Skink	S2
<i>Eumeces obsoletus</i>	Great Plains Skink	S5
<i>Scincella lateralis</i>	Ground Skink	S5
<i>Cnemidophorus sexlineatus</i>	Prairie-Lined Racerunner	S5
<i>Carphophis amoenus</i>	Western Worm Snake	S5
<i>Coluber constrictor</i>	Eastern Yellowbelly Racer	S5
<i>Diadophis punctatus</i>	Prairie Ringneck Snake	S5
<i>Elaphe guttata</i>	Great Plains Rat Snake	S5
<i>Elaphe obsoleta</i>	Black Rat Snake	S5
<i>Heterodon platirhinus</i>	Eastern Hognose Snake	S3
<i>Lampropeltis calligaster</i>	Prairie Kingsnake	S5
<i>Lampropeltis getula</i>	Common Kingsnake	S5
<i>Lampropeltis triangulum</i>	Milk Snake	S4
<i>Nerodia erythrogaster</i>	Blotched Water Snake	S5
<i>Nerodia rhombifer</i>	Diamondback Water Snake	S5
<i>Nerodia sipedon</i>	Northern Water Snake	S5
<i>Opheodrys aestivus</i>	Rough Green Snake	S4
<i>Pituophis melanoleucus</i>	Bullsnake	S5
<i>Regina grahamii</i>	Graham's Crayfish Snake	S4

Vertebrates of Linn County, Kansas
Kansas Natural Heritage Inventory

Name	Common Name	SRank
<i>Storeria dekayi</i>	Texas Brown Snake	S5
<i>Storeria occipitomaculata</i>	Northern Redbelly Snake	S5
<i>Tantilla gracilis</i>	Flathead Snake	S4
<i>Thamnophis proximus</i>	Western Ribbon Snake	S5
<i>Thamnophis sirtalis</i>	Red-Sided Garter Snake	S5
<i>Tropidoclonion lineatum</i>	Lined Snake	S5
<i>Agkistrodon contortrix</i>	Copperhead	S5
<i>Crotalus horridus</i>	Timber Rattlesnake	S3
<i>Sistrurus catenatus</i>	Massasauga	S4

162 Records Processed

Explanation of the Natural Heritage Ranking System

Each species is given two ranks. A global (G) rank reflecting its rarity throughout the world and an state (S) rank reflecting its rarity within Kansas.

Global Rank

- G1 = Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2 = Imperiled globally because of rarity (six to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it vulnerable to extinction throughout its range.
- G3 = Either very rare and local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range; in the range of 21 to 100 occurrences.
- G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
- GH = Historically known, expectation that it might be rediscovered.
- GX = Believed to be extinct.
- GU = Rarity unknown.

State Rank

- S1 = Critically imperiled in Kansas because of extreme rarity IS or fewer occurrences or very few remaining individuals or acres or because of some factor(s) making it especially vulnerable to extinction from the state.
- S2 = Imperiled in Kansas because of rarity (six to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
- S3 = Rare in Kansas (on the order of 21 to 100 occurrences).
- S4 = Apparently secure in Kansas, with many occurrences.
- S5 = Demonstrably secure in Kansas.
- SH = Of historical occurrence in Kansas, perhaps not having been verified in the past 20 years, and suspected to be still extant in the state.
- SX = Apparently extirpated from Kansas.
- SU = Rarity in Kansas unknown.

Other Rank Symbols

- ? = Denotes uncertainty about the rank.
- Q = Questions exist about the taxonomic status of the species.
- T = May appear with the global rank, and indicates a global rank for a particular subspecific taxon.

Explanation of Federal and State Status Codes

Federal (status determined by U.S. Fish and Wildlife Service, Office of Endangered Species)

LE = Listed Endangered.

PE = Proposed for Listing as Endangered.

LT = Listed Threatened.

PT = Proposed for Listing as Threatened.

LELT=Listed Endangered in some regions and Listed Threatened in other regions.

C1= Category 1 species for Listing. Species determined to be in need of protection by listing the species as Endangered or Threatened.

C2= Category 2 species for Listing. Species needs additional study to determine whether it should be Threatened or Endangered.

C2*= Category 2 species recommended for elevation to C1 status.

3C = Category 3 species. Currently, the species is not recommended for Listing as Threatened or Endangered.

State (Status determined by Kansas Department of Wildlife and Parks)

E = Endangered

T = Threatened

C = In Need of Conservation

U = Unclassified (no protective status)

Appendix C
Kansas Department of Wildlife and Parks
Threatened and Endangered Species
Known or Likely to Occur
in
Linn County, Kansas

Kansas Department of Wildlife and Parks
Threatened and Endangered Species Known or Likely to Occur
in
Linn County, Kansas

Bald eagle (*Haliaeetus leucocephalus*) - Endangered: Known to occur as a regular winter resident along the Marais des Cygnes River and at wetlands. Critical habitat has been designated. Endangered nationally.

Broadhead skink (*Eumeces laticeps*) - Threatened: may occur in mature woodlands where it depends upon tree cavities for habitat.

Central newt (*Notophthalmus viridescens Louisianensis*) - Threatened: Known to occur historically and likely still occurs in moist bottomland woodlands where small weedy pools are found.

Eastern hognose snake (*Heterodon platyrhinos*) - Threatened: May occur in suitable habitat. Prefers light loamy to sandy soils near streams and wetlands. Tends to avoid dense woodland.

Eastern spotted skunk (*Spilogale putorius interrupta*) - Threatened: May occur near woodland edges, in grasslands with shrub clumps or rock outcrops, and in abandoned farmsteads where old buildings or debris piles provide cover.

Eskimo curlew (*Numenius borealis*) - Endangered: formerly a regular spring transient using open fields and heavily grazed or burned grasslands. Was most common in the eastern 2/3 of the state, but has not been verified in Kansas since 1902. Recent sightings north of Kansas indicate a few birds may still migrate through the state. Endangered nationally.

Flat floater (*Anodonta suborbiculata*) - Endangered: This freshwater mussel is known to occur in suitable mud-bottomed permanent oxbow lakes along the Marais des Cygnes River. Critical habitat has been designated.

Green frog (*Rana clamitans melanota*) - Threatened: May occur in suitable backwater areas near streams and small impoundments.

Hornyhead chub (*Nocomis biguttatus*) - Threatened: Known to occur historically and may still occur in larger tributaries to the Marais des Cygnes River. Requires gravelly low gradient streams with pools and slow to moderate runs. Often associated with aquatic vegetation.

Least tern (*Sterna antillarum*) - Endangered: Known to occur as an uncommon seasonal transient or summer visitant. Endangered nationally.

Northern crawfish frog (*Rana areolata circumosa*) - Threatened: Known to occur in poorly drained meadows and lowlands where temporary rain-filled pools are used for breeding. Spends most of its life below ground in crayfish burrows. Critical habitat has been designated.

Northern redbelly snake (*Storeria occipitomaculata occipitomaculata*) - Threatened: May occur in mature upland woodlands having dense leaf litter, rocks, logs, and other debris present for cover.

Northern spring peeper (*Pseudacris crucifer crucifer*) - Threatened: Known to occur historically and may still occur as isolated colonies in suitable habitat. Requires small pools and wetlands with abundant aquatic vegetation located near woodlands.

Peregrine falcon (*Falco peregrinus*) - Endangered: Known to occur as an uncommon seasonal transient or winter visitant. Prefers areas with large concentrations of waterfowl. Endangered nationally.

Piping plover (*Charadrius melodus*) - Threatened: Known to occur as a rare seasonal transient at sparsely vegetated shorelines of stream, marshes, or impoundments. Threatened nationally.

Snowy plover (*Charadrius alexandrinus*) - Threatened: Known to occur as an occasional seasonal transient and summer visitant at sparsely vegetated wetlands and impoundment shorelines.

Western earth snake (*Virginia valeriae elegans*) - Threatened: Known to occur in rocky hillsides in moist woodlands. Spends daylight hours beneath rocks, logs, or in leaf-litter.

White-faced ibis (*Plegadis chihi*) - Threatened: Known to occur as an occasional seasonal or summer visitant at wetlands and impoundments.

Effective August, 1989

Appendix D

Executive Order 12996

EXECUTIVE ORDER 12996

Management and General Public Use of the National Wildlife Refuge System

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in furtherance of the purposes of the Fish and Wildlife Act of 1956 (16 U.S.C. 742a), the Fish and Wildlife Coordination Act (16 U.S.C. 661), the National Wildlife Refuge System Administration Act (16 U.S.C. 668dd), the Refuge Recreation Act (16 U.S.C. 460k), the Endangered Species Act of 1973 (16 U.S.C.1531), the Emergency Wetlands Resource Act (16 U.S.C. 3901), the National Environmental Policy Act (42 U.S.C. 4321), and other pertinent statutes, and in order to conserve fish and wildlife and their habitat, it is ordered as follows:

Section 1. The Mission of the National Wildlife Refuge System. The mission of the National Wildlife Refuge System ("Refuge System") is to preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources of the United States for the benefit of present and future generations.

Sec. 2. Guiding Principles. To help ensure a bright future for its treasured national heritage, I hereby affirm the following four guiding principles for management and general public use of the Refuge System:

- (a) **Public Use.** The Refuge System provides important opportunities for compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation.
- (b) **Habitat.** Fish and wildlife will not prosper without high-quality habitat, and without fish and wildlife, traditional uses of refuges cannot be sustained. The Refuge System will continue to conserve and enhance the quality and diversity of fish and wildlife habitat within refuges.
- (c) **Partnerships.** America's sportsmen and women were the first partners who insisted on protecting valuable wildlife habitat within wildlife refuges. Conservation partnerships with other Federal agencies, State agencies, Tribes, organizations, industry, and the general public can make significant contributions to the growth and management of the Refuge System.
- (d) **Public Involvement.** The public should be given a full and open opportunity to participate in decisions regarding acquisition and management of our National Wildlife Refuges.

Sec. 3. Directive to the Secretary of the Interior. To the extent consistent with existing laws and interagency agreements, the Secretary of the Interior, in carrying out his trustee and stewardship responsibilities for the Refuge System is directed to:

- (a) recognize compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation as priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- (b) provide expanded opportunities for these priority public uses within the Refuge System when they are compatible and consistent with sound principles of fish and wildlife management, and are otherwise in the public interest;
- © ensure that such priority public uses receive enhanced attention in planning and management within the Refuge System;
- (d) provide increased opportunities for families to experience wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting;
- (e) ensure that the biological integrity and environmental health of the Refuge System is maintained for the benefit of present and future generations of Americans;
- (f) continue, consistent with existing laws and interagency agreements, authorized or permitted uses of units of the Refuge System by other Federal agencies, including those necessary to facilitate military preparedness;
- (g) plan and direct the continued growth of the Refuge System in a manner that is best designed to accomplish the mission of the Refuge System, to contribute to the conservation of the ecosystems of the United States, and to increase support for the Refuge System and participation from conservation partners and the public;
- (h) ensure timely and effective cooperation and collaboration with Federal agencies and State fish and wildlife agencies during the course of acquiring and managing National Wildlife Refuges;
- (I) ensure appropriate public involvement opportunities will be provided in conjunction with refuge planning and management activities; and
- (j) identify, prior to acquisition, existing compatible wildlife-dependent uses of new refuge lands that shall be permitted to continue on an interim basis pending completion of comprehensive planning.

Sec. 4. Judicial Review. This order does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.

WILLIAM J. CLINTON

THE WHITE HOUSE,
March 25, 1996

Appendix E

References

Brown, E.

- 1989 *What's it Worth? Dollars and Cents in Fish and Wildlife Recreation.* Missouri Conservationist, February, 1989.

Collins, J. T.

- 1974 *Amphibians and Reptiles in Kansas.* University of Kansas, Museum of Natural History, Public Educations Series No. 2.

Cowardin, L.M., V. Carter and F.C. Golet.

- 1979 *Classification of Wetlands and Deepwater Habitats of the United States.* Fish and Wildlife Service, Office of Biological Services.

Keystone Center.

- 1991 *Biological Diversity on Federal Lands - Report of a Keystone Policy Dialogue.* The Keystone Center, Keystone, CO.

Nordstrom, S.

- 1988 *National Wildlife Refuges and Local Communities: A Report on the Economic Benefits.* Utah State University. Logan, UT

Ohlenbusch, P.D., E.P. Hodges, and S. Pope.

- 1983 *Range Grasses of Kansas.* Cooperative Extension Service, Kansas State University. Manhattan, KS.

Tiner, R.W.,

- 1984 *Wetlands of the United States: Current Status and Recent Trends.* Fish and Wildlife Service, Washington, D.C.

U.S. Department of Agriculture, Soil Conservation Service

- 1981 *Soil Survey of Linn and Miami Counties, Kansas*

U.S. Department of Interior, Fish and Wildlife Service

- 1988 *Concept Plan for Waterfowl Habitat Protection - Prairie Potholes and Parklands.* FWS Region 3, Minneapolis, MN and Region 6, Denver, CO.

U.S. Department of Interior, Fish and Wildlife Service

- 1990 *Conservation of Avian Diversity in North America.* Office of Migratory Bird Management. Washington, D.C.

U.S. Department of Interior, Fish and Wildlife Service

- 1978 *Bottomland Hardwood Preservation Program, Lower Mississippi River Delta, Habitat Category 7.* FWS Region 4, Atlanta, GA.

U.S. Department of Interior, Fish and Wildlife Service

1986 *North American Waterfowl Management Plan - a Strategy for Cooperation*. Fish and Wildlife Service and Canadian Wildlife Service.

U.S. Department of Interior, Geological Survey

---- *Annual Water Reports for Water Years 1959-1988*. U.S. Geological Survey, Washington, D.C.

U.S. Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSM)

1991 *Draft EIS - Proposed Revision to the Permanent Program Regulations Implementing Section 522(e) of the Surface Mining Control and Reclamation Act of 1977*. Washington, D.C.

U.S. Environmental Protection Agency

1977 *Quality Criteria For Water*. Washington, D.C.

