

Appendix I.

Species in Greatest Need of Conservation for Illinois as identified by eight criteria.

Abbreviations used: **FE** - Federally Endangered; **FT** - Federally Threatened; **FC** – Federal candidate for listing under the Endangered Species Act; **XN** - experimental, nonessential population of a federally-listed species; **SE** - State Endangered; **ST** - State Threatened; **RR** –recent recovery/delisted within 10 years; **G1, G2, G3** - Global Conservation Ranks as indicated

by NatureServe Explorer (<http://www.natureserve.org/explorer/> Accessed March 2004)

Criteria for Selecting Illinois' Species in Greatest need of Conservation:

1. All species listed as threatened or endangered in Illinois, including federally listed species that occur within the State.
2. Species with a global conservation rank indicator of G1, G2, or G3.
3. Species is rare (small or low population size, density or range) or has significantly declined in abundance or distribution from historical levels.
4. Species is dependent upon a rare or vulnerable habitat for one or more life history needs (breeding, migration, wintering).
5. Species is endemic to Illinois, or the Illinois population is disjunct from the rest of the species' range.
6. Illinois' population of a species represents a significant proportion of the species' global population.
7. Species is representative of broad array of other species found in a particular habitat.
8. Species' status is poorly known, but available evidence suggests conservation

X. Appendices - Appendix I

APPENDIX I.

INVERTEBRATES		Criteria							
Name	Habitat Association	1	2	3	4	5	6	7	8
MOLLUSKS									
Acella haldemani (spindle lymnaea)			G3	1					
Alasmidonta viridis (slippershell mussel)	Streams	ST		1					
Arcidens confragosus (rock pocketbook)	Streams, large rivers			1					
Cincinnatia integra (midland slitsnail)			G3	1					
Cyclonaias tuberculata (purple wartyback)	Streams, large rivers	ST		1					
Cyprogenia stegaria (fanshell mussel)	Large rivers	FE SE	G1	1					
Cumberlandia monodonta (spectacle case mussel)	Large rivers	FC SE	G2	1					
Discus macclintocki (Iowa Pleistocene snail)	Algific slopes	FE SE	G1	1					
Ellipsaria lineolata (butterfly)	Large rivers	ST		1					
Elliptio crassidens (elephant-ear mussel)	Large rivers	ST		1					
Elliptio dilatata (spike)	Streams	ST		1					
Epioblasma triquetra (snuffbox mussel)	Streams	SE	G3	1					
Euchemotrema (= Stenotrema) hubrichti (carinate pillsnail)			G1	1					
Fontigens aldrichi (Hoosier amnicola)			G3	1					
Fontigens antroecetes (Hydrobiid cavesnail)			G2	1					
Fusconaia ebena (ebonyshell)	Large rivers	ST		1					
Gastrocopta rogersensis (a snaggletooth)			G2	1					

snail)										
Lampsilis abrupta (pink mucket)	Large rivers	FE SE	G2	1						
Lampsilis fasciola (wavy-rayed lampmussel)	Streams	SE		1						
Lampsilis higginsii (Higgins eye)	Large rivers	FE SE	G1	1						
Lasmigona compressa (creek heelsplitter)	Streams			1						
Lasmigona costata (fluted shell)	Streams			1						
Ligumia recta (black sandshell)	Streams, Large rivers	ST		1						
Lithasia armigera (armored rocksnail)			G3	1						
Lithasia obovata (Shawnee rocksnail)			G3	1						
Lithasia verrucosa (varicose rocksnail)			G3	1						
Megapallifera ragsdalei (Ozark mantleslug)			G2	1						
Micromenetus sampsoni			G2	1						
Oxyloma salleanum (Louisiana ambersnail)			G3	1						
Paravitrea significans (domed supercoil)			G3	1						
Plethobasus cooperianus (orange-foot pimpleback)	Large rivers	FE SE	G1	1						
Plethobasus cyphus (sheepnose mussel)	Streams, Large rivers	FC SE	G3	1						
Pleurobema clava (clubshell)	Streams	FE SE	G2	1						
Pleurobema cordatum (Ohio pigtoe)	Large rivers	SE	G3	1						
Pleurocera alveare (rugged hornsnail)			G3	1						
Potamilus capax (fat pocketbook pearly mussel)	Large river	FE SE	G1	1						
Ptychobranthus fasciolaris (kidneyshell mussel)	Streams, Large rivers	SE		1						
Pyrgulopsis scalariformis (moss pyrg)			G1	1						
Quadrula cylindrica (rabbitsfoot mussel)	Streams, Large rivers	SE	G3	1						
Quadrula metanerva (monkeyface)	Streams, Large rivers			1						
Simpsonaias ambigua (salamander mussel)	Streams	SE	G3	1						
Somatogyrus depressus (sandbar pebblesnail)			G2	1						
Stagnicola woodruffi (coldwater pondsnail)			G3	1						
Strobulops affinis (eightfold pinecone)			G3	1						
Succinea forsheyi (spotted ambersnail)			G3	1						
Triodopsis discoidea (rivercliff threetooth)			G3	1						
Triodopsis fradulenta (baffled three-tooth)			G3	1						
Toxolasma lividus (purple lilliput mussel)	Streams	SE	G2	1						
Valvata perdepressa (purplecap valvata)			G3	1						
Vallonia gracilicosa (multirib vallonia)			G3	1						
Venustaconcha ellipsiformis (ellipse)	Streams		G3	1						
Villosa iris (rainbow mussel)	Streams								SE	
Villosa lienosa (little spectacle case mussel)	Streams	ST		1						
Viviparus intertextus (rotund mysterysnail)			G2	1						
Viviparus subpurpureus (olive mysterysnail)			G2	1						
Xolotrema obstrictum (sharp wedge)			G3	1						
Zonitoides limatulus (dull gloss)			G3	1						

CRUSTACEANS									
Bactrurus brachycaudus				G3	1				
Cambarus laevis (crayfish)				G3	1				
Caecidotea beattyi (a cave obligate isopod)	Caves Caves			G3	1				
Caecidotea bicrenata (a cave obligate isopod)				G3	1				
Caecidotea lesliei (isopod)	Groundwater		SE		1				
Caecidotea packardi (a cave obligate isopod)	Caves			G3	1				
Caecidotea spatulata (a cave obligate isopod)	Caves		SE	G3	1				
Caecidotea tridentata				G3	1				
Crangonyx anomalus (anomalous spring amphipod)	Seeps, springs, caves		SE		1				
Crangonyx packardi (amphipod)	Caves		SE	G3	1				
Diacyclops clandestinus (a cave obligate copepod)	Caves			G3	1				
Gammarus acherondytes (Illinois cave amphipod)	Caves		FE SE	G1	1				
Gammarus bousfieldi (Bousfield's amphipod)	Gravel shoals of Ohio River			G1	1				
Orconectes illinoisensis (Illinois crayfish)				G3	1				
Orconectes indianensis (Indiana crayfish)	rocky streams		SE	G3	1				
Orconectes kentuckiensis (Kentucky crayfish)	rocky streams		SE	G2	1				
Orconectes lancifer (shrimp crayfish)	deep water at Horseshoe Lake		SE		1				
Orconectes placidus (bigclaw crayfish)	gravel, rocky streams & rivers		SE		1				
Orconectes stannardi (crayfish)				G2	1				
Stygobromus iowae (Iowa amphipod)	Algific slopes		SE	G3	1				
Stygobromus subtilis (subtle cave amphipod)	Caves			G3	1				
Order Anostraca	ephemeral wetlands					1			1
INSECTS									
Abagrotis orbis	sand prairie				1				
Acanthametropus pecatonica (Pecatonica River mayfly)				G2	1				
Acontia lactipennis	sand prairie				1				
Acrolepiopsis leucoscia	sedge meadow				1				
Acronicta tritona					1				
Aeshna mutata (spatterdock darner)				G3	1				
Aflexia rubranura (redveined prairie leafhopper)	xeric/mesic prairie		ST	G1	1				
Agonopterix hyperella	wet prairie				1				
Agonopterix lythrella	wet prairie				1				

Agrotis stigmosa	sand savanna			1					
Allocaupnia illinoensis (a stonefly)			G3	1					
Ambesa laetella	sand			1					
Amblyscirtes aesculapius (lace-winged roadside-skipper)			G3	1					
Amblyscirtes carolina (Carolina roadside skipper)			G3	1					
Amblyscirtes linda (Linda's roadside-skipper)			G2	1					
Amblyscirtes reversa (revered roadside-skipper)			G2	1					
Ancylis semiovana	sand savanna			1					
Apainea lutosa	prairie			1	1				
Apamea (Agroperina) lutosa	prairie			1					
Apamea (Crymodes) relicina	prairie			1					
Apamea alia	prairie			1					
Apamea impulsiva	prairie			1					
Apamea indocilis	prairie			1					
Apamea lignicolora	prairie			1					
Apamea plutonia	prairie			1	1				
Apodrepanulatrix liberaria	sand savanna								
Archanara laeta	sedge meadow			1					
Archanara subflava	prairie			1					
Aristotelia elegantella	prairie			1					
Arphia pseudonietana	gravel prairie			1					
Atascosa glareosella	dunes			1					
Aterpia approximata	wet prairie			1					
Atrytone arogos (arogos skipper)	prairie	SE	G3	1					
Atrytonopsis hianna	sand prairie			1					
Attenuipyga vanduzeei	xeric prairie			1					
Auridius helvus				1					
Bagisara gulnare				1					
Boloria selene myrina	wet prairie			1					
Bombus fraternus				1					
Bruchomorpha extensa	mesic prairie			1					
Bruchomorpha oculata	prairie			1	1				
Calephelis borealis (northern metalmark)			G3	1					
Calephelis muticum (swamp metalmark)	fen	SE	G3	1					
Callophrys irus (frosted elfin)	sand savanna		G2	1					
Callophrys polios	sand prairie			1					
Calyptra canadensis	wet prairie			1					
Camelobaetis waltzi (a mayfly)			G3	1					
Capis curvata	prairie			1					
Carectocultus perstrialis				1					
Carmenta anthrasipennis	mesic/wet prairie			1					
Catocala abbreviatella	xeric prairie/savanna			1					

Catocala amestris	sand savanna			1					
Catocala antinympha	sand savanna			1					
Catocala atocala (an underwing moth)			G3	1					
Catocala dulciola (quiet or sweet underwing)			G3	1					
Catocala gracilis	sand savanna			1					
Catocala marmorata (marbled underwing)			G3	1					
Catocala praeclara	prairie			1					
Catocala relictata	sand savanna			1					
Catocala similis	sand savanna			1					
Catocala sordida	sand savanna			1					
Catocala whitneyi (Whitney's underwing)	hill prairie		G3	1					
Centropilum walshi (a mayfly)			G2	1					
Chlorotettix dentatus	wet prairie/woods			1					
Chlorotettix fumidus	silt loam savanna			1					
Chlorotettix limosus	wet prairie			1					
Chlosyne gorgone carlota	xeric prairie			1					
Chlosyne harrisii	Fens			1					
Chortodes (Hypocoena) defecta	wet prairie			1					
Chortodes (Hypocoena) enervata	wet prairie			1					
Chortodes (Hypocoena) inquinata	sedge meadow			1					
Cicaudula cyperacea	prairie			1	1				
Cicaudula straminea	prairie			1	1				
Cicindela ancocisconensis (a tiger beetle)			G3	1					
Cloeon cognatum (a mayfly)			G3	1					
Commellus colon	sand prairie			1					
Cosmotettix beirni	wet savanna/flat woods			1					
Cosmotettix bilineatus	wet prairie			1					
Cosmotettix delector	wet prairie			1					
Cosmotettix luteocephalus	wet prairie			1					
Crambus girardellus	sand prairie			1					
Crambus murellus	xeric prairie			1					
Crambus watsonellus	calcareous prairie								
Cryptocala acadensis	sand prairie			1					
Cyclophora pendulinaria	savanna			1					
Deltocephalus gnarus	sedge meadow			1					
Derrima stellata	sand prairie			1					
Destria fumida	wet prairie			1					
Diapheromera velii	xeric prairie			1					
Diceroprocta vitripennis	sand savanna			1					
Dicranopselaphus (variegated false water penny beetle)			G1	1					
Digrammia ordinata	prairie			1					
Elaphria chalcedonia	wet prairie			1					
Enodia creola (creole pearly-eye)			G3	1					
Epipaschiinae				1					

Erastria coloraria	sand savanna			1					
Eremobina jocasta	sand prairie			1					
Eritettix simplex	sand prairie			1					
Erynnis icelus	prairie/sand savanna			1					
Erynnis lucilius	sand savanna			1					
Erynnis martialis (mottled duskywing)	prairie/savanna		G3	1					
Erynnis persius	sand savanna			1					
Euchlaena milnei (a geometrid moth)			G2	1					
Euchloe olympia	sand savanna			1					
Eucoptocnemis fimbriaris	sand prairie			1					
Eucosma bipunctella	mesic prairie			1					
Eucosma fulminana	mesic prairie			1					
Eucosma n.s.	mesic/wet prairie			1					
Eucosma palabundana	sand prairie			1					
Eucosma pandana	prairie			1					
Eucosma rusticana	mesic prairie			1					
Eucosma sombreana	sedge meadow			1					
Euphyes bimacula	mesic/wet prairie			1					
Euphyes dion	prairie			1	1				
Euphyes dukesi (Duke's skipper)			G3	1					
Euphyes niveilinea	prairie			1	1				
Euscelis sahlbergi	wet prairie			1					
Euxoa albipennis	prairie			1					
Euxoa aurulenta	dunes			1					
Euxoa immixta	sand prairie			1					
Euxoa manitobana	sand prairie			1					
Euxoa scandens	sand prairie			1					
Evora hemidesma	prairie			1					
Fagitana littera	wet prairie			1					
Fitchiella robertsoni	hill prairie			1					
Flexamia abbreviata	dry prairie			1					
Flexamia albida	hill prairie			1					
Flexamia areolata	prairie			1	1				
Flexamia atlantica	wet prairie			1					
Flexamia grammica	sand prairie			1					
Flexamia pyrops	xeric prairie			1					
Gabara subnivosella	wet sand savanna			1					
Glaucopsyche lygdamus	savanna			1					
Gomphus ventricosus (skillet clubtail)			G3	1					
Graminella oquaka	prairie			1	1				
Grapholita tristrigana	prairie			1					
Gryllotalpa major (prairie mole cricket)			G3	1					
Hadena capsularis	sand savanna			1					
Hadena ectypa	sand savanna			1					
Hebecephalus signatifrons									1
Hemaris gracilis	sand savanna			1					

Hemileuca maia	sand savanna			1					
Hemileuca nevadensis	sand savanna			1					
Heptagenia patoka (a mayfly)			G2	1					
Heptagrotis phyllophora				1					
Hesperia attalus (dotted skipper)			G3	1					
Hesperia dacotae (Dakota skipper)	xeric prairie		FC G2	1					
Hesperia leonardus	xeric prairie			1					
Hesperia metea (cobweb skipper)	sand prairie		ST	1					
Hesperia ottoe (ottoe skipper)	xeric prairie		ST G3	1					
Hesperia sassacus	sand savanna			1					
Homoeoneuria ammophila (a sand-filtering mayfly)			G3	1					
Homorthodes furfurata	sand prairie			1					
Hydraecia (Hydroecia) immanis	prairie			1					
Hydraecia stramentosa	mesic prairie			1					
Hyparpax aurora	sand savanna			1					
Hydroperla fugitans (a spring stonefly)			G3	1					
Incisalia polios (hoary elfin)			SE	1					
Iodopepla u-album	sand prairie			1					
Isogenoides varians (a stonefly)			G3	1					
Itame amboflava	mesic/wet prairie			1					
Kansendria kansiensis	sand prairie			1					
Laevicephalus minimus	xeric prairie			1					
Laevicephalus peronatus	savanna			1					
Lemmeria digitalis	wet prairie			1					
Lethe appalachia				1					
Leucania extincta	sand prairie			1					
Limotettix elegans	wet prairie			1					
Limotettix nigrax	wet prairie/savanna			1					
Limotettix parallelus	wet prairie			1					
Limotettix pseudospagneticus	wet prairie			1					
Limotettix truncatus	wet prairie			1					
Lonatura catalina	xeric prairie			1					
Loxagrotis grotei	xeric prairie			1					
Loxocrambus awemensis	dunes			1					
Lycaeides melissa samuelis (Karner blue butterfly)	sand savanna		FE SE	1					
Lycaena helloides	wet prairie			1					
Lycaena xanthoides	wet prairie			1					
Macrochilo (Hormisa) bivittata	prairie			1					
Macrochilo (Hormisa) litophora	prairie			1					
Macrochilo (Hormisa) louisiana	prairie			1					
Macrosteles pottoria	sedge meadows			1					
Melanchra assimilis	prairie fens			1					
Melanomma auricinctaria	savanna			1					
Melanoplus dawsoni	sand prairie			1					

Memnonia panzeri				1					
Meropleon diversicolor	sedge meadow			1					
Mesamia straminea	mesic prairie			1					
Nannothemis bella (elfin skimmer)	fen/seep	ST		1					
Neoconocephalus lyristes	sedge meadow/fen			1					
Nephoterix dammersi	xeric prairie			1					
Nicrophorus americanus (American burying beetle)			G2	1					
Nomotettix parvus (low-ridged pygmy grasshopper)			G3	1					
Oarisma powesheik (Powesheik skipperling)	wet prairie		G2	1					
Okanagana balli	silt loam prairie			1					
Olethreutes comandrana	prairie			1					
Olethreutes osmundana	sand prairie/savanna								
Oligia obtusa	sand savanna			1					
Oncocnemis riparia	sand prairie			1					
Oncocnemis saundersiana	prairie			1					
Oncocnemis viriditincta	sand savanna			1					
Oncopodura iowae (a cave isopod springtail)			G3	1					
Pachypolia atricornis (three-horned moth)			G3	1					
Paectes abrostolella	sand prairie			1					
Palus bilineatus	prairie			1	1				
Palus delector	prairie			1	1				
Palus luteocephalus	prairie			1	1				
Pangrapta decoralis	sand prairie			1					
Paraleptophlebia sticta (a mayfly)			G1	1					
Paraphlepsius lupalus (leafhopper)		SE		1					
Papaipema aerata	unknown			1					
Papaipema araliae (Aralia shoot borer moth)			G3	1					
Papaipema beeriana (blazing star stem borer)	prairie/fen		G3	1					
Papaipema birdi	wet prairie/fen			1					
Papaipema cerina	savanna			1					
Papaipema cerrusata	wet prairie/fen			1					
Papaipema eryngii (rattlesnake-master borer moth)	wet/mesic prairie	SE	G1	1					
Papaipema eupatorii	wet prairie			1					
Papaipema harrissi	fen			1					
Papaipema inquaesita	wet prairie			1					
Papaipema leucostigma	sand savanna			1					
Papaipema limpida	mesic/wet prairie			1					
Papaipema lysimachiae	sedge meadow			1					
Papaipema maritima	prairie/fen			1					

Papaipema necopina	savanna			1					
Papaipema nelita	fen/savanna			1					
Papaipema nepheleptena	wet prairie/fen			1					
Papaipema pterisii	sand savanna			1					
Papaipema rigida	mesic prairie			1					
Papaipema rutila	savanna			1					
Papaipema sciata (cluvers root borer)	prairie/fen		G3	1					
Papaipema silphii (Silphium borer moth)	prairie		G3	1					
Papaipema sp. 10 (Grundy County papaipema)	mesic/wet prairie		G1	1					
Papaipema speciosissima	sand prairie			1					
Papaipema unimoda	prairie/fen			1					
Paraphilaenus parallelus	wet prairie			1					
Paraphlepsius altus	sand prairie			1					
Paraphlepsius carolinus	sand prairie			1					
Paraphlepsius electus	prairie			1					
Paraphlepsius humidus	wet prairie			1					
Paraphlepsius incisus	savanna?			1					
Paraphlepsius lascivius	savanna			1					
Paraphlepsius lupalus	sand prairie		SE	1					
Paraphlepsius maculosus	sand prairie			1					
Paraphlepsius nebulosus	prairie			1					
Paraphlepsius rossi	savanna			1					
Paraphlepsius solidaginis	prairie			1					
Paraphlepsius texanus	hill prairie			1					
Paraphlepsius umbellatus	prairie			1					
Paraphlepsius umbrosus	wet prairie			1					
Parapoynx maculalis	marsh			1					
Pediasia abnaki	fens			1					
Peltonotellus histrionicus	wet prairie			1					
Perlesta golconda (a stonefly)									G2 1
Petrophora subaequaria	savanna			1					
Phalaenostola hanhami	prairie			1					
Phytometra ernestinana	prairie			1					
Pieris virginensis (West Virginia white)			G3	1					
Plagiomimicus (Stibadium) spumosum	prairie			1					
Plagiomimicus heitzmani	prairie			1					
Platyperigea (Caradrina) meralis	sand savanna			1					
Platytes vobisne	wet prairie			1					
Plauditus veteris (a mayfly)			G2	1					
Plusia venusta	wet prairie			1					
Poanes viator	sedge meadow			1					
Polyamia compacta	prairie			1	1				
Polyamia dilata	hill prairie			1					
Polyamia herbida	sand savanna			1					
Polyamia interrupta	sand savanna			1					

Polyamia obtecta	xeric prairie			1					
Polyamia rossi	sand prairie			1					
Polyamia similaris	xeric prairie			1					
Prairiana cinerea	prairie/savanna			1					
Prionapteryx achatina	sand prairie			1					
Prionapteryx nebulifera	dunes			1					
Problema byssus (Byssus skipper)	mesic/wet prairie		G3	1					
Procloeon irrubrum (a mayfly)			G2	1					
Procloeon mendax (a mayfly)			G2	1					
Procloeon quaesitum (a mayfly)			G2	1					
Procloeon simplex (a mayfly)			G2	1					
Proserpinus guarae	mesic prairie			1					
Protorthodes incincta	sand prairie			1					
Psectraglaea carnosia	sand savanna			1					
Pseudanophthalmus illinoisensis (Illinois cave beetle)			G1	1					
Pseudeva purpurigera	wet prairie			1					
Pseudexentera vaccinii	sand prairie			1					
Pygarctia spraguei (Sprague's pygarctic)	sand savanna		G3	1					
Pyla arenaeola	dunes			1					
Pyrausta laticlavata	prairie			1					
Pyrausta orphisalis	prairie			1					
Rhodoecia aurantiago	mesic prairie			1					
Richia n. sp.	sand prairie			1					
Rimulincola divalis			G1	1					
Rosenus cruciatus	sand prairie/savanna			1					
Satyrium edwardsii	savanna			1					
Scaphytopius abbreviatus	sand prairie/savanna			1					
Scaphytopius cinereus	prairie			1					
Scaphytopius dorsalis	xeric prairie			1					
Scaphytopius rubellus	prairie			1	1				
Scaphytopius vaccinium	xeric prairie			1					
Schinia gloriosa	sand & hill prairie			1					
Schinia gracilentata (bifascia)	wet prairie			1					
Schinia guarae	mesic prairie			1					
Schinia indiana	sand savanna			1					
Schinia jaguarina	mesic-xeric prairie			1					
Schinia lucens	prairie			1					
Schinia nundina	sand savanna			1					
Schinia oleagina	xeric prairie			1					
Schinia saturata	sand prairie			1					
Schinia septentrionalis	mesic-xeric prairie			1					
Schizura apicalis (plain schizura)									
Scudderia pistillata	wet/mesic prairie			1					
Semiothisa eremiata	sand prairie/savanna			1					
Serratella frisoni (Frison's serratellan)			G3	1					

Culaea inconstans (brook stickleback)	vegetation in cool streams		0	0	1	1	0	0	0	0
Cycleptus elongatus (blue sucker)	rivers w/ rocky substrate		0	G3	1	1	0	0	1	1
Cyprinella venusta (blacktail shiner)	sandy pools, runs of rivers		0	0	1					
Elassoma zonatum (banded pygmy sunfish)	swamps		0	0	1					
Erimystax x-punctatus (gravel chub)	rivers w/ gravel substrate	ST	0		1	1	0	0	1	1
Erimyzon sucetta (lake chubsucker)	vegetation in lakes, backwaters		0	0	1	1	1	0	1	1
Esox lucius (northern pike - native stocks)	clear, vegetated lakes, backwaters		0	0					1	
Esox masquinongy (muskellunge-native stocks)	cool-water streams, lakes		0	0					1	
Etheostoma camurum (bluebreast darter)	rivers w/ rocky substrate	SE	0		1	1	0	0	1	0
Etheostoma chlorosomum (bluntnose darter)	swamps, backwaters, low-gradient streams		0	0	1	1	0	0	1	0
Etheostoma crossopterum (fringed darter)	rocky pools, riffles of steams		0	0	1					1
Etheostoma exile (Iowa darter)	vegetation in ponds, lakes	ST	0		1	1	0	0	1	0
Etheostoma histrio (Harlequin darter)	high-gradient rivers over gravel woody debris	SE	0		1	1	1	0	1	1
Etheostoma proelaire (cypress darter)	slow water, vegetation over mud		0	0	1					1
Etheostoma squamiceps (spottail darter)	rocky pools, riffles of steams		0	0	1					
Forbesichthys agassizi (spring cavefish)	springs, caves		0	0	1					
Fundulus diaphanus (banded killifish)	vegetated lakes, low-gradient streams over sand/gravel	ST	0		1	1	0	0	1	1
Fundulus dispar (starhead topminnow)	vegetated lakes, ponds, low-gradient streams	ST	0		1	1	0	1	1	1
Hybognathus hayi (cypress minnow)	swamps, backwaters, low-gradient streams	SE	0		1	1	0	0	0	0
Hybopsis amblops (bigeye chub)	vegetated stream over sand, gravel	SE	0		1	1	0	0	1	1
Hybopsis amnis (pallid shiner)	rivers over sand	SE	0		1	1	0	0	0	1
Ichthyomyzon fossor (northern brook lamprey)	streams and rivers	SE	0		1	0	0	0	0	1
Ichthyomyzon unicuspis (silver lamprey)	streams and rivers over gravel		0	0	1	1	0	0	0	0
Lampetra aepyptera (least brook lamprey)	streams and rivers over sand, gravel	ST	0		1	1	0	0	0	1
Lampetra appendix (American brook lamprey)	streams and rivers over gravel		0	0	1	1	0	0	0	1
Lepomis miniatus (redspotted sunfish)	vegetated backwaters, low-gradient streams	ST	0		1	1	1	0	1	1
Lepomis symmetricus (bantam sunfish)	vegetated swamps, backwaters	ST	0		1	1	0	0	1	0

Lythrurus fumeus (ribbon shiner)	vegetated low-gradient streams over sand, silt	0	0	1	0	0	0	0	0
Macrhybopsis gelida (sturgeon chub)	rivers over sand, gravel	SE	G3	1	1	0	1	1	1
Macrhybopsis meeki (sicklefin chub)	rivers over sand, gravel	0	G3	1	1	0	1	1	1
Micropterus dolomieu (smallmouth bass)	cool streams, rivers over gravel, rock	0	0	0	0	0	0	1	0
Micropterus punctulatus (spotted bass)	streams, rivers over gravel, rock	0	0	0	0	0	0	1	0
Moxostoma carinatum (river redhorse)	high-gradient rivers over rocky	ST	0	1	1	1	0	1	1
Moxostoma duquesnei (black redhorse)	streams over sand, rock	0	0	1					
Moxostoma valenciennesi (greater redhorse)	rivers over gravel, rock	SE	0	1	1	0	0	0	1
Myoxocephalus quadricornis (fourhorn sculpin)		0	0						
Nocomis micropogon (river chub)	streams, rivers over gravel, rock	SE	0	1	1	0	0	1	1
Notropis anogenus (pugnose shiner)	vegetated glacial lakes, streams	SE	G3	1	1	0	0	1	0
Notropis boops (bigeye shiner)	streams over sand, gravel	SE	0	1	1	0	0	1	1
Notropis buchanani (ghost shiner)	large turbid rivers	0	0	1	1	0	0	0	1
Notropis chalybaeus (ironcolor shiner)	vegetated low-gradient streams over sand	ST	0	1	1	1	0	1	1
Notropis heterodon (blackchin shiner)	vegetated low-gradient streams over sand	ST	0	1	1	0	0	1	0
Notropis heterolepis (blacknose shiner)	vegetated cool streams, lakes over sand	SE	0	1	1	0	0	1	1
Notropis maculatus (taillight shiner)	vegetated backwaters, swamps, lakes	SE	0	1	1	0	0	0	1
Notropis nubilus (Ozark minnow)	pools, streams, over grave	0	0	1					
Notropis rubellus (rosyface shiner)	rocky runs of small-medium rivers	0	0	1					
Notropis shumardi (silverband shiner)	turbid rivers over sand, gravel	0	0	1					
Notropis texanus (weed shiner)	vegetated streams over sand	SE	0	1	1	0	0	1	0
Noturus eletherus (mountain madtom)	high-gradient streams, rivers over gravel, rock	0	0	1	1	0	1	1	1
Noturus exilis (slender madtom)	high-gradient streams, rivers over gravel, rock	0	0	1	1	0	0	1	0
Noturus stigmosus (northern madtom)	streams, rivers over sand, woody debris	SE	G3	1	1	0	0	0	1
Opsopoeodus emilae (pugnose minnow)	vegetated lakes, low-gradient streams	0	0	1	1	0	1	0	1
Perca flavescens (yellow perch)	Lake Michigan	0	0	1					
Percopsis omiscomaycus (trout-perch)	lakes, pools over sand	0	0	1	0	0	0	0	0
Phoxinus erythrogaster (southern redbelly dace)	cool streams over sand, gravel	0	0	0	1	0	0	1	0
Polyodon spathula (North American paddlefish)	large silty rivers rich w/ zooplankton	0	0	1	1	0	0	1	0

Rhynchichthys atratulus (blacknose dace)	cool streams over sand, gravel	0	0	0	1	0	0	1	0
Rhynchichthys cataractae (longnose dace)	coolwater streams	0	0	1	1	0	0	1	0
Salvelinus fontinalis	coolwater streams	0	0	1	1	0	0	1	0
Salvelinus namaycush (lake trout)	Lake Michigan	0	0	1	0	0	0	1	0
Scaphirhynchus albus (pallid sturgeon)	large turbid rivers over sand	FE SE	G1	1	1	0	0	1	1
Scaphirhynchus platorhynchus (shovelnose sturgeon)	large turbid rivers	0	0	1	1	0	0	1	1
Stizostedion canadense (sauger)	large rivers	0	0	0	0	0	0	1	0
Stizostedion vitreum (walleye)	streams, rivers, lakes	0	0					1	
Umbra limi (central mudminnow)	vegetation in still water, over mud	0	0	1					

APPENDIX I, CONTINUED.

AMPHIBIANS & REPTILES		Criteria							
Name	Habitat Association	1	2	3	4	5	6	7	8
AMPHIBIANS									
Ambystoma jeffersonianum (Jefferson salamander)	forest, ephemeral pools	ST	0	1	1	0	0		0
Ambystoma laterale (blue-spotted salamander)	forest, ephemeral pools	0	0	1	1	0	0		1
Ambystoma platineum (silvery salamander)	forest, ephemeral pools	SE	0	1	1	0	0		0
Ambystoma talpoideum (mole salamander)	swamp	0	0	1	1	0	0		0
Cryptobranchus alleganiensis (hellbender)	swift rivers, streams	SE	G3	1	1	0	0		1
Desmognathus conanti (spotted dusky salamander)	cool headwaters, forest	SE	0	1	1	0	0		0
Gastrophryne carolinensis (eastern narrowmouth toad)	open floodplains, ephemeral pools	ST	0	1	0	0	0		0
Hemidactylium scutatum (four-toed salamander)	pools, streams, forest	ST	0	1	1	0	0		0
Hyla avivoca (bird-voiced treefrog)	swamp	ST	0	1	1	0	0		0
Necturus maculosus (mudpuppy)	gravel-bottom streams, lakes	0	0	1	1	0	0		1
Pseudacris streckeri illinoensis (Illinois chorus frog)	sand prairie, ephemeral pools	ST	0	1	1	1	1		0
Rana areolata (crayfish frog)	wet grasslands, ephemeral pools	0	0	1	1	0	0		1
Rana palustris (pickerel frog)	cool, rocky headwaters, cave entrances	0	0	1	1	0			1
Rana sylvatica (wood frog)	forest, ephemeral pools	0	0	1	0	0	0		1
REPTILES									

Apalone mutica (smooth softshell turtle)	sand-bottom streams		0	0	0	1	0	0	1
Clemmys guttata (spotted turtle)	marsh	SE	0	1	1	0	0	0	0
Clonophis kirtlandii (Kirtland's snake)	wet grassland, marsh	ST	0	1	1	0	1	1	1
Crotalus horridus (timber rattlesnake)	forest, rocky slopes	ST	0	1	1	0	0	0	0
Elaphe emoryi (great plains rat snake)	rocky grassland/savanna slopes	SE	0	1	1	0	0	0	0
Emydoidea blandingii (Blanding's turtle)	marsh	ST	0	1	1	0	0	0	0
Farancia abacura (mud snake)	swamp		0	0	1	1	0	0	0
Heterodon nasicus (western hognose snake)	sand prairie, sand savanna	ST	0	1	1	1	0	0	0
Kinosternon flavescens (Illinois mud turtle)	wetlands in sand prairie	SE	0	1	1	1	1	1	0
Kinosternon subrubrum (eastern mud turtle)	swamp		0	0	1	1	0	0	1
Macrochelys temminckii (alligator snapping turtle)	rivers, swamp	SE	G3	1	1	0	0	0	1
Masticophis flagellum (coachwhip)	rocky grassland/savanna slopes	SE	0	1	1	0	0	0	0
Nerodia cyclopion (Mississippi green water snake)	swamp	ST	0	1	1	0	0	0	0
Nerodia erythrogaster neglecta (n. copperbelly watersnake)	swamp, bottomland forest	***	0	1	1	0	1	0	0
Nerodia fasciata (broad-banded water snake)	swamp	SE	0	1	1	0	0	0	0
Liochlorophis vernalis (smooth green snake)	grassland, savanna, marsh, successional		0	0	1	0	0	0	1
Ophisaurus attenuatus (slender glass lizard)	grassland, savanna		0	0	1	1	0	0	1
Pseudemys concinna (river cooter)	rivers, swamp	SE	0	1	1	0	0	0	0
Sistrurus catenatus catenatus (eastern massasauga)	marsh, bottomland forest, grassland	FC SE	0	1	1	0	1	0	0
Tantilla gracilis (flathead snake)	rocky, wooded slopes	ST	0	1	1	0	0	0	1
Terrapene ornata (ornate box turtle)	grassland		0	0	1	1	0	0	1
Thamnophis sauritus (eastern ribbon snake)	bottomland forest, swamp	ST	0	1	1	0	0	0	0
Tropidoclonion lineatum (lined snake)	grassland	ST	0	1	1	0	0	0	0

*** *N. E. neglecta* is protected by Illinois Administrative Rule, part 880.70, in 14 southeastern Illinois counties

APPENDIX I, CONTINUED.

BIRDS	Name	Habitat Association	Criteria							
			1	2	3	4	5	6	7	8
	Ammodramus henslowii (Henslow's sparrow)	Grassland	ST	0	1	1	0	0	0	0
	Ammodramus leconteii (LeConte's sparrow) ¹	Grassland, marsh		0	0	1	1	0	0	0
	Ammodramus nelsoni (Nelson's sharp-tailed sparrow) ¹	Grassland, marsh		0	0	1	1	0	0	0

Ammodramus savannarum (grasshopper sparrow)	Grassland		0	0	1	1	0	0	0	0
Anas rubripes (American black duck) ¹	Forested streams, lakes		0	0	1	1	0	1	0	0
Ardea alba (great egret)	Forested streams, lakes		0	0	RR	1	0	0	0	0
Asio flammeus (short-eared owl)	Grassland	SE	0	1	1	0	0	0	0	0
Aythya affinis (lesser scaup)	Rivers, lakes		0	0	1	1	0	1	0	0
Aythya valisineria (canvasback)	Rivers, lakes		0	0	1	1	0	1	0	0
Bartramia longicauda (upland sandpiper)	Grassland	SE	0	1	1	0	0	1	0	0
Bonasa umbellus (ruffed grouse)	Forest, successional forest		0	0	1	0	0	0	0	1
Botaurus lentiginosus (American bittern)	Marsh	SE	0	1	1	0	0	1	0	0
Buteo lineatus (red-shouldered hawk)	Bottomland forest, forest		0	0	RR	0	0	0	1	0
Buteo platypterus (broad-winged hawk)	Forest		0	0	1	1	0	0	1	0
Buteo swainsoni (Swainson's hawk)	Savanna, grassland, agriculture	SE	0	1	1	1	0	1	0	0
Calcarius pictus (Smith's longspur) ¹	Agricultural, grassland		0	0	1	1	0	1	0	1
Calidris himantopus (stilt sandpiper) ¹	Vernal pool, mudflat, marsh		0	0	1	1	0	0	0	0
Caprimulgus carolinensis (chuck-will's-widow)	Forest		0	0	1	0	0	0	0	0
Caprimulgus vociferus (whip-poor-will)	Forest, successional		0	0	1	0	0	0	1	0
Certhia americana (brown creeper)	Bottomland forest, forest		0	0	RR	0	0	0	0	0
Chaetura pelagica (chimney swift)	swamp, urban		0	0	1	0	0	1	0	0
Charadrius melodus (piping plover)	Beach	FE SE	G3	1	1	0	0	0	0	0
Chlidonias niger (black tern)	Marsh	SE		0	1	1	0	0	1	0
Chordeiles minor (common nighthawk)	urban, barren, grassland		0	0	1	0	0	0	0	0
Circus cyaneus (northern harrier)	Grassland, marsh	SE		0	1	1	0	0	1	0
Cistothorus palustris (marsh wren)	Marsh		0	0	1	1	0	0	0	0
Cistothorus platensis (sedge wren)	grassland, marsh		0	0	0	1	0	0	0	0
Coccyzus americanus (yellow-billed cuckoo)	Forest, savanna		0	0	1	1	0	0	0	0
Coccyzus erythrophthalmus (black-billed cuckoo)	forest		0	0	0	0	0	0	0	0
Colaptes auratus (northern flicker)	savanna, grassland		0	0	1	0	0	1	0	0
Colinus virginianus (northern bobwhite)	Successional field, grassland		0	0	1	0	0	1	1	0
Coturnicops noveboracensis (yellow rail) ¹	Marsh		0	0	1	1	0	0	0	0
Cygnus buccinator (trumpeter swan) ¹	Marsh, lakes	XN		0	1	0	0	0	0	0
Dendroica cerulea (cerulean warbler)	Bottomland forest	ST		0	1	1	0	0	1	0
Dendroica discolor (prairie warbler)	successional		0	0	0	1	0	0	0	0
Dolichonyx oryzivorus (bobolink)	Grassland		0	0	1	1	0	0	0	0
Egretta caerulea (little blue heron)	Forested streams, lakes	SE		0	1	1	0	0	0	0
Egretta thula (snowy egret)	Forested streams, lakes	SE		0	1	1	0	0	0	0
Empidonax traillii (willow flycatcher)	marsh, successional		0	0	0	1	0	0	0	0
Empidonax virescens (Acadian flycatcher)	forest		0	0	1	0	0	0	0	0
Euphagus carolinus (rusty blackbird) ¹	Swamp, bottomland forest		0	0	1	1	0	0	0	1
Falco peregrinus (peregrine falcon)	Urban, cliffs	FE ST		0	1	1	0	0	0	0

Gallinula chloropus (common moorhen)	Marsh	ST	0	1	1	0	0	0	0
Gallinago delicatata (Wilson's snipe)	Marsh, vernal pool		0	0	1	1	0	0	1
Grus americana (whooping crane) ¹	Marsh	XN G1	1	1	0	0	0	0	0
Grus canadensis (sandhill crane)	Marsh	ST	0	1	1	0	0	1	0
Haliaeetus leucocephalus (bald eagle)	Forested streams, lakes	FT ST	0	0	0	0	1	0	0
Helmitheros vermiforma (worm-eating warbler)	forest		0	0	0	0	0	0	1
Hylocichla mustelina (wood thrush)	forest		0	0	0	0	0	0	1
Icteria virens (yellow-breasted chat)	Successional fields, edges		0	0	1	0	0	0	0
Ictinia mississippiensis (Mississippi kite)	Forested streams, lakes	SE	0	1	1	0	0	0	0
Ixobrychus exilis (least bittern)	Marsh	ST	0	1	1	0	0	0	0
Lanius ludovicianus (loggerhead shrike)	Grassland	ST	0	1	1	0	0	0	0
Laterallus jamaicensis (black rail)	Marsh	SE	0	1	1	1	0	0	1
Limnodromus griseus (short-billed dowitcher) ¹	Marsh, vernal pool, mudflat		0	0	1	1	0	0	0
Limnithlypis swainsonii (Swainson's warbler)	Bottomland forest	SE	0	1	1	0	0	0	0
Lophodytes cucullatus (hooded merganser)	Forested streams, lakes		0	0	1	0	0	0	0
Melanerpes erythrocephalus (red-headed woodpecker)	Savanna		0	0	1	0	0	1	1
Nyctanassa violacea (yellow-crowned night-heron)	Swamp	SE	0	1	1	0	0	0	0
Nycticorax nycticorax (black-crowned night-heron)	Swamp	SE	0	1	1	0	0	0	0
Oporornis agilis (Connecticut Warbler) ¹	Forest		0	0	1	0	0	0	0
Oporornis formosus (Kentucky warbler)	Forest		0	0	1	1	0	0	1
Pandion haliaetus (osprey)	Forested streams, lakes	SE	0	1	1	0	0	0	0
Passerculus sandwichensis (savannah sparrow)	Grassland, agricultural		0	0	1	0	0	0	1
Phalaropus tricolor (Wilson's phalarope)	Marsh, vernal pool	SE	0	1	1	0	0	0	0
Pluvialis dominica (American golden-plover) ¹	Agricultural, mudflat, grassland		0	0	1	1	0	1	0
Podilymbus podiceps (pied-billed grebe)	Marsh, lakes		0	0	RR	1	0	0	0
Protonotaria citrea (prothonotary warbler)	bottomland forest		0	0	0	1	0	0	0
Rallus elegans (king rail)	Marsh, grassland	SE	0	1	1	0	0	0	0
Scolopax minor (American woodcock)	Successional fields, ecotones		0	0	1	1	0	0	0
Seiurus aurocapillus (ovenbird)	Forest		0	0	1	0	0	0	0
Spiza americana (dickcissel)	Grassland		0	0	1	1	0	1	0
Spizella pusilla (field sparrow)	successional		0	0	1	0	0	1	0
Sterna antillarum (least tern)	Rivers, shoreline	FE SE	0	1	1	0	0	0	0
Sterna forsteri (Forster's tern)	Marsh	SE	0	1	1	0	0	0	0
Sterna hirundo (common tern)	Beach	SE	0	1	1	0	0	0	0
Thryomanes bewickii (Bewick's wren)	Successional areas, forest	SE	0	1	1	1	0	0	0
Toxostoma rufum (brown thrasher)	succssional		0	0	0	0	0	1	0

Tringa melanoleuca (greater yellowlegs) ¹	Vernal pool, mudflat, marsh	0	0	1	1	0	0	1	0
Tryngites subruficollis (buff-breasted sandpiper) ¹	Vernal pool, mudflat, marsh	0	0	1	1	0	1	0	1
Tympanuchus cupido (greater prairie-chicken)	Grassland	SE	0	1	1	1	0	1	0
Tyto alba (barn-owl)	Savanna, grassland, agriculture	SE	0	1	1	0	0	0	0
Vermiforma pinus (blue-winged warbler)	successional, forest	0	0	0	0	0	0	0	0
Vireo belli (Bell's vireo)	Successional fields, grassland	0	0	1	1	0	0	0	0
Xanthocephalus xanthocephalus (yellow-headed blackbird)	Marsh	SE	0	1	1	0	0	0	0

¹ Occurs as a vagrant only in Illinois

¹ - Does not typically breed in Illinois

MAMMALS		Criteria							
Name	Habitat Association	1	2	3	4	5	6	7	8
Canis lupus (gray wolf) ¹	Forest	FT ST	0	0	0	0	0	0	0
Corynorhinus rafinesquii (eastern big-eared bat)	Forest, caves, mines, buildings	SE G3	1	1	0	0	1	0	
Lontra canadensis (river otter)	Streams, impoundments	0 0 RR	0	0	0	0	0	0	0
Lynx rufus (bobcat)	Forest, ecotones	0 0 RR	0	0	0	0	1	0	
Sorex hoyi (pygmy shrew)	Forests, successional areas, bogs	0 0 1	0	0	0	0	0	1	
Microtus pinetorum (woodland vole)	Deciduous forest, successional forest	0 0 1	0	0	0	0	0	1	
Mustela nivalis (least weasel)	Grassland, successional, ecotones	0 0 0	0	0	0	0	1	0	
Myotis austroriparius (southeastern bat)	Forests, caves, mines	SE G3	1	1	0	0	0	0	
Myotis grisescens (gray bat)	Caves, mines	FE SE G3	1	1	0	0	1	0	
Myotis sodalis (Indiana bat)	Forests, riparian areas, caves, mines	FE SE G2	1	1	0	0	1	0	
Neotoma floridana (eastern woodrat)	Rocky cliffs, caves	SE	0	1	1	0	0	0	
Ochrotomys nuttalli (golden mouse)	Ecotones, successional fields	ST	0	1	0	0	0	1	
Ondatra zibethicus (muskrat)	Marshes, streams, ponds	0 0 0	1	0	0	1	0	0	
Oryzomys palustris (marsh rice rat)	Marsh, wetland ecotones	ST	0	1	0	0	0	0	
Peromyscus gossypinus (cotton mouse)	Forest, swamp	0 0 1	1	0	0	0	0	1	
Spermophilus franklinii (Franklin's ground squirrel)	grassland, early successional areas	ST	0	0	1	0	0	1	
Sylvilagus aquaticus (swamp rabbit)	bottomland forest	0 0 1	1	0	0	0	0	0	
Tamiasciurus hudsonicus (red squirrel)	Forest, coniferous forest	0 0 1	1	0	0	0	0	0	
Taxidea taxus (American badger)	Grassland, agricultural	0 0 0	0	0	0	0	1	0	
Urocyon cinereoargenteus (gray fox)	Forest, successional areas	0 0 0	0	0	0	0	1	0	