

Appendices

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Appendix B: Glossary

Appendix B: Glossary

<i>Alternative</i>	A set of objectives and strategies needed to achieve refuge goals and the desired future condition.
<i>Biological Diversity</i>	The variety of life forms and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.
<i>Compatible Use</i>	A wildlife-dependent recreational use, or any other use on a refuge that will not materially interfere with or detract from the fulfillment of the mission of the Service or the purposes of the refuge.
<i>Comprehensive Conservation Plan</i>	A document that describes the desired future conditions of the refuge, and specifies management actions to achieve refuge goals and the mission of the National Wildlife Refuge System.
<i>Ecosystem</i>	A dynamic and interrelated complex of plant and animal communities and their associated non-living environment.
<i>Ecosystem Approach</i>	A strategy or plan to protect and restore the natural function, structure, and species composition of an ecosystem, recognizing that all components are interrelated.
<i>Ecosystem Management</i>	Management of an ecosystem that includes all ecological, social and economic components that make up the whole of the system.
<i>Endangered Species</i>	Any species of plant or animal defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register.
<i>Environmental Assessment</i>	A systematic analysis to determine if proposed actions would result in a significant effect on the quality of the environment.
<i>Extirpation</i>	The local extinction of a species that is no longer found in a locality or country, but exists elsewhere in the world.
<i>Goals</i>	Descriptive statements of desired future conditions.

<i>Interjurisdictional Fish</i>	Fish that occur in waters under the jurisdiction of one or more states, for which there is an interstate fishery management plan or which migrates between the waters under the jurisdiction of two or more states bordering on the Great Lakes.
<i>Issue</i>	Any unsettled matter that requires a management decision. For example, a resource management problem, concern, a threat to natural resources, a conflict in uses, or in the presence of an undesirable resource condition.
<i>Meta-population:</i>	Definition of <i>meta-population</i> population of populations in discrete patches linked by migration and extinction.
<i>National Wildlife Refuge System</i>	All lands, waters, and interests therein administered by the U.S. Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas, and other areas for the protection and conservation of fish, wildlife and plant resources.
<i>Objectives</i>	Actions to be accomplished to achieve a desired outcome.
<i>Preferred Alternative</i>	The Service's selected alternative identified in the Draft Comprehensive Conservation Plan.
<i>Scoping</i>	A process for determining the scope of issues to be addressed by a comprehensive conservation plan and for identifying the significant issues. Involved in the scoping process are federal, state and local agencies; private organizations; and individuals.
<i>Species</i>	A distinctive kind of plant or animal having distinguishable characteristics, and that can interbreed and produce young. A category of biological classification.
<i>Strategies</i>	A general approach or specific actions to achieve objectives.
<i>Wildlife-dependent Recreational Use</i>	A use of refuge that involves hunting, fishing, wildlife observation and photography, or environmental education and interpretation, as identified in the National Wildlife Refuge System Improvement Act of 1997.
<i>Threatened Species</i>	Those plant or animal species likely to become endangered species throughout all of or a significant portion of their range within the foreseeable future. A plant or animal identified and defined in accordance with the 1973 Endangered Species Act and published in the Federal Register.

<i>Vegetation</i>	Plants in general, or the sum total of the plant life in an area.
<i>Vegetation Type</i>	A category of land based on potential or existing dominant plant species of a particular area.
<i>Watershed</i>	The entire land area that collects and drains water into a stream or stream system.
<i>Wetland</i>	Areas such as lakes, marshes, and streams that are inundated by surface or ground water for a long enough period of time each year to support, and that do support under natural conditions, plants and animals that require saturated or seasonally saturated soils.
<i>Wildlife Diversity</i>	A measure of the number of wildlife species in an area and their relative abundance.

Appendix C: Species Lists

Illinois River Plant Species List

Trees

Box elder	<i>Acer negundo</i>
Silver maple	<i>Acer saccharinum</i>
Sugar maple	<i>Acer saccharum</i>
Pawpaw	<i>Asimina triloba</i>
River birch	<i>Betula nigra</i>
Flowering dogwood	<i>Cornus florida</i>
Roughleaf dogwood	<i>Cornus drummondii</i>
Pale dogwood	<i>Cornus obliqua</i>
Red cedar	<i>Juniperus virginiana</i>
Persimmon	<i>Diospyros virginiana</i>
Swamp white oak	<i>Quercus bicolor</i>
Shingle oak	<i>Quercus imbricaria</i>
Cinquapin oak	<i>Quercus muhlenbergii</i>
Bur oak	<i>Quercus macrocarpa</i>
Blackjack oak	<i>Quercus marilandica</i>
Pin oak	<i>Quercus palustris</i>
Northern red oak	<i>Quercus rubra</i>
Post oak	<i>Quercus stellata</i>
Black oak	<i>Quercus velutina</i>
Bitternut hickory	<i>Carya cordifornis</i>
Pecan	<i>Carya illinoensis</i>
Shellbark hickory	<i>Carya laciniosa</i>
Shagbark hickory	<i>Carya ovata</i>
Mockernut hickory	<i>Carya tomentosa</i>
Butternut	<i>Juglans cinerea</i>
Black walnut	<i>Juglans nigra</i>
Sassafras	<i>Sassafras albidum</i>
Redbud	<i>Cercus canadensis</i>
Honey Locust	<i>Gleditsia triacanthos</i>
Kentucky coffee tree	<i>Gymnocladus dioica</i>
Black Locust	<i>Robinia pseudoacacia</i>
Osage orange	<i>Maclura pomifera</i>
White mulberry	<i>Morus alba</i>
Red mulberry	<i>Morus rubra</i>
White ash	<i>Fraxinum americana</i>
Green ash	<i>Fraxinus pennsylvanica</i>
Sycamore	<i>Platanus occidentalis</i>
Red haw	<i>Crataegus mollis</i>
Prairie crab-apple	<i>Malus ioensis</i>

Peachleaf willow
Sandbar willow
Black willow
Autumn willow
American basswood
Sugarberry
American hackberry
Upland hackberry
American elm
Siberian elm
Slippery elm

Salix amygdaloides
Salix interior
Salix nigra
Salix rigida
Tilia americana
Celtis leavigata
Celtis occidentalis
Celtis tenuifolia
Ulmus americana
Ulmus pumila
Ulmus rubra

Shrubs

Fragrant sumac
Smooth sumac
Poison ivy
Swamp holly
Bluevine
Trumpet-creeper
Japanese honeysuckle
Honeysuckle
Common elder
Burning bush
Bittersweet
Common spicebush
Dull-leafed indigobush
Greenbriar
Swamp privet
Berries
Buttonbush
American ampelopsis
Virginia creeper
Summer grape
Winter grape
Riverbank grape
Frost grape

Phus aromatica
Rhus glabra
Rhus radicans
Ilex decidua
Ampelamus albidus
Campsis radicans
Lonicera japonica
Lonicera morrowi
Sambuscus Canadensis
Euonymous atropurpureus
Celastrus scandens
Lindera benzoin
Amorpha fruticosa
Smilax sp.
Forestiera acuminata
Rubus spp.
Cephalanthus occidentalis
Ampelopsis cordata
Partheocissus quinquefolia
Vtis aestivalis
Vitis cinerea
Vitis riparia
Vitis vulpina

Forbs

Hairy ruellia
Smooth ruellia
Carpetweed

Ruellia hurnilis
Ruellia strepens
Mollugo verticillata

Cottonweed	<i>Froelichia gracilis</i>
Blue star	<i>Amsonia tabernaemontana</i>
Indian hemp	<i>Apocynum cannabinum</i>
Indian hemp	<i>Apocynum sibericum</i>
Green dragon	<i>Arisaema dracontium</i>
Mead's milkweed	<i>Asclepias meadii</i>
Tall green milkweed	<i>Asclepias hirtella</i>
Swamp milkweed	<i>Asclepias incarnate</i>
Purple milkweed	<i>Asclepias purpuras</i>
Common milkweed	<i>Asclepias syriaca</i>
Climbing milkweed	<i>Matelea gonocarpa</i>
Tennessee milk vetch	<i>Astragalus tennesseensis</i>
Spotted touch-me-not	<i>Impatiens biflora</i>
Pale touch-me-not	<i>Impatiens pallida</i>
American bellflower	<i>Campanula americana</i>
Cardinal flower	<i>Lobelia cardinalis</i>
Venus looking-glass	<i>Specularia perfoliata</i>
Clammyweed	<i>Polanisia dodecandra</i>
James' clammyweed	<i>Polanisia jamessii</i>
Common mouse-eared chickweed	<i>Cerastium vulgatum</i>
Deptford pink	<i>Dianthus armeria</i>
Evening campion	<i>Lychnis alba</i>
Sleepy catchfly	<i>Silene stellata</i>
Common chickweed	<i>Stellaria media</i>
Lamb's quarter	<i>Chenopodium album</i>
Goosefoot	<i>Chenopodium bushianum</i>
Winged pigweed	<i>Cycloloma atriplicifolium</i>
Day flower	<i>Commelina diffusa</i>
Prairie spiderwort	<i>Tradescantia braceata</i>
Morning glory	<i>Convolvulus serpium</i>
False tarragon	<i>Artemisia dracunculus</i>
Pineapple-weed	<i>Matricaria matricariodes</i>
Prairie dandelion	<i>Microseris cuspidate</i>
Blanket flower	<i>Gaillardia puchella</i>
Common ragweed	<i>Ambrosia artemisilfolia</i>
Giant ragweed	<i>Ambrosia trifida</i>
Forked aster	<i>Aster furcatus</i>
Side-flowered aster	<i>Aster lateriflorus</i>
Small-headed aster	<i>Aster parviceps</i>
Hairy aster	<i>Aster pilosus</i>
Panicle aster	<i>Aster simplex</i>

White-top	<i>Erigeron annuus</i>
Horseweed	<i>Erigeron canadensis</i>
Daisy fleabane	<i>Erigeron strigosus</i>
Blue boneset	<i>Eupatorium coelestinum</i>
Spotted joe-pye-weed	<i>Eupatorium masculatum</i>
White snakeroot	<i>Eupatorium rugosum</i>
Late boneset	<i>Eupatorium serotinum</i>
Common sunflower	<i>Helianthus annuus</i>
Marsh-elder	<i>Iva annua</i>
Wild lettuce	<i>Lactuca canadensis</i>
Woodland lettuce	<i>Lactuca floridana</i>
False dandelion	<i>Pyrrhopappus carolinianus</i>
Wild golden-glow	<i>Rudbeckia laciniata</i>
Tall goldenrod	<i>Solidago canadensis</i>
Common sow thistle	<i>Sonchus oleraceum</i>
Yellow crownbeard	<i>Verbesina helianthoides</i>
Common ironweed	<i>Veronica gigantea</i>
Missouri ironweed	<i>Veronica missurica</i>
Marsh speedwell	<i>Veronica scutellarta</i>
Common cocklebur	<i>Xanthium strumacium</i>
American bindweed	<i>Calystegia septium</i>
Dodder	<i>Cuscuta cuspidate</i>
Ivy-leaved morning-glory	<i>Ipomoea hederaceae</i>
Small white morning-glory	<i>Ipomoea lacunosa</i>
Wild sweet potato-vine	<i>Ipomoea pandurata</i>
Water cress	<i>Nastortium officinale</i>
Spring cress	<i>Cardamine bulbosa</i>
Winter cress	<i>Barbarea vulgaris</i>
Shepherd's purse	<i>Capsella bursapastoris</i>
Poor-man's-pepper	<i>Lepidium virginicum</i>
Marsh Yellow cress	<i>Rorippa islandica</i>
Sessile-flowered yellow cress	<i>Rorippa sessiliflora</i>
Silky bladderpod	<i>Lesquerelle ludoviciana</i>
Bur-cucumber	<i>Sicyos angulatus</i>
Wild yam	<i>Dioscorea villosa</i>
Common horse-tail	<i>Equisetum arvensa</i>
Wort spurge	<i>Euphorbie heliscopia</i>
Three-seeded mercury	<i>Acaltpha rhombiodea</i>
Three-seeded mercury	<i>Acalypha virginica</i>
Milk spurge	<i>Chamaesyce humistrata</i>
Nodding spurge	<i>Chamaesyce maculata</i>

Bugleweed	<i>Lycopus virginicus</i>
False dragonhead	<i>Physostegia speciosa</i>
False dragonhead	<i>Physostegia virginiana</i>
Field mint	<i>Martha arvensis</i>
Self-heal	<i>Prunella vulgaris</i>
Motherwort	<i>Leonurus cardiaca</i>
Mad-dog skullcap	<i>Scutellaria fateriflora</i>
Woundwort	<i>Stachys palustris</i>
Smooth hedge nettle	<i>Stachys tenuifolia</i>
American germander	<i>Teucrium carradense</i>
Hog-peanut	<i>Amphicarpa bracteata</i>
Ground nut	<i>Apios americana</i>
White wild indigo	<i>Baptisia leucantha</i>
Partridge pea	<i>Cassia fasciculata</i>
Maryland senna	<i>Cassia marilandica</i>
Illinois mimosa	<i>Desmanthus illinoensis</i>
Hoary tick-trefoil	<i>Desmodium canescens</i>
Panicled tick-trefoil	<i>Desmodium paniculatum</i>
Foxglove beardtongue	<i>Penstomen digitalis</i>
White sweet clover	<i>Melilotus albus</i>
Yellow sweet clover	<i>Melilotus officinalis</i>
Buffalo clover	<i>Trifolium reflexum</i>
Red clover	<i>Trifolium pratense</i>
White clover	<i>Trifolium repens</i>
Asparagus	<i>Asperagus officinalis</i>
Trout lily	<i>Erythronium americanum</i>
Bristly cat-briar	<i>Smilax hisipida</i>
Carrion flower	<i>Smilax tasionaura</i>
Winged loosestrife	<i>Lythrum alarum</i>
Velvet-leaf	<i>Abustilon theophrasti</i>
Prickly mallow	<i>Sida spinosa</i>
Canada moon-seed	<i>Menispermum canadense</i>
Creeping primrose-willow	<i>Jurssiaea repens</i>
Cinnamon willow-herb	<i>Epilooium cloratum</i>
Creeping water primrose	<i>Ludwigia decurrens</i>
Seed box	<i>Ludwigia alternifolia</i>
Common evening primrose	<i>Oenothera biennis</i>
Cut-leaved evening primrose	<i>Oenothera laciniata</i>
Grass pink orchid	<i>Calopogon tuberosus</i>
Tuberclad orchid	<i>Platanthera flava herbiola</i>
Prairie white-fringed orchid	<i>Platanthera leucopheae</i>

Water smartweed	<i>Polygonum amphibium</i>
Prostrate knotweed	<i>Polygonum aviculare</i>
Knotweed	<i>Polygonum ramosissimum</i>
Climbing false buckwheat	<i>Polygonum scandens</i>
Woodland knotweed	<i>Polygonum virginianum</i>
Mud plantain	<i>Hereranthera limosa</i>
Purslane	<i>Portulaca oleracea</i>
Fringed loosestrife	<i>Lysimachia cilata</i>
Loosestrife	<i>Lysimachia lanceolata</i>
Moneywort	<i>Lysimachia nummularia</i>
Canada anemone	<i>Anemona canadensis</i>
Tall anemone	<i>Anemone virginiana</i>
Heatherflower	<i>Cleranthis pitcheri</i>
Dwarf larkspur	<i>Delphinium tricornis</i>
Kidneyleaf buttercup	<i>Ranunculus abortivus</i>
Swamp buttercup	<i>Ranunculus septentrionalis</i>
Queen-of-the-prairie	<i>Filipendula rubra</i>
Avens	<i>Geum canadensis</i>
Rough cinquefoil	<i>Potentilla norvegica</i>
Rough-fruted cinquefoil	<i>Potentilla recta</i>
Brambles	<i>Rubus spp.</i>
Goosegrass	<i>Galium aparine</i>
Wild locorice	<i>Galium circaezans</i>
Shining bedstraw	<i>Galium concinnum</i>
Smooth buttonweed	<i>Spermacoce glabra</i>
Kitten tails	<i>Besseyia bullii</i>
Lizard's tail	<i>Saururus cernuus</i>
Ditch stonecrop	<i>Penthorum sedoides</i>
Slender false foxglove	<i>Gerardia tenuifolia</i>
Ear-leafed foxglove	<i>Tornanthera auriculata</i>
Slender false pimpernel	<i>Lindernaia anagaliidea</i>
False pimpernel	<i>Lindernia dubia</i>
Yellow monkey-flower	<i>Minulus glabratus</i>
Sharp-winged monkey-flower	<i>Mimulus alatus</i>
Squire-stemmed monkey-flower	<i>Mimulus ringens</i>
Mullein foxglove	<i>Seymaria macrophylla</i>
Moth mullein	<i>Verbascum blattaria</i>
Common mullein	<i>Verbascum thapsus</i>
Common night-shade	<i>Solanum americanum</i>
Horse nettle	<i>Solanum carolinense</i>
Water hemlock	<i>Cicute maculate</i>

Clearweed
Blue vervain
Vervain
White vervain
Arrow-leaved violet
Slender corydalis
Dutchman's breeches

Pilea pumila
Verbena hastate
Verbena stricta
Verbena urticifolia
Viola sagittata
Corydalis micrantha
Dicentra cucullaria

Grasses

Red top
Common foxtail
Big bluestem
Awnless brome
Japanese chess
Downey chess
Bluejoint grass
Muskgrass
Stout wood reed
Orchard grass
Smooth crab grass
Crab grass
Barnyard grass
Goose grass
Wild rye
Virginia wild rye
Stinking love grass
Love grass
Nodding fescue
Squirrel-tail grass
Little barley
Muhley
Witch grass
Broad-leaved panic grass
Tall panicum
Panic grass
Switch grass
Hairy bead grass
Bead grass
Swamp bead grass
Reed canary grass
Timothy

Agrastris alba
Alopecurus carolinianus
Andropogon gerardii
Bromus inermis
Bromus japonicus
Bromus tectorum
Calamagrostis canadensis
Chara spp.
Cinna arundinacea
Dactylis glomerata
Digitaria ischaerum
Digitaria sanguinalis
Echinochloa muricata
Eleusine indica
Elymus riparius
Elymus virginicus
Eragrostis cilianensis
Eragrostis pectinacea
Festuca obtuse
Hordeum jubatum
Hordeum pusillum
Muhlenbergia spp.
Panicum capillare
Panicum clandestinum
Panicum dichotomiflorum
Panicum gattingeri
Panicum virgatum
Paspalum bushii
Paspalum ciliatifolium
Rspalum fluitans
Phalaris arundinacea
Phleum pratense

Johnson grass
Prairie cord grass
Tall slough grass
Wedge grass
Purple top

Sorghum halepense
Spartina pectinata
Spartina michauxiana
Sphenopholis obtusata
Tridens flavus

Emergent Plants

Arrowhead
Narrow-leaved arrowleaf
Duck potato
Spike rush
Spike rush
Elodea
Hardstem bulrush
River bulrush
Roundstem bulrush
Swamp loosestrife
Halbered-leaved rose mallow
Swamp rose mallow
Poppy mallow
Wild rice
Marsh smartweed
Pickerelweed
Common bur-reed
Cattail
Narrow-leaved cattail
Hybred cattail

Sagittaria calycinus
Sagittaria graminea
Sagittaria latifolia
Eleocharis macrostachya
Eleocharis smallii
Elodea nuttalli
Scirpus acutus
Scirpus fluviatilis
Scirpus validus
Decodon verticillatus
Hibiscus militaris
Hibiscus moscheutos
Califirhoe triangulata
Zizania aquatica
Polygonum coccineum
Pontederia cordata
Sparganium eurycarpum
Typha latifolia
Typha angustifolia
Typha glauca

Submergent Plants

Coontail
Lesser duckweed
Spiked water milfoil
Water milfoil
Naiad
Bushy pondweed
Spotted pondweed
Curlyleaf pondweed
Leafy pondweed
Small pondweed
Longleaf pondweed
Greater duckweed

Ceratophyllum demersum
Lemna minor
Myriophyllum exalbescens
Myriophyllum spicatum
Najas flexilis
Najas guadalupensis
Potamogeton pulcher
Potamogeton crispus
Potamogeton foliosus
Potamogeton pusillu
Potamogeton nodosus
Spirodela polyrhiza

Floating Aquatic Plants

American lotus
Yellow pond lily
White pond lily

Nelumbo lutea
Nymphaea advena
Nymphaea tuberosa

Moist Soil Plants

Water hemp
Pigweed
Nodding bur marigold
Beggar-ticks
Common beggar-ticks
Fall beggar-ticks
Sedge
Spreading sedge
Pale sedge
Sedge
Shaved sedge
Short-pointed cyperus
Red-rooted nutgrass
Chufa
Gray's sedge
Awned cyperus
Galingale
Japanese millet
Walter's millet
Spike rush
Spike rush
Teal rush
Rush
Catchfly grass
Rice cutgrass
White grass
marsh cord grass
Long-leaved ammannia
Swamp smartweed
Nodding smartweed
Largeseed smartweed
Lady's thumb
Dotted smartweed
Curled dock
Swamp dock

Amaranthus rudis
Amaranthus tuberculatus
Bidens cernua
Bidens cornosa
Bidens frondosa
Bidens vulgate
Carex comosa
Carex laxiculmis
Carex pallascens
Carex squarrosa
Carex tosa
Cyperus acuminatus
Cyperus erythrorhizos
Cyperus esculentus
Cyperus grayioides
Cyperus inflexus
Cyperus strigosus
Echinochloa frumentacea
Echinochloa walteri
Eleocharis obtusa
Eleocharis palustris
Eragrostis hypnoides
Juncas Canadensis
Leersia lenticularis
Leersia oryzoides
Leersia virginica
Spartina michauxiana
Ammannia coccinea
Polygonum hydropiperoides
Polygonum laphifolium
Polygonum pennsylvanicum
Polygonum persicaria
Polygonum punctatum
Rumex crispus
Rumex verticillatus

Illinois River NWR Fish List

Fish

Chestnut lamprey	<i>Ichthyomzon castaneus</i>
Lake sturgeon	<i>Acipenser fulvescens</i>
Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>
Paddlefish	<i>Polyodon spathula</i>
Spotted gar	<i>Lepisosteus oculatus</i>
Longnose gar	<i>Lepisosteus occeus</i>
Shortnose gar	<i>Lepisosteus platostornus</i>
Bowfin	<i>Amia calva</i>
Goldeye	<i>Hiodon alosoides</i>
Mooneye	<i>Hiodon turgisus</i>
American eel	<i>Anguilla rostrata</i>
Skipjack herring	<i>Alosa chrysochloris</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Threadfin shad	<i>Dorosoma petensese</i>
Central stoneroller	<i>Campostoma anomalium</i>
Goldfish	<i>Carassius auratus</i>
Grass carp	<i>Ctenopharyngodon idella</i>
Red shiner	<i>Cyprinella lutrensis</i>
Common carp	<i>Cyprinus carpio</i>
Mississippi silvery minnow	<i>Hybognathus nuchalis</i>
Bighead carp	<i>Hypophthalmichthys nobilis</i>
Striped shiner	<i>Luxilus chrysocephalus</i>
Speckled chub	<i>Extranius aestifalis</i>
Silver chub	<i>Macrhybopsis storeriana</i>
Hornyhead chub	<i>Nocomis biguttatus</i>
Golden shiner	<i>Notemigonus crysoleucas</i>
Emerald shiner	<i>Notropis atherinoides</i>
River shiner	<i>Notropis blennius</i>
Bigmouth shiner	<i>Hybopsis dorsalis</i>
Spottail shiner	<i>Notropis hudsonius</i>
Silverhand shiner	<i>Notropis shumardi</i>
Sand shiner	<i>Notropis stramineus</i>
Pugnose minnow	<i>Opsopoedus emiliae</i>
Suckermouth minnow	<i>Phenacobius mirabilis</i>
Southern redbelly dace	<i>Phoxinus erythrogaster</i>
Bluntnose minnow	<i>Pimephales promelas</i>
Fathead minnow	<i>Pimephales vigilax</i>
Bullhead minnow	

Mud darter	<i>Etheostoma asprigene</i>
Bluntnose darter	<i>Etheostoma chlorosomum</i>
Johnny darter	<i>Etheostoma nigrum</i>
Orangethroat darter	<i>Etheostoma spectabile</i>
Yellow perch	<i>Perca flavescens</i>
Logperch	<i>Percina caprodes</i>
Blackside darter	<i>Percina maculata</i>
Slenderhead darter	<i>Percina phoxocephala</i>
River darter	<i>Percina shumardi</i>
Sauger	<i>Stizostedion canadense</i>
Walley	<i>Stizostedion vitreum</i>
Freshwater drum	<i>Aplodinotus grunniens.</i>
Smallmouth buffalo	<i>Ictiobus bubalus</i>
Bigmouth buffalo	<i>Ictiobus cyprinellus</i>
Black buffalo	<i>Ictiobus niger</i>
Spotted sucker	<i>Minytrema melanops</i>
Silver redhorse	<i>Maxostoma anisurum</i>
Golden redhorse	<i>Maxostoma erythrurum</i>
Shorthead redhorse	<i>Maxostoma macrolepidaturn</i>
Lake chubsucker	<i>Erimyzon sucetta</i>
White catfish	<i>Ictalurus catus</i>
Ironcolor shiner	<i>Notropis chalybaeus</i>
Striped bass	<i>Morone saxatilis</i>
Black bullhead	<i>Ameriurus melas</i>
Yellow bullhead	<i>Ameriurus natalis</i>
Brown bullhead	<i>Ameriurus nebulosaus</i>
Blue catfish	<i>Ictalurus furcatus</i>
Channel catfish	<i>Ictalurus punctatus</i>
Stonecat	<i>Noturus flavus</i>
Tadpole madtom	<i>Noturus gyrinus</i>
Flathead catfish	<i>Pylodictis olivaris</i>
Grass pickerel	<i>Esox americanus vermiculatus</i>
Northern pike	<i>Eox lucius</i>
Rainbow smelt	<i>Osmerus mordax</i>
Rainbow trout	<i>Oncorgyncus mykiss</i>
Trout-perch	<i>Percopsis orniscornaycus</i>
Pirate perch	<i>Aphredoderus sayanus</i>
Burbot	<i>Lota lota</i>
Starhead topminnow	<i>Fundulus dispar</i>
Blackstripe topminnow	<i>Fundulus notatus</i>
Western mosquitofish	<i>Gambusia affinis</i>
Brook silverside	<i>Labidesthes sicculus</i>
White bass	<i>Morone chrysops</i>
Yellow bass	<i>Morone mississippiensi</i>
Rock bass	<i>Ambloplites rupestris</i>

Green sunfish
Pumpkinseed
Warmouth
Orangespotted sunfish
Bluegill
Longear sunfish
Redear sunfish
Spotted sunfish

Lepomis cyanellus
Lepomis gibbosus
Lepomis gulosus
Lepomis humilis
Lepomis macrochirus
Lepomis megalotis
Lepomis microlophus
Lepomis punctatus

List of Mammals of the Illinois River National Wildlife and Fish Refuges

The following mammal list includes only those that have actually been observed on the refuges. Additional species can be expected, and will be added to the list as time passes. The 28 species listed are represented by official records and specimens preserved in the U.S. Fish and Wildlife Service collections at Washington, D.C., in the Museum of Natural History of the University of Illinois, and elsewhere.

Opossum (*Didelphis marsupialis*)
Eastern Mole (*Scalopus aquaticus*)
Little Brown Myotis (*Myotis lucifungus*)
Big Brown Bat (*Eptesicus fuscus*)
Hoary Bat (*Lasiurus cinereus*)
Eastern Cottontail (*Sylvilagus floridanus*)
Woodchuck (*Marmota monax*)
Eastern Fox Squirrel (*Sciurus niger*)
Southern Flying Squirrel (*Glaucomys volans*)
Plains Pocket Gopher (*Geomys bursarius*)
Beaver (*Castor canadensis*)
Deer Mouse (*Peromyscus maniculatus*)
White-footed Mouse (*Peromyscus leucopus*)
Southern Bog Lemming (*Synaptomys cooperi*)
Meadow Vole (*Microtus pennsylvanicus*)
Pine Vole (*Pitymys pioneetorum*)
Muskrat (*Onodatra zibethicus*)
Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
Meadow Jumping Mouse (*Zapus hudsonius*)
Coyote (*Canis latrans*)
Red Fox (*Vulpes fulva*)
Gray Fox (*Urocyon cinereoargenteus*)
Raccoon (*Procyon lotor*)
Mink (*Mustela vison*)
Badger (*Taxidea taxus*)
Striped Skunk (*Mephitis mephitis*)
Whitetail Deer (*Odocoileus virginianus*)

Illinois River NWFR Bird Checklist

Legend:

S=Spring

s=Summer

F=Fall

W=Winter

a = Abundant - Common species that is numerous

c = Common - Certain to be seen or heard 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

* = Species that nests in the refuge

+ = Species that is threatened or endangered in Illinois

Common Name	S	s	F	W
Loons				
Common Loon			o	
Grebes				
Pied-billed Grebe +			c	
Horned Grebe			u	u
Pelicans				
American White Pelican			o	
Cormorants				
Double-crested Cormorant +		c	o	c
Hérons and Bitterns				
American Bittern +	r		o	r
Least Bittern +	r	r	r	
Great Blue Heron +	a	a	a	o
Little Blue Heron +	u		u	
Great Egret +	a	a	c	
Snowy Egret +	r		r	
Cattle Egret	u	u	u	
Green Heron *	c	c	c	
Black-crowned Night Heron + *	o	u	o	
“Swans, Geese, and Ducks”				
Tundra Swan	r		o	r
Trumpeter Swan			o	o
Greater White-fronted Goose	o		o	
Snow Goose	u		u	
Canada Goose *	c	c	a	u
Wood Duck *	a	a	a	o
Green-winged Teal	c	u	a	r
American Black Duck	c	u	c	o
Mallard *	a	a	a	u
Northern Pintail	c	r	a	o
Blue-winged Teal *	c	u	a	r
Northern Shoveler	c		c	
Gadwall	u	o	u	r

Common Name	S	s	F	W
American Wigeon	c	r	c	r
Canvasback	c		c	o
Redhead	u		c	o
Ring-necked Duck	c		c	o
Lesser Scaup	a		c	o
Greater Scaup	r		o	
Black Scoter	r		r	
Surf Scoter			r	r
White-winged Scoter			r	r
Common Goldeneye	u		u	r
Bufflehead	u		u	o
Hooded Merganser	o	r	o	o
Common Merganser	a		u	c
Red-breasted Merganser	o		o	
Ruddy Duck	u	o	c	o
Vultures				
Turkey Vulture *	c	o	c	
Hawks and Eagles				
Osprey +	u	r	u	
Bald Eagle + *	u	r	u	c
Northern Harrier +	o	r	o	o
Sharp-shinned Hawk +	u	o	u	o
Cooper's Hawk +	u		u	r
Red-shouldered Hawk + *	r	r	r	r
Broad-winged Hawk *	o	r	o	
Red-tailed Hawk *	c	c	c	c
Rough-legged Hawk	u		u	u
Falcons				
American Kestrel *	c	c	c	o
Merlin	r		r	
Peregrine Falcon +	r		o	
Upland Game Birds				
Ring-necked Pheasant	o	o	o	o
Wild Turkey	o	o	o	o
Northern Bobwhite *	c	c	c	c
Rails and Coots				
King Rail	r		r	
Virginia Rail	u	o	u	
Sora *	c	r	c	
Common Moorhen +	r		r	
American Coot	a	o	a	u
Cranes				
Sandhill Crane +	r		r	

Common Name	S	s	F	W
Shorebirds				
Black-bellied Plover	o		o	
Lesser Golden Plover	o		o	
Semipalmated Plover	u		c	
Piping Plover +	r		r	
Killdeer *	c	c	a	o
American Avocet	r		u	
Greater Yellowlegs	c	u	c	
Lesser Yellowlegs	c	u	a	
Solitary Sandpiper	c	o	c	
Willet	r		o	
Spotted Sandpiper *	c	c	c	
Upland Sandpiper +	r		r	
Hudsonian Godwit	r	r	r	
Ruddy Turnstone	r		o	
Red Knot		r	r	
Sanderling	r	r	r	
Semipalmated Sandpiper	u	o	u	
Western Sandpiper	r	r	o	
Least Sandpiper	u	u	u	
Baird's Sandpiper	r	r	o	
Pectoral Sandpiper *	c	u	c	
Buff-breasted Sandpiper	r	o	o	
Dunlin	r		o	
Stilt Sandpiper	r	o	c	
Short-billed Dowitcher	o	o	u	
Long-billed Dowitcher	o	o	u	
Common Snipe	u	r	u	
American Woodcock	u	o	o	
Wilson's Phalarope +	r		r	
Red-necked Phalarope	r		o	
Gulls and Terns				
Laughing Gull	r	r	r	
Franklin's Gull	r	r	u	
Bonaparte's Gull	u		o	
Ring-billed Gull	c	u	c	c
Herring Gull	c	r	c	c
Caspian Tern	o		u	
Common Tern +	u		u	
Forster's Tern +	o	r	u	
Least Tern +	o	o	o	
Black Tern +	u	o	c	
Doves				
Rock Dove	c	c	c	c
Mourning Dove *	c	a	a	c
Cuckoos				
Black-billed Cuckoo	u	o	u	
Yellow-billed Cuckoo *	u	c	u	

Common Name	S	s	F	W
Owls				
Eastern Screech Owl *	u	u	u	u
Great Horned Owl *	c	c	c	c
Barred Owl *	c	c	c	c
Short-eared Owl	o	o	o	o
Nighthawks and Nightjars				
Common Nighthawk *	u	c	c	
Whip-poor-will *	o	u	o	
Swifts				
Chimney Swift	u	c	u	
Hummingbirds				
Ruby-throated Hummingbird *	u	u	c	
Kingfishers				
Belted Kingfisher *	c	c	c	o
Woodpeckers				
Red-Headed Woodpecker *	c	c	c	c
Red-bellied Woodpecker *	c	c	c	c
Yellow-bellied Sapsucker	c		c	o
Downy Woodpecker *	c	c	c	c
Hairy Woodpecker *	u	u	u	u
Northern Flicker *	c	c	c	c
Pileated Woodpecker	c	c	c	c
Flycatchers				
Olive-sided Flycatcher	r		o	
Eastern Wood Pewee *	c	c	c	
Yellow-bellied Flycatcher	o		o	
Acadian Flycatcher	u	o	u	
Alder Flycatcher	r		o	
Willow Flycatcher	u	u	r	
Least Flycatcher	c		u	
Eastern Phoebe *	u	u	u	
Great Crested Flycatcher	c	c	c	
Eastern Kingbird *	c	c	c	
Larks				
Horned Lark *	c	c	c	c
Swallows				
Purple Martin *	c	c	u	
Tree Swallow *	c	a	c	
Northern Rough-winged Swallow *	c	c	u	
Bank Swallow	u	c	c	
Cliff Swallow	u	u	u	
Barn Swallow *	c	c	a	

Common Name	S	s	F	W
Jays and Crows				
Blue Jay *	a	c	a	c
American Crow *	c	c	c	a
Chickadees and Titmice				
Black-capped Chickadee *	c	c	c	c
Tufted Titmouse	c	c	c	c
Nuthatches				
Red-breasted Nuthatch	r		r	o
White-breasted Nuthatch *	c	c	c	c
Creepers				
Brown Creeper	o	r	c	c
Wrens				
Carolina Wren *	c	c	c	u
Bewick's Wren +	r	r		
House Wren	c	c	c	
Winter Wren	u		u	u
Marsh Wren	r	o	r	
“Kinglets, Bluebirds, and Thrushes”				
Golden-crowned Kinglet	u		u	u
Ruby-crowned Kinglet	c		c	u
Blue-gray Gnatcatcher	u	u	o	
Eastern Bluebird *	o	r	o	r
Veery +	u		u	
Gray-cheeked Thrush	c		c	
Swainson's Thrush	c		c	
Hermit Thrush	c		c	r
Wood Thrush *	u	u	u	
American Robin *	a	a	a	u
Mimics				
Gray Catbird *	c	c	c	
Northern Mockingbird *	u	o	u	o
Brown Thrasher *	c	c	u	r
Pipits				
American Pipit	r		u	
Waxwings				
Cedar Waxwing	c	u	c	r
Shrikes				
Loggerhead Shrike +	r		r	
Starlings				
European Starling *	a	c	a	a

Common Name	S	s	F	W
Vireos				
White-eyed Vireo	r	r	r	
Bell's Vireo *	u	u	o	
Solitary Vireo	u		u	
Yellow-throated Vireo	o	r	o	
Warbling Vireo *	c	c	u	
Philadelphia Vireo	u		u	
Red-eyed Vireo *	c	c	c	
Warblers				
Blue-winged Warbler	r		r	
Golden-winged Warbler	r		r	
Tennessee Warbler	c		o	
Orange-crowned Warbler	u		u	
Nashville Warbler	c		c	
Northern Parula	c	u	c	
Yellow Warbler *	c	c	c	
Chestnut-sided Warbler	c		c	
Magnolia Warbler	c		c	
Cape May Warbler	r		r	
Black-throated Green Warbler	c		c	
Blackburnian Warbler	c	o	c	
Pine Warbler	r		r	
Palm Warbler	r		r	
Bay-breasted Warbler	o		o	
Blackpoll Warbler	c		u	
Cerulean Warbler	r		r	
Black-and-white Warbler	c		c	
American Redstart *	c	u	u	
Prothonotary Warbler *	c	c	u	
Ovenbird	c	u	c	
Northern Waterthrush	c		c	
Louisiana Waterthrush	u		r	
Kentucky Warbler	o	r	r	
Connecticut Warbler	r		r	
Mourning Warbler	r		r	
Common Yellowthroat *	c	c	u	r
Hooded Warbler	o		r	
Wilson's Warbler	c		c	
Canada Warbler	u		u	
Yellow-breasted Chat	u	r	u	
Tanagers				
Summer Tanager	u		u	
Scarlet Tanager	u	r	u	
"Grosbeaks, Buntings, and Sparrows"				
Northern Cardinal *	a	a	a	a
Rose-breasted Grosbeak *	c	c	c	
Blue Grosbeak	r	r	r	
Indigo Bunting *	c	a	a	r
Dicksissel *	c	c	c	

Common Name	S	s	F	W
Eastern Towhee *	c	c	u	r
American Tree Sparrow	c		c	a
Chipping Sparrow *	c	c	c	
Clay-colored Sparrow +	r		r	
Field Sparrow *	c	a	c	o
Vesper Sparrow *	o	o	o	r
Savannah Sparrow	u		u	
Grasshopper Sparrow	o	r	r	
Le Conte's Sparrow	o		o	
Nelson's Sharp-tailed Sparrow	r		r	
Fox Sparrow	c		c	o
Song Sparrow *	c	c	c	u
Lincoln's Sparrow	o		o	
Swamp Sparrow	u		u	o
White-throated Sparrow	c		c	o
White-crowned Sparrow	u		u	
Harris' Sparrow	r		r	
Dark-eyed Junco	c		c	a
Lapland Longspur	r		r	
Blackbirds and Orioles				
Bobolink	o		o	
Red-winged Blackbird *	a	a	a	u
Eastern Meadowlark *	c	c	c	o
Rusty Blackbird	c	c	c	o
Common Grackle *	c	a	c	o
Brown-headed Cowbird *	c	c	c	o
Baltimore Oriole *	c	c	c	
Finches				
Purple Finch	u		c	u
House Finch	u	u	u	u
Pine Siskin	u		u	o
American Goldfinch	a	a	a	c
Evening Grosbeak	r		r	r
Old World Sparrows				
House Sparrow	a	a	a	a
Eurasian Tree Sparrow	u	u	u	u
Rare and Accidental Birds				
Eared Grebe				Snow Bunting
Cinnamon Teal				Oldsquaw
Northern Goshawk				Sharp-tailed Sandpiper
Whimbrel				Red Phalarope
Red Crossbill				Little Gull
Thayer's Gull				Iceland Gull
Glaucous Gull				Snowy Owl
Long-eared Owl				Chuck-wills-widow
Black-throated Blue Warbler				

Common Name**Scientific Name***Mollusks*

three-ridge	<i>Actinonaias ligamentina</i>
common floater	<i>Amblerma plicata</i>
paper pondshell	<i>Anodonta grandis</i>
flat floater	<i>Anodonta imbecillis</i>
rock pocketbook	<i>Anodonta suborbiculata</i>
asiatic clam	<i>Arcidens confragosus</i>
purple wartyback	<i>Corbicula flurninea</i>
	<i>Cyclonaias tuberculata</i>
	<i>Dreissena polymorpha</i>
elephant ear	<i>Elliptio crassidens</i>
spike	<i>Elliptio dilatata</i>
	<i>Ellipsaria lineolata</i>
ebonyshell	<i>Fusconaia abena</i>
abash pigtoe	<i>Fusconaia flava</i>
plain pocketbook	<i>Lampsilis cardium</i>
Higgin's eye	<i>Lampsilis higginsii</i>
fatmucker	<i>Lampsilis siliquoidea</i>
yellow sandshell	<i>Lampsilis teres</i>
white heelsplitter	<i>Lasmigona complanata</i>
fragile papershell	<i>Leptodea iragilis</i>
black sandshell	<i>Ligumia recta</i>
washboard	<i>Megalonaias nervosa</i>
three-horned wartyback	<i>Obliquaria reflexa</i>
hickorynut	<i>Obovaria olivaria</i>
bullhead	<i>Plethobasus cyphus</i>
	<i>Pleurobema simox</i>
pink heelsplitter	<i>Potamilus alatus</i>
pink papershell	<i>Potamilus obiensis</i>
monkeyface	<i>Quadrula metanevra</i>
wartyback	<i>Quadrula nodulata</i>
pimpleback	<i>Quadrula pustulosa</i>
mapleleaf	<i>Quadrula quadrula</i>
squawfoot	<i>Strophitus undulates</i>
lilliput	<i>Toxolasma parvus</i>
	<i>Tritogonia verrucosa</i>
fawnsfoot	<i>Trunicilla donaciformis</i>
deertoe	<i>Trunicilla truncate</i>

Crustaceans

isopod	<i>Caecidotea forbesi</i>
isopod	<i>Caecidotea intermedia</i>
crayfish	<i>Cambarus diogenes</i>
amphipod	<i>Crangonyx forbesi</i>
amphipod	<i>Gammarus pseudolimnaeus</i>
amphipod	<i>Hyaella azteca</i>
crayfish	<i>Orconectes vinlis</i>
crayfish	<i>Palaemonetes kadiakensis</i>
crayfish	<i>Procambarus acutus</i>
crayfish	<i>Procambarus gracilis</i>

Reptiles

northern copperhead	<i>Agkistrodon contormix mokeson</i>
common snapping turtle	<i>Chelydra serpentine serpentine</i>
painted turtle	<i>Chrysemys picta belli</i>
midland painted turtle	<i>Chrysemys picta marginata</i>
Kirtland's snake	<i>Clonophis kirtlandi</i>
six-lined racerunner	<i>Cnemidophorus sexlineatus</i>
eastern yellowbelly racer	<i>Coluber constrictor flaviventris</i>
northern ringneck snake	<i>Diadophis punctatus edwardsii</i>
black rat snake	<i>Elephe obsoleta obsoleta</i>
fox snake	<i>Elephe vulpine</i>
western fox snake	<i>Elephe vulpine vulpine</i>
Blanding's turtle	<i>Emydoidea blaningi</i>
five-lined skink	<i>Eumeces fasciatus</i>
broad-headed skink	<i>Eumeces laticpes</i>
map turtle	<i>Grapemys geographica</i>
Ouchita map turtle	<i>Graptemys ouachitensis</i>
false map turtle	<i>Graptemys pseudogeographica</i>
dusty hognose snake	<i>Heterodon nasicus gloydi</i>
plains hognose snake	<i>Heterodon nasicus nasicus</i>
eastern hognose snake	<i>Heterodon platyrhinos</i>
Illinois mud turtle	<i>Kinosternon flavescens spooneri</i>
prairie kingsnake	<i>Lampropeltis calligaster</i>
speckled kingsnake	<i>Lampropeltis getulus holbrooki</i>
eastern milk snake	<i>Lampropeltis triangulum</i>
red milk snake	<i>Lampropeltis triangulum sypila</i>
alligator snapping turtle	<i>Macrolemys temmincki</i>
yellowbelly water snake	<i>Natrix erythrogaster flavigaster</i>
Graham's water snake	<i>Natrix grahami</i>
diamondback water snake	<i>Natrix rhombifera</i>
diamondback water snake	<i>Natrix rhombifera rhombifera</i>

queen snake
northern water snake
western smooth green snake
western slender glass lizard
bullsnake
red-eared turtle
ground skink
eastern massasauga
pond slider
smooth softshell
eastern spiny softshell

Natrix septemvittata
Natrix sipedon sipedon
Opheadrys vernalis blanchardi
Ophisaurus attenuatus
Pituophis melanoleucus sayi
Pseudemys scripta elegans
Scincella lateralis
Sistrurus catenatus catenatus
Trachemys scripta elegans
Trionyx muticus muticus
Trionyx spiniferus spiniferus

Amphibians

Blanchard's cricket frog
small-mouthed salamander
tiger salamander
eastern tiger salamander
American toad
Woodhouse's toad
Fowler's toad
northern spring peeper
eastern gray tree frog
mud puppy
Illinois chorus frog
western chorus frog
crawfish frog
plains leopard frog
bullfrog
green frog
northern leopard frog
southern leopard frog
western lesser siren

Acris crepitans blanchardi
Ambystoma texanum
Ambystoma tigrinum
Ambystoma tigrinum tigrinum
Bufo americanus americanus
Bufo woodhousei
Bufo woodhousei fowleri
Hyla crucifer crucifer
Hyla versicolor
Necturus maculosus maculosus
Pseudacris streckeri illinoensis
Pseudacris triseriata triseriata
Rana areolata
Rana blairi
Rana catesbeiana
Rana clamitans melanota
Rana pipiens pipiens
Rana shenocephala
Siren intermedia nettingi

Appendix D: Compatibility Determinations

COMPATIBILITY DETERMINATION

Use: Wildlife Observation and Photography

Refuge Name: Chautauqua National Wildlife Refuge

Establishing Authority: Chautauqua Refuge was established under Executive Order 7524, dated December 23, 1936

Refuge Purpose: The purpose of Chautauqua National Wildlife Refuge is "... as a refuge and breeding ground for migratory birds and other wildlife." (Executive Order 7524) and "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (Migratory Bird Conservation Act)

National Wildlife Refuge System Purpose: The mission of the National Wildlife Refuge System is to *administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

Description of Use: The Fish and Wildlife Service proposes to provide the public with opportunities for wildlife observation and photography on Chautauqua National Wildlife Refuge. These uses were identified in Executive Order 12996 and the National Wildlife Refuge System Improvement Act of 1997 as priority public uses and are to be encouraged when compatible with refuge purposes. The refuge has been identified as a Globally Significant Bird area and as a Western Hemisphere Shorebird Network site. The refuge is popular among individuals and groups interested in viewing and photographing shorebirds, waterfowl, eagles, and numerous others birds.

A public use brochure will be available to acquaint the public with the refuge layout, allowed activities and restrictions.

Availability of Resources: Birders are generally a low impact group requiring little regulation, enforcement, and accommodations. Existing parking lots, trails, overlooks, and rest areas are adequate to support these uses. Birders have expressed interest in additional access and observation points which will be considered in the Comprehensive Plan. Refuge law enforcement staff check birders as time permits or when special circumstances warrant. No additional law enforcement officers or salaries are required. No additional equipment is needed to conduct signing, posting, and litter removal which is done as part of other refuge maintenance operations and should not contribute to fixed refuge maintenance costs. It is estimated that \$1,000 is required annually to administer the wildlife observation and photography programs on Chautauqua Refuge.

Anticipated Impacts of the Use: The proposed use will not have an affect on refuge purposes.

The most of the refuge is closed to public entry from October 16 through January 15 to provide sanctuary for waterfowl, eagles, and other birds.

Public Review and Comment: This compatibility determination will be a part of the draft Comprehensive Plan and open for public review and comment. Notices will be mailed to local news media and posted on refuge kiosks and bulletin boards announcing dates for review and comment.

Determination:

Use are Not Compatible

Uses are Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility: The proposed use will be compatible with the refuge purpose as long as the use does not restrict, deter, detract or inhibit the ability of the Refuge to meet its migratory bird and endangered species responsibilities. This is possible when the use is authorized under current federal and state regulations and refuge specific regulations and in accordance with the refuge management plans.

Justification: Wildlife observation and photography conducted as a wildlife dependent uses fit well with Executive Order 12996 and the National Wildlife Refuge Improvement Act of 1997. When planned and managed to minimize impacts on the migratory bird resources, these uses provide thousands of hours of pleasure for the public engaged in wildlife observation and photography. The public is keenly interested in ensuring that this tradition continue.

Signature: Refuge Manager:

(Signature and Date)

Concurrence: Regional Chief:

(Signature and Date)

Mandatory 15- Re-evaluation Date:

COMPATIBILITY DETERMINATION

Use: Hunting

Refuge Name: Chautauqua National Wildlife Refuge

Establishing Authority: Chautauqua Refuge was established under Executive Order 7524, dated December 23, 1936

Refuge Purpose: The purpose of Chautauqua National Wildlife Refuge is "... as a refuge and breeding ground for migratory birds and other wildlife." (Executive Order 7524) and "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (Migratory Bird Conservation Act)

National Wildlife Refuge System Purpose: The mission of the National Wildlife Refuge System is to *administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

Description of Use: The U.S. Fish and Wildlife Service proposes to continue to provide waterfowl hunting opportunities on Chautauqua National Wildlife Refuge. The area open to hunting includes refuge lands and waters between the Illinois River and the outside toe of the west levee of Lake Chautauqua. The hunting plan will be updated and consideration for other hunting opportunities will be evaluated and may be authorized when these activities do not interfere with waterfowl hunting.

Seasons, harvest methods, and bag limits will be consistent with State of Illinois regulations. Hunters may access the area 1 hour before sunrise. Hunting is allowed during daylight hours only. Enforcement activities on the hunting area will be conducted by Refuge officers and with Illinois Conservation Police Officers providing periodic assistance.

A public use brochure will be available to acquaint the public with the refuge layout, allowed activities and restrictions.

Availability of Resources: Inasmuch as the use will be somewhat limited by difficult access (access is by boat only with public boat ramps at Liverpool and Havana), the existing Refuge staff can continue to administer the hunting program. Historically, hunting pressure and hunter success have been low in this area, patrols by refuge law enforcement officers are not conducted daily. Law enforcement is conducted when time permits or when special circumstances warrant. No additional law enforcement officers or salaries are required. No additional equipment is needed to conduct signing, posting, and litter removal which is done as part of other refuge maintenance operations and should not contribute to fixed refuge maintenance costs. It is estimated that \$1,300 is required annually to administer waterfowl hunting on Chautauqua Refuge. Once Illinois River Refuges reaches its growth potential and vision, a full time refuge officer will greatly enhance the ability of the refuge to ensure compliance with waterfowl hunting and other visitor use regulations.

Anticipated Impacts of the Use: The proposed use will not have an affect on refuge purposes.

Populations of targeted species are at a level where hunting in accordance with state and federal regulations in this small portion of the refuge will not adversely affect waterfowl populations. The 1,100 north pool and 2100 acre south pool of Lake Chautauqua serve as an inviolate sanctuary for waterfowl and other migratory birds.

Public Review and Comment: This compatibility determination will be a part of the draft Comprehensive Plan and open for public review and comment. Notices will be mailed to local news media and posted on refuge kiosks and bulletin boards announcing dates for review and comment.

Determination:

Use is Not Compatible

Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility: The proposed uses will be compatible with the refuge purpose when authorized under current federal and state regulations and refuge specific regulations, included in a hunting plan, and formally opened to hunting.

Justification: Wildlife dependent use of this tract will fit well with concept plans for the Emiquon Refuge and Executive Order 12296, and the National Wildlife Refuge Improvement Act of 1997. Public use of this tract will not affect the need for waterfowl sanctuary on the refuge. Long range plans call for Thompson and Flag Lakes to be waterfowl sanctuaries once the land is purchased and the habitat is restored and Chautauqua Refuge offers sanctuary directly across the Illinois River.

Signature: Refuge Manager:

(Signature and Date)

Concurrence: Regional Chief:

(Signature and Date)

Mandatory 15- Re-evaluation Date:

COMPATIBILITY DETERMINATION

Use: Sport Fishing

Refuge Name: Chautauqua National Wildlife Refuge

Establishing Authority: Chautauqua Refuge was established under Executive Order 7524, dated December 23, 1936

Refuge Purpose: The purpose of Chautauqua National Wildlife Refuge is "... as a refuge and breeding ground for migratory birds and other wildlife." (Executive Order 7524) and "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (Migratory Bird Conservation Act)

National Wildlife Refuge System Purpose: The mission of the National Wildlife Refuge System is to *administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

Description of Use: Historically, Lake Chautauqua was a productive and popular sport fishing lake. Sport fishing was identified in the National Wildlife Refuge Improvement Act as one of the six wildlife dependent public uses to be encouraged when compatible with refuge purposes. The U.S. Fish and Wildlife Service proposes to continue to provide sport fishing opportunities on Chautauqua National Wildlife Refuge. The all waters of Chautauqua Refuge will be open to sport fishing from January 16 through October 15 each year. The shoreline of Lake Chautauqua will be open to bank fishing from the refuge office site to the Goofy Ridge water control structure year around.

A public use brochure will be available to acquaint the public with the refuge layout, allowed activities and restrictions.

Availability of Resources: In 1998 the Illinois Department of Natural Resources stocked the 1,000 acre North Pool of Lake Chautauqua with 400 pounds of breeding crappie, 400 pounds of breeding bluegill, 40 breeding largemouth bass, 20,000 channel catfish, and 120,000 fingerling bass. The Department fishery biologist have been monitoring fish growth and reproduction and have placed restrictive size and creel limits on largemouth bass and crappie to enhance the fishery. The South Pool is open to the river during much of the year but is drawn down in the late spring or early summer to provide habitat for shorebirds and to provide food for waterfowl. The South Pool is not fishable during drawdown.

Department of Natural Resources Conservation Officers regularly enforce fishing regulations. Refuge law enforcement staff check anglers as time permits or when special circumstances warrant. No additional law enforcement officers or salaries are required. No additional equipment is needed to conduct signing, posting, and litter removal which is done as part of other refuge maintenance operations and should not contribute to fixed refuge maintenance costs. It is estimated that \$1,300 is required annually to administer sport fishing program on Chautauqua Refuge.

Anticipated Impacts of the Use: The proposed use will not have an affect on refuge purposes.

Populations of targeted species are at a level where fishing in accordance with state and federal regulations will not adversely affect fish populations or waterfowl use. Boats are limited to a no wake speed. The 1,100 north pool and 2100 acre south pool of Lake Chautauqua serve as an inviolate sanctuary for waterfowl and other migratory birds from October 16 through January 15

each year and is closed to fishing at that time.

Public Review and Comment: This compatibility determination will be a part of the draft Comprehensive Plan and open for public review and comment. Notices will be mailed to local news media and posted on refuge kiosks and bulletin boards announcing dates for review and comment.

Determination:

Use is Not Compatible

Use is Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility: The proposed use will be compatible with the refuge purpose as long as the use does not restrict, deter, detract or inhibit the ability of the Refuge to meet its migratory bird and endangered species responsibilities. This is possible when the use is authorized under current federal and state regulations and refuge specific regulations and in accordance with the refuge management plans.

Justification: Public sport fishing conducted as a wildlife dependent use of this tract will fit well with Executive Order 12996 and the National Wildlife Refuge Improvement Act of 1997. Public use of this tract will not affect the need for waterfowl sanctuary on the refuge. Traditionally Lake Chautauqua has been a popular and productive sport fishing lake. The public is keenly interested in ensuring that this tradition continue.

Signature: Refuge Manager:

(Signature and Date)

Concurrence: Regional Chief:

(Signature and Date)

Mandatory 15- Re-evaluation Date:

COMPATIBILITY DETERMINATION

Use: Environmental Education and Interpretation

Refuge Name: Chautauqua National Wildlife Refuge

Establishing Authority: Chautauqua Refuge was established under Executive Order 7524, dated December 23, 1936

Refuge Purpose: The purpose of Chautauqua National Wildlife Refuge is "... as a refuge and breeding ground for migratory birds and other wildlife." (Executive Order 7524) and "... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (Migratory Bird Conservation Act)

National Wildlife Refuge System Purpose: The mission of the National Wildlife Refuge System is to *administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.*

Description of Use: The Fish and Wildlife Service proposes to provide the public with interpretative information and environmental education opportunities on Chautauqua National Wildlife Refuge. These uses were identified in Executive Order 12996 and the National Wildlife Refuge System Improvement Act of 1997 as priority public uses and are to be encouraged when compatible with refuge purposes. The refuge has been identified as a Globally Significant Bird area and as a Western Hemisphere Shorebird Network site. The refuge is popular among individuals and education groups interested in learning more about their National Wildlife Refuge System and about the ecosystem in which they live.

A public use brochure will be available to acquaint the public with the refuge layout, allowed activities and restrictions. Refuge staff will encourage and assist with natural resource workshops for teachers. Teachers will be encouraged to use the Refuge as an outdoor classroom.

Availability of Resources: Environmental education and interpretation are generally a low impact activities requiring little regulation, enforcement, and accommodations. Existing parking lots, trails, overlooks, and rest areas are adequate to support these uses. Refuge staff will encourage teachers to bring their students to the refuge and study their environment in a natural setting. Refuge staff will present interpretative programs from time to time when requested and as time permits. No additional staff or law enforcement officers or salaries are required. No additional equipment is needed to conduct signing, posting, and litter removal which is done as part of other refuge maintenance operations and should not contribute to fixed refuge maintenance costs. It is estimated that \$1,000 is required annually to administer the environmental education and interpretation programs on Chautauqua Refuge.

Anticipated Impacts of the Use: The proposed use will not have an affect on refuge purposes.

Most of the refuge is closed to public entry from October 16 through January 15 to provide sanctuary for waterfowl, eagles, and other birds.

Public Review and Comment: This compatibility determination will be a part of the draft Comprehensive Plan and open for public review and comment. Notices will be mailed to local news media and posted on refuge kiosks and bulletin boards announcing dates for review and comment.

Determination:

Use are Not Compatible

Uses are Compatible with Following Stipulations

Stipulations Necessary to Ensure Compatibility: The proposed use will be compatible with the refuge purpose as long as the use does not restrict, deter, detract or inhibit the ability of the Refuge to meet its migratory bird and endangered species responsibilities. This is possible when the use is authorized under current federal and state regulations and refuge specific regulations and in accordance with the refuge management plans.

Justification: Interpretation and environmental education conducted as a wildlife dependent uses fit well with Executive Order 12996 and the National Wildlife Refuge Improvement Act of 1997. When planned and managed to minimize impacts on the migratory bird resources, these uses provide an opportunity for students to learn about their environment in a natural setting. Educators are keenly interested in ensuring that this tradition continues.

Signature: Refuge Manager:

(Signature and Date)

Concurrence: Regional Chief:

(Signature and Date)

Mandatory 15- Re-evaluation Date:

COMPATIBILITY DETERMINATION
ILLINOIS RIVER REFUGES FOCUS AREAS

Use: Research, biological monitoring, habitat restoration

Refuge Name: Illinois River National Fish and Wildlife Refuges (Chautauqua, Emiquon, and Meredosia Refuges)

Establishing and Acquisition Authorities: Executive Order 7524, dated December 23, 1936(Chautauqua Refuge), Migratory Bird Conservation Act (Meredosia and Chautauqua Refuges), and the Emergency Wetlands Resources Act of 1986 (Emiquon Refuge).

Refuge Purposes: "...as a refuge and breeding ground for migratory birds and other wildlife."
"... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds."
"... the conservation of wetlands of the Nation in order to maintain public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions ..."

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

Description of Uses: The Fish and Wildlife Service has identified 5 focus areas along the Illinois River between the towns of Meredosia and Hennepin for inclusion in the Comprehensive Conservation Planning process (see attached maps). These areas total approximately xxxx acres. The Illinois River Refuges will undertake and/or support research and monitoring, outreach, technical assistance, land acquisition and habitat restoration efforts in the focus areas for conservation of migratory birds, endangered species, migratory fish, and a natural diversity of flora and fauna.

Ecological research and biological monitoring will be conducted on Illinois River Refuges to provide information needed for effective decision making for management and restoration projects. The Natural History Survey, the Long Term Resource Monitoring Program, refuge staff and volunteers and others will study ecological processes, affects of management actions on vegetation and wildlife communities, and monitor fish, wildlife and plant populations to assist refuge staff in making wise management decisions and to support adaptive management processes.

Much of the land within refuge focus areas is in agricultural production with excellent potential for restoration of wetlands and other habitats. The Nature Conservancy owns 7,500 acres within the Emiquon acquisition boundary. Presently this land is 99 percent agriculture and the Conservancy plans to restore Thompson and Flagg Lakes and other wetlands, bottomland forests, and prairie habitat. The Conservancy also purchased 1,100 within the Meredosia Refuge Focus Area and have restored wetlands, prairie, and forests. They managed a waterfowl hunting program on the area. The Wetland Initiative recently purchased the 2500 acre Hennepin Drainage District and they plan to turn it over to the Service or the DNR in 15 years. Prior to purchase this area was 95 percent agriculture. The Wetland Initiative stopped pumping in April to restore hydrology and already have about 1,200 acres of wetlands which are attracting numerous birds. The response of wetland plants and invertebrates has been impressive. The Illinois Department of Transportation recently purchased 1,700 acres at the confluence of the Lamoine and Illinois Rivers. This area was primarily agriculture but it was leased and flooded in the fall to provide hunting opportunities for paying customers. This area may be turned over to the Illinois Department of Natural Resources when restored.

All private land on Meredosia Island north of refuge property has been enrolled in the Conservation Reserve Enhancement Program (CREP). Agriculture fields are allowed to revert to bottomland forests or restored as wetlands for hunting purposes.

Availability of Resources: Some research and monitoring is funded by grants, the Corps of Engineers, the Natural History Survey, or done by students and volunteers. Refuge staff involvement includes reviewing research proposals, monitoring research activities, and reviewing reports.

The Illinois 2020 Program is pulling together funds from several sources for restoration projects. The Department of Agriculture's CREP has taken conservation easements on over 100,000 acres within the Illinois River watershed and the IDNR has purchased permanent easements on roughly half of the federal easements. The Department of Agriculture pays for habitat restoration. The Environmental Management Program of the Corps of Engineers funded a large restoration project on Chautauqua Refuge and is considering the Weis Lake\Crow Creek\Duck Ranch project for funding as a Habitat Restoration and Enhancement Project. The Illinois Department of Transportation is restoring habitat on property they purchased south of the Lamoine River as mitigation for wetland losses from highway projects.

The Nature Conservancy and the Wetland Initiative have purchased large tracts of land for habitat restoration within refuge focus areas using Department of Agriculture money, North American Wetland Conservation Act grants, Corps of Engineers programs, and private donations. Ducks Unlimited is also an active partner in habitat restoration matching funds from Fish and Wildlife Service and other agencies and groups.

The Service may purchase some of these restored habitats within the refuge focus areas as well as purchasing private lands for habitat protection or restoration. All of these restoration projects need to be monitored, evaluated, and managed in accordance with the best science available..

Anticipated Impacts of the Use: Information gathered in these research and monitoring efforts will enhance the ability of managers to successfully restore and manage river ecosystems. Fish, wildlife and plants require healthy ecosystems for their continued existence and for use and enjoyment by people. Managers will ensure through review and approval of proposals that research efforts will have minimal adverse impact on refuge resources.

All of the habitat restoration efforts by the various agencies, non-government organizations, and private landowners will have a positive effect on floodplain plant communities and on fish and wildlife species depending on these plant communities to meet a portion or all of their life requirements.

Public Review and Comment: The refuge hosted 3 open houses and several workshops to solicit comments from the public and other agencies and organizations. The draft refuge Comprehensive Conservation Plan will be available for public review and comment before being finalized. The Nature Conservancy and the Wetland Initiative have held workshops to assist with their planning for habitat restoration.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility: Research and monitoring projects must be reviewed approved by the refuge manager. The manager will identify all requirements to ensure the use is in compliance with policy and regulations and has minimal adverse impact on refuge resources.

Justification: Research and monitoring information is critical to making sound biological decisions in the restoration and management of ecosystems for fish and wildlife communities occurring on national wildlife refuges. This is an important use to ensure that we have the best information possible upon which to base management decisions.

Signature: Refuge Manager: Signature/Date

Concurrence: Regional Chief: Signature / Date

Mandatory 15 year Re-evaluation Date:

Appendix E: Compliance Requirements

Appendix E / Compliance Requirements

Rivers and Harbor Act (1899) (33 U.S.C. 403): Section 10 of this Act requires the authorization by the U.S. Army Corps of Engineers prior to any work in, on, over, or under a navigable water of the United States.

Antiquities Act (1906): Authorizes the scientific investigation of antiquities on Federal land and provides penalties for unauthorized removal of objects taken or collected without a permit.

Migratory Bird Treaty Act (1918): Designates the protection of migratory birds as a Federal responsibility. This Act enables the setting of seasons, and other regulations including the closing of areas, Federal or non Federal, to the hunting of migratory birds.

Migratory Bird Conservation Act (1929): Establishes procedures for acquisition by purchase, rental, or gift of areas approved by the Migratory Bird Conservation Commission.

Fish and Wildlife Coordination Act (1934), as amended: Requires that the Fish and Wildlife Service and State fish and wildlife agencies be consulted whenever water is to be impounded, diverted or modified under a Federal permit or license. The Service and State agency recommend measures to prevent the loss of biological resources, or to mitigate or compensate for the damage. The project proponent must take biological resource values into account and adopt justifiable protection measures to obtain maximum overall project benefits. A 1958 amendment added provisions to recognize the vital contribution of wildlife resources to the Nation and to require equal consideration and coordination of wildlife conservation with other water resources development programs. It also authorized the Secretary of Interior to provide public fishing areas and accept donations of lands and funds.

Migratory Bird Hunting and Conservation Stamp Act (1934): Authorized the opening of part of a refuge to waterfowl hunting.

Historic Sites, Buildings and Antiquities Act (1935), as amended: Declares it a national policy to preserve historic sites and objects of national significance, including those located on refuges. Provides procedures for designation, acquisition, administration, and protection of such sites.

Refuge Revenue Sharing Act (1935), as amended: Requires revenue sharing provisions to all fee-title ownerships that are administered solely or primarily by the Secretary through the Service.

Transfer of Certain Real Property for Wildlife Conservation Purposes Act (1948): Provides that upon a determination by the Administrator of the General Services Administration, real property no longer needed by a Federal agency can be transferred without reimbursement to the Secretary of Interior if the land has particular value for migratory birds, or to a State agency for other wildlife conservation purposes.

Federal Records Act (1950): Directs the preservation of evidence of the government's organization, functions, policies, decisions, operations, and activities, as well as basic historical and other information.

Fish and Wildlife Act (1956): Established a comprehensive national fish and wildlife policy and broadened the authority for acquisition and development of refuges.

Refuge Recreation Act (1962): Allows the use of refuges for recreation when such uses are compatible with the refuge's primary purposes and when sufficient funds are available to manage the uses.

Wilderness Act (1964), as amended: Directed the Secretary of Interior, within 10 years, to review every roadless area of 5,000 or more acres and every roadless island (regardless of size) within National Wildlife Refuge and National Park Systems and to recommend to the President the suitability of each such area or island for inclusion in the National Wilderness Preservation System, with final decisions made by Congress. The Secretary of Agriculture was directed to study and recommend suitable areas in the National Forest System.

Land and Water Conservation Fund Act (1965): Uses the receipts from the sale of surplus Federal land, outer continental shelf oil and gas sales, and other sources for land acquisition under several authorities.

National Wildlife Refuge System Administration Act (1966), as amended by the National Wildlife Refuge System Improvement Act (1997) 16 U.S.C.

668dd668ee. (*Refuge Administration Act*): Defines the National Wildlife Refuge System and authorizes the Secretary to permit any use of a refuge provided such use is compatible with the major purposes for which the refuge was established. The Refuge Improvement Act clearly defines a unifying mission for the Refuge System; establishes the legitimacy and appropriateness of the six priority public uses (hunting, fishing, wildlife observation and photography, or environmental education and interpretation); establishes a formal process for determining compatibility; established the responsibilities of the Secretary of Interior for managing and protecting the System; and requires a Comprehensive Conservation Plan for each refuge by the year 2012. This Act amended portions of the Refuge Recreation Act and National Wildlife Refuge System Administration Act of 1966.

National Historic Preservation Act (1966), as amended: Establishes as policy that the Federal Government is to provide leadership in the preservation of the nation's prehistoric and historic resources.

Architectural Barriers Act (1968): Requires federally owned, leased, or funded buildings and facilities to be accessible to persons with disabilities.

National Environmental Policy Act (1969): Requires the disclosure of the environmental impacts of any major Federal action significantly affecting the quality of the human environment.

Uniform Relocation and Assistance and Real Property Acquisition Policies Act (1970), as amended: Provides for uniform and equitable treatment of persons who sell their homes, businesses, or farms to the Service. The Act requires that any purchase offer be no less than the fair market value of the property.

Endangered Species Act (1973): Requires all Federal agencies to carry out programs for the conservation of endangered and threatened species.

Rehabilitation Act (1973): Requires programmatic accessibility in addition to physical accessibility for all facilities and programs funded by the Federal government to ensure that anybody can participate in any program.

Archaeological and Historic Preservation Act (1974): Directs the preservation of historic and archaeological data in Federal construction projects.

Clean Water Act (1977): Requires consultation with the Corps of Engineers (404 permits) for major wetland modifications.

Surface Mining Control and Reclamation Act (1977) as amended (Public Law 95-87) (SMCRA): Regulates surface mining activities and reclamation of coal-mined lands. Further regulates the coal industry by designating certain areas as unsuitable for coal mining operations.

Executive Order 11988 (1977): Each Federal agency shall provide leadership and take action to reduce the risk of flood loss and minimize the impact of floods on human safety, and preserve the natural and beneficial values served by the floodplains.

Executive Order 11990: Executive Order 11990 directs Federal agencies to (1) minimize destruction, loss, or degradation of wetlands and (2) preserve and enhance the natural and beneficial values of wetlands when a practical alternative exists.

Executive Order 12372 (Intergovernmental Review of Federal Programs): Directs the Service to send copies of the Environmental Assessment to State Planning Agencies for review.

American Indian Religious Freedom Act (1978): Directs agencies to consult with native traditional religious leaders to determine appropriate policy changes necessary to protect and preserve Native American religious cultural rights and practices.

Fish and Wildlife Improvement Act (1978): Improves the administration of fish and wildlife programs and amends several earlier laws including the Refuge Recreation Act, the National Wildlife Refuge System Administration Act, and the Fish and Wildlife Act of 1956. It authorizes the Secretary to accept gifts and bequests of real and personal property on behalf of the United States. It also authorizes the use of volunteers on Service projects and appropriations to carry out a volunteer program.

Archaeological Resources Protection Act (1979), as amended: Protects materials of archaeological interest from unauthorized removal or destruction and requires Federal managers to develop plans and schedules to locate archaeological resources.

Federal Farmland Protection Policy Act (1981), as amended: Minimizes the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.

Emergency Wetlands Resources Act (1986): Promotes the conservation of migratory waterfowl and offsets or prevents the serious loss of wetlands by the acquisition of wetlands and other essential habitats.

Federal Noxious Weed Act (1990): Requires the use of integrated management systems to control or contain undesirable plant species, and an interdisciplinary approach with the cooperation of other Federal and State agencies.

Native American Graves Protection and Repatriation Act (1990): Requires Federal agencies and museums to inventory, determine ownership of, and repatriate cultural items under their control or possession.

Americans With Disabilities Act (1992): Prohibits discrimination in public accommodations and services.

Executive Order 12898 (1994): Establishes environmental justice as a Federal government priority and directs all Federal agencies to make environmental justice part of their mission. Environmental justice calls for fair distribution of environmental hazards.

Executive Order 12996 Management and General Public Use of the National Wildlife Refuge System (1996): Defines the mission, purpose, and priority public uses of the National Wildlife Refuge System. It also presents four principles to guide management of the System.

Executive Order 13007 Indian Sacred Sites (1996): Directs Federal land management agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, avoid adversely affecting the physical integrity of such sacred sites, and where appropriate, maintain the confidentiality of sacred sites.

National Wildlife Refuge System Improvement Act (1997): Considered the “Organic Act of the National Wildlife Refuge System. Defines the mission of the System, designates priority wildlife-dependent public uses, and calls for comprehensive refuge planning.

National Wildlife Refuge System Volunteer and Community Partnership Enhancement Act (1998): Amends the Fish and Wildlife Act of 1956 to promote volunteer programs and community partnerships for the benefit of national wildlife refuges, and for other purposes.

National Trails System Act: Assigns responsibility to the Secretary of Interior and thus the Service to protect the historic and recreational values of congressionally designated National Historic Trail sites.

Treasury and General Government Appropriations Act of 2001 (Public Law 106-554): In December 2002, Congress required federal agencies to publish their own guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information that they disseminate to the public (44 U.S.C. 3502). The amended language is included in Section 515(a). The Office of Budget and Management (OMB) directed agencies to develop their own guidelines to address the requirements of the law. The Department of the Interior instructed bureaus to prepare separate guidelines on how they would apply the Act. The U.S. Fish and Wildlife Service has developed “Information Quality Guidelines” to address the law.

Appendix F: RONS and MMS Lists

Table 1: Refuge Operating Needs Projects

Project Number	Project Title	FTEs	Operating Costs (\$000)		
			One-time	Recurring Base	Total First Year
99015	Enhance existing wetlands on the Cameron/Billsbach Division		137	52	189
97009	Improve Refuge public use and outreach (outdoor recreation planner).	1.0	65	63	128
99005	Improve resources data analysis on Illinois River Refuges (biologist)	1.0	65	74	139
99011	Construct accessible platform at Chautauqua NWR		27		27
97003	Meredosia NWR prairie restoration on Shearl and Skinner tracts.		51	3	54
99004	Improve entrance road to Illinois River Refuge's headquarters.		201	13	214
Totals		20	546	205	751

MMS Items Greater than \$100,000

Number	Description	Amount (\$)
01007	John Deere Tracked Excavator, 32" tracks, Model DW690EL	152,000
99012	Construct Illinois River Refuge's Visitor Center	1,139,000
99008	Enhance Chautauqua NWR cross dike levee	8,805,000
97019	Construct Meredosia NWR HQ/Visitor Center	912,000
01036	Champion 710A Road Grader, w/cab, 14' Moldboard	111,000
97002	Meredosia NWR wetland restoration of three tracts	125,392
00003	Restore Globe levee District Wetlands and Moist Soil Habitat	172,800
01NNN	Restoration of Liverpool Side Channel and Public Hunting Area	2,600,000
01NNN	Rehabilitate Old Chautauqa Maintenance Shop into VC/EE Center	570,000
02NNN	Construction of Meredosia NWR Headquarters with Visitor Contact	1,000,000
02NNN	Construction of Cameron Billsbach Division HQ with Visitor Contact	1,303,000

Appendix G: Mailing List

Appendix G: Mailing List

The following is an initial list of elected officials, government offices, private organizations, and individuals who will receive notice of the availability of the draft CCP. We continue to add to this list.

Elected Officials

Gov. Rod R. Blagojevich
Sen. Peter Fitzgerald
Sen. Richard Durbin
Rep. Ray LaHood
Rep. Lane Evans

Local Government

City of Havana, Illinois
Mason County, Illinois
Morgan County, Illinois
Cass County, Illinois
Marshall County, Illinois
Fulton County, Illinois

Government Agencies

Environmental Protection Agency, Chicago, Illinois
Environmental Protection Agency, Kansas City, Kansas
Holt County FSA, USDA Building
Illinois River National Wildlife and Fish Refuge, Havana, Illinois
Natural Resource Conservation Service, Hardin, Illinois
NRCS District Conservationist, Murphysboro, Illinois
Shawnee National Forest, Murphysboro, Illinois
U.S. Fish and Wildlife Service, Marion, Illinois
U.S. Fish and Wildlife Service ES Office, Rock Island, Illinois
Illinois State Police
Illinois Department of Natural Resources
Pere Marquette State Park, Grafton, Illinois
Shawnee Resource Conservation, Marion, Illinois
University of Illinois, State Extension Office, Urbana, Illinois

Organizations

Bassmasters
Ducks Unlimited
Great Rivers Chapter, Illinois Audubon Society
Illinois EcoWatch
Illinois Rivers Project
Illinois Wildlife Foundation
Illinois-Indian Sea Grant College
Izaak Walton League of America, Inc.
Illinois Federation of Outdoor Resources
Migratory Waterfowl Hunters, Inc.
National Audubon Society

National Wildlife Foundation
The Nature Conservancy
Nature Institute
Northeast Midwest Institute
Partners for Wetlands
Sierra Club
Southwestern Illinois Resource
American Fisheries Society
American Fisheries Society, Illinois Chapter
Clean Water Fund
Conservation Fund
Illinois Audubon Society
Illinois Bass Chapter Federation
Illinois Chapter Federation
Illinois Environmental Council
Illinois Natural Heritage Foundation
National Waterways Conference
National Wildlife Refuge Association
Natural Resources Council
Sierra Club
Wildlife Management Institute

Tribes

News Media

Appendix H: List of Preparers

Appendix H: List of Preparers

Ross Adams

Project Leader, U.S. Fish and Wildlife Service, Illinois River National Wildlife and Fish Refuge Complex, Havana, IL. Responsible for public involvement and CCP and environmental assessment preparation and review (overall).

Gabriel DeAllesio

Biologist/GIS, Regional Office, Branch of Ascertainment and Planning. Responsible for preparing figures and maps used in the draft EA and CCP.

Ron Fisher

Assistant Project Leader, U.S. Fish and Wildlife Service, Illinois River National Wildlife and Fish Refuge Complex, Havana, IL. Responsible for public involvement and CCP and environmental assessment preparation and review (overall).

Jeff Gosse

Regional National Environmental Policy Act Coordinator, U.S. Fish and Wildlife Service, Great Lakes-Big Rivers Regional Office, Fort Snelling, Minnesota. Responsible for CCP and environmental assessment review and editing and NEPA compliance.

Dean Granholm

Refuge Planner, Regional Office, Branch of Ascertainment and Planning. Responsible for writing and editing draft EA.

Jane Hodgins

Technical Writer/Editor, U.S. Fish and Wildlife Service, Great Lakes-Big Rivers Regional Office, Fort Snelling, MN. Responsible for CCP and environmental assessment review and editing.

Liz Jones

Wildlife Biologist, U.S. Fish and Wildlife Service
Contributed to writing the draft CCP.

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Appendix I: Resource Conservation Priority List

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In September 1999, in response to the Government Performance and Results Act (GPRA), Region 3 published a document entitled Fish and wildlife resource Conservation Priorities, Region 3 (RCPs). The RCP document contains 182 species considered to be in the greatest need of attention under the Service's full span of authorities. The strategies identified in the document will contribute to the conservation, protection and recovery of migratory birds, threatened and endangered species, and interjurisdictional fish as well as the habits on which they depend, thus fulfilling the Service's mission. Benefits of identifying RCPs include:

- Assisting employees in prioritizing workloads and opportunities.
- Focusing application of the Service's many fish and wildlife conservation tools.
- Identifying research priorities and training needs.
- Preparation of Refuge comprehensive conservation plans and ecosystem plans.
- Developing budgets.

Consideration of RCPs in day-to-day activities will lead to protection, enhancement, and restoration of the most important Regional resources through the efficient and wise application of the Service's people and funding.

Regional Conservation Priority (RCP) Species Likely to Occur in the Vicinity of the Illinois River Refuges

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS/ INTEREST
BIRDS		
Double-crested Cormorant	Phalacrocorax auritus	
American Bittern	Botaurus lentiginosus	Rare/declining
Least Bittern	Ixobrychus exilis	Rare/declining
Canada Goose - Giant Population	Branta canadensis	
Canada Goose - Urban Giants	Branta canadensis	
Trumpeter Swan	Cygnus buccinator	Rare/declining
Wood Duck	Aix sponsa	
Mallard	Anas platyrhynchos	
Blue-winged Teal	Anas discors	
Canvasback	Aythya valisineria	
Bald Eagle	Haliaeetus leucocephalus	Threatened
Northern Goshawk	Accipiter gentilis	Rare/declining
Red-shouldered Hawk	Buteo lineatus	Rare/declining
American Woodcock	Scolopax minor	Rare/declining
Least Tern - Interior Population	Sterna antillarum	Endangered
Black Tern	Chlidonias niger	Rare/declining
Loggerhead Shrike	Lanius ludovicianus	Rare/declining
Wood Thrush	Hylocichla mustelina	Rare/declining
Cerulean Warbler	Dendroica cerulea	Rare/declining
Grasshopper Sparrow	Ammodramus savannarum	Rare/declining
Dickcissel	Spiza americana	Rare/declining
Bobolink	Dolichonyx oryzivorus	Rare/declining
Eastern Meadowlark	Sturnella magna	Rare/declining
Peregrine Falcon	Falco peregrinis anatum	Endangered
Common Loon	Gavia immer	Rare/declining
Lesser Scaup	Aythya affinis	Rare/declining
Northern Harrier	Circus cyaneus	Rare/declining
Upland Sandpiper	Bartramia longicauda	Rare/declining
Red-headed Woodpecker	Melanerpes erythrocephalus	Rare/declining
Northern Flicker	Colaptes auratus	Rare/declining
Bell's Vireo	Vireo bellii	Rare/declining
Blue-winged Warbler	Vermivora pinus	Rare/declining
Field Sparrow	Spizella pusilla	Rare/declining
King Rail	Rallus elegans	Rare/declining
Common Moorhen	Gallinula chloropus	Rare/declining
Greater Yellowlegs	Tringa flavipes	Rare/declining
Whimbrel	Numenius phaeopus	Rare/declining
Hudsonian Godwit	Limosa haemastica	Rare/declining
Marbled Godwit	Limosa fedoa	Rare/declining
Stilt Sandpiper	Calidris himantopus	Rare/declining
Buff-breasted Sandpiper	Trygites subruficollis	Rare/declining
Short-billed Dowitcher	Limnodromus griseus	Rare/declining
Wilson'S Phalarope	Phalaropus tricolor	Rare/declining
Forster's Tern	Sterna forsteri	Rare/declining

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Black-billed Cuckoo	Coccyzus erythrophthalmus	Rare/declining
Whip-poor-will	Caprimulgus vociferus	Rare/declining
Acadian Flycatcher	Empidonax virescens	Rare/declining
Prothonotary Warbler	Protonotaria citrea	Rare/declining
Louisiana Waterthrush	Seiurus motacilla	Rare/declining
Canada Warbler	Wilsonia canadensis	Rare/declining
Le Conte's Sparrow	Ammodramus leconteii	Rare/declining
Western Meadowlark	Sturnella neglecta	Rare/declining
Rusty Blackbird	Euphagus carolinus	Rare/declining
Orchard Oriole	Icterus spurius	Rare/declining

FISH

Lake sturgeon - Inland population	Acipenser fulvescens	Rare/declining
Pallid sturgeon	Scaphirhynchus albus	Endangered
Shovelnose sturgeon	Scaphirhynchus platyrhynchus	
Paddlefish	Polyodon spathula	Rare/declining
Plains minnow	Hybognathus placitus	Rare/declining
Blue sucker	Cycleptus elongatus	Rare/declining
Flathead chub	Hybopsis gracilis	Rare/declining
Bighead carp	Hypophthalmichthys nobilis	
Grass carp	Ctenopharyngodon idella	

MUSSELS

Black sandshell	Ligumia recta	Rare/declining
Elktoe	Alasmidonta marginata	Rare/declining
Fat pocketbook	Potamilus capax	Endangered
Higgins' eye pearlymussel	Lampsilis higginsii	Endangered
Mapleleaf	Quadrula quadrula	
Monkeyface	Quadrula metanevra	Rare/declining
Pimpleback	Quadrula metanevra	
Rock pocketbook	Arcidens confragosus	Rare/declining
Round pigtoe	Pleurobema coccineum	Rare/declining
Salamander mussel	Simpsonaias ambigua	Rare/declining
Scaleshell mussel	Leptodea leptodon	
Sheepnose	Plethobasus cyphus	Rare/declining
Slippershell	Alasmidonta viridis	Rare/declining
Snuffbox	Epioblasma triquetra	Rare/declining
Spectaclecase	Cumberlandi mondonga	Rare/declining
Threeridge	Amblema plicata	
Pistolgrip	Tritogonia verrucosa	Rare/declining
Washboard	Megaloniais nervosa	
Asiatic clam	Corbicula fluminea	
Zebra mussel	Dreissena polymorpha	

PLANTS

Decurrent false aster	Boltonia decurrens	Threatened
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Appendix J: References

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Appendix K: Summary of Public Involvement

TABLE 3
Scoping and Public Involvement Opportunities

Event	Date	Description
Interagency Meeting	December 1997	An interagency meeting was held to discuss information needs for the Comprehensive Conservation Plan.
Hav-a-vision Meeting	August 24, 1998	Refuge Manager provided an overview of the Comprehensive Planning Process and opportunities for public input.
News Release	March 26, 1999	A news release was sent to all local and regional written and broadcast media requesting public comments on the Refuge and the developing Comprehensive Conservation Plan.
Div. of Water Resources	May 24, 1999	Meeting to discuss Comprehensive Plan and Crow Creek/Weis Lake watershed issues and opportunities.
Interagency Workshop	August 10, 1999	A workshop was held to characterize management issues associated with the Illinois River.
Technical Advisory Committee and Planning Committee workshops	August 20, 1999 - September 20, 2001	Nine meetings with private landowners and technical advisors to plan restoration of Crow Creek watershed and Weis Lake
Environmental Management Technical Center, LaCrosse	September 17, 1998	Met with Center staff to discuss GIS services and mapping needs for the Comprehensive Plan
Environmental Round Table of the Midwest Natural Resources Group	November 1998 through 2001	Annual meetings of the Illinois River Focus team. Team discussed Comprehensive Conservation Plan, issues, and cooperative federal efforts on the Illinois River.
News Release	April 1, 1999	A news release was issued requesting public input into the Comprehensive Conservation Planning Process and to announce three future public meetings

TABLE 3
Scoping and Public Involvement Opportunities

Public Meeting	April 19-21, 1999	Public scoping meetings were held in Meredosia, Henry, and Lewiston to solicit public comment on the Refuge Comprehensive Conservation Plan
Outdoor Recreation Project Review	November 15, 1999	Four Service outdoor recreation planners toured refuges to evaluate recreation and education programs and provide recommendations for the Plan.
Meet Illinois DNR	November 18, 1999	Discuss project in refuge Plan for consideration for submitting to Corps for possible funding
Workshop	June 8, 1999	A workshop was held to identify and characterize management issues associated with the Weiss Lake Area and the Crow Creek Watershed.
Meeting with Regional Office Staff	January 10 - 11, 2000	Internal scoping of issues for development of the Plan
Jacksonville Audubon Society	February 4, 2000	Provided an overview of the planning effort and opportunities for public input
Federal Issues Working Group, Illinois River Coordination Council	February 8, 2000	Discussion of issues and how to pull federal and state programs together to focus on restoration of the Illinois River
Astoria Lions Club	February 13, 2000	Provide overview of the planning effort and opportunities for public input
Meeting with Congressman LaHood's staff	February 14, 2001	Provided an overview of planning efforts and refuge accomplishments
Federal Issues Working Group, Illinois River Coordination Council	March 10, 2000	Discussion of issues and how to pull federal and state programs together to focus on restoration of the Illinois River
Havana Lutheran Church	May 13, 2000	Provide overview of the planning effort and opportunities for public input
Midwest Natural Resources Group Senior Leaders meet in Peoria, Illinois	June 14, 2000	Senior leaders took a bus tour of the Weis Lake/Crow Creek Watershed project to learn of issues and restoration opportunities.

TABLE 3 Scoping and Public Involvement Opportunities		
Upper Mississippi River/Tallgrass Ecosystem Team	July 18, 2000	Provided an overview of planning efforts, discussed issues
Meeting with Regional Office Staff	March 8, 2001	Reviewed progress of planning effort and discussed issues and opportunities
The Nature Conservancy workshop	April 9 -10, 2001	Participated on scientific advisory committee in a planning effort for the Emiquon project
Interagency meeting	May 1 - 2, 2001	Interagency workshop to brainstorm issues and opportunities for restoration and growth of Illinois River Refuges
The Wetland Initiative workshop	May 25, 2001	Participated in planning effort for restoration of the natural resources in the Hennepin Drainage District
Meeting with Illinois Department of Conservation	April 12, 2001	Briefed Springfield staff on planning effort and asked for their input.
The Nature Conservancy workshop	August 9, 2001	Meeting to discuss recreation opportunities on the Emiquon project and associated economic development
Havana Women's Group	September 11, 2001	Provided overview of the planning process and discussed opportunities for public input
Governor's conference on restoration of the Illinois River	October 4, 2001	Provided an overview of the planning process, partnership opportunities, and opportunities for participant input
Illinois DNR	October 30, 2001	DNR staff advised of needed project on Clear Lake adjacent to Chautauqua National Wildlife Refuge and partnership opportunities
Havana Audubon Society	November 11, 2001	Provided overview of planning process and opportunities for public input
Interagency Meeting	January 29, 2002	An interagency meeting was held to discuss geographic information system data and mapping needs.
Public Meeting	February 27, 2002	Refuge staff and regional office personnel met with interested public(s) at the Dickson Mounds Museum to discuss Refuge CCP