

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

DRAFT ENVIRONMENTAL ASSESSMENT
FOR
RECREATIONAL FISHING PLAN
CYPRESS CREEK NATIONAL WILDLIFE REFUGE

November 2003

U.S. FISH AND WILDLIFE SERVICE
CYPRESS CREEK NATIONAL WILDLIFE REFUGE
0137 RUSTIC CAMPUS DRIVE
ULLIN, IL 62996

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1. PURPOSE OF AND NEED FOR ACTION

1.1 Purpose

The primary purpose of the proposed action is to consider recreational fishing opportunities on Cypress Creek National Wildlife Refuge (NWR). One of the six priority public uses of a refuge is to provide fishing, which is a traditional wildlife-oriented recreational opportunity that is compatible with the purposes for which the refuge was established. The purposes for which Cypress Creek NWR was established are: to protect, restore, and manage bottomland hardwood forests and wetlands in support of the North American Waterfowl Management Plan; to provide resting, feeding, nesting, and wintering habitat for waterfowl and other birds; to protect endangered and threatened species and their habitats; to increase public opportunities for outdoor recreation and environmental education that are compatible with the preceding purposes; and to protect a National Natural Landmark.

1.2 Need

Cypress Creek NWR is a rather new refuge (established 1990) with a need to facilitate wildlife-dependent recreation activities, such as recreational fishing, where compatible with refuge purposes. There is a need to allow for public use including the harvest of renewable resources where appropriate and compatible with Service policy and refuge purposes. Refuge lands adjoin the Cache River State Natural Area and recreational users often spend time on both area during the same outing. Consequently, there is a need to coordinate recreational uses with the State and standardize regulations as appropriate with Service policy and refuge purposes.

1.3 Decisions that Need to be Made

The Service's Regional Director will select one of the alternatives analyzed in detail and will determine, based on the facts and recommendations contained herein, whether this Environmental Assessment (EA) is adequate to support a Finding of No Significant Impact (FONSI) decision, or whether an Environmental Impact Statement (EIS) will need to be prepared.

1.4 Background

Since the refuge was established in 1990 major management actions have focused on land acquisition, habitat restoration and management, and limited facility development. Hunting, wildlife observation and environment education programs have been initiated and provided to the visiting public. Although limited fishing has occurred on the refuge since establishment, a recreational fishing plan and refuge specific regulations have not been prepared.

2. PROPOSED ACTION AND ALTERNATIVES

2.1 Alternatives not Considered for Detailed Analysis

One other potential alternative was considered but not analyzed or included. This alternative would have allowed fishing on only certain designated portions of the refuge. There did not seem to be any biological or public use justification for excluding fishing on larger portions of the refuge, so this alternative was not considered.

2.2 Alternatives Carried Forward for Detailed Analysis

2.2.1 Alternative A - Open Refuge to Year Around Fishing (Proposed Action)

The proposed action would establish a recreational fishing program on Cypress Creek NWR. Fishing would be permitted year round with only minimal time and space restrictions imposed, if necessary to minimize wildlife disturbance or user conflicts. Sensitive areas on the refuge that require designation as “Closed Areas” to minimize wildlife disturbance may be closed to fishing. Visitors would be permitted to fish on the refuge ponds via vehicle and foot access. Pond fishing would be from the bank only, no boats would be permitted on ponds. The Cache River and tributaries would be accessible via vehicle or foot with use of boats permitted. Two boat launch ramps are currently available at the Old Cache River channel. Additional boat ramps may be provided in the future depending on refuge land acquisition and funding. Boats may not be left on the refuge overnight. Other uses such as wildlife viewing, hunting, hiking, photography, and birdwatching would be offered simultaneously.

The proposed action would comply with all State, Federal and refuge-specific rules/regulations, as well as Service policies and directives. All seasons will be coordinated with and within the framework of the Illinois Department of Natural Resources. Some fishing regulations may be more restrictive than State regulations to meet refuge objectives. As the fishing program on the refuge progresses, harvest information is collected, and public use is evaluated, modifications may be made to refuge-specific regulations and/or the program itself.

2.2.2 Alternative B (No Action)

This alternative would not allow recreational fishing to occur on Cypress Creek NWR. Visitors would be prohibited from taking any fish species from the refuge.

There would be no change to the other current public use and management strategies at the refuge.

2.2.3 Alternative C - Open Refuge to Seasonal Fishing

This alternative would allow recreational fishing on all areas of the refuge from March 15 to September 30. Other uses such as wildlife viewing, hunting, hiking, photography, and birdwatching would be offered simultaneously. Designated “Closed Areas” would be closed to fishing and other wildlife-dependent uses outside the March 15 to September 30 time frame. This alternative would be inconsistent with fishing regulations on the adjoining Cache River State Natural Area administered by the Illinois Department of Natural Resources. The public would have limited recreational fishing opportunities on the refuge and would likely experience confusion and frustration trying to interpret what fishing regulations apply to them with regards to whether they are on State or Federal property. The fishing program would comply with all State, Federal and refuge-specific regulations, and Service policies and directives.

3. AFFECTED ENVIRONMENT

This section describes the area's natural environment, including vegetation, fish and wildlife resources, and cultural resources.

3.1 Physical Characteristics

Cypress Creek National Wildlife Refuge (NWR) is located along approximately forty miles of the Cache River and its tributaries in Johnson, Union, Pulaski and Alexander counties Illinois. The Cache River - Cypress Creek Wetlands were designated as a “Wetlands of International Importance - especially as waterfowl habitat” under terms of the Ramsar Convention. The U.S. Fish and Wildlife Service (USFWS), Illinois Department of Natural Resources (IDNR), The Nature Conservancy (TNC) and Ducks Unlimited (DU) entered into a Memorandum of Agreement forming a Joint Venture Partnership for protecting the biological diversity and improving the quality of the human environment in the Cache River Wetlands. The Joint Venture Partnership is focusing on a 60,000 acre core area within the Cache River Basin.

The refuge acquisition boundary encompasses 35,320 acres, which is located along the Cache River from Hwy. 37 then west and south to Mound City, IL. Land for inclusion in the refuge is acquired from willing sellers on a continual basis. Currently, the refuge has acquired 15,328 acres. The Cache River has been extensively modified during the last 100 years by creation of the Post Creek Cutoff and Forman Floodway (1912), Cache River Levee (1949), Diversion Channel (1950) and numerous other tributary modifications (1912 to present). Principle tributaries are Cypress Creek, Big Creek, Mill

Creek, Sandy Creek and Boar Creek.

The primary purposes of the refuge are 1). protect, restore and manage wetlands and bottomland forests habitats in support of the North American Waterfowl Management Plan; 2). provide resting, nesting, feeding and wintering habitat for waterfowl and other migratory birds; 3). protect endangered and threatened species and their habitats; 4). provide for biodiversity; 5). protect a National Natural Landmark; 6). and increase public opportunities for compatible recreation and environmental education.

3.2 Biological Environment

3.2.1 Habitat/vegetation

Land within the refuge acquisition boundary contains parts of four overlapping physiographic regions; the Coastal Plains, Interior Low Plateaus, Central Lowlands, and Ozark Plateaus. Each of these regions contain unique plant and animal species influenced and molded by the habitat and environmental conditions within the specific region. These conditions create a habitat area of unusual species abundance and diversity. Of the six areas in the country where four or more of these physiographic regions overlap, the Cache River basin is thought to be the most diverse (Initial Evaluation Report, Alexander and Pulaski Counties, Illinois, March, 1984).

The Cache River area is composed primarily of wetlands, bottomland forest, upland forest, and agricultural lands. Five general categories of wetlands occur on the refuge: 1) swamp; 2) shrub swamp; 3) open water; 4) wet floodplain forest; and 5) successional fields (wet farmland). The swamp and shrub swamp areas are dominated by cypress and tupelo trees with varying amounts of buttonbush scrub ticket. Water in these areas stands at a depth of approximately two feet when full. These cypress and tupelo trees make up some of the oldest living stand of trees east of the Mississippi River. Open water is characterized by a wide expanse of open water that is generally too deep for trees and shrubs. A few cypress trees occur scattered in the open water, but buttonbush is restricted to the edges. The open water areas were 8-10 feet deep prior to settlement. Forest clearing and agricultural activity over the last 50 years have resulted in the deposition of over 4 feet of sediment in these natural ponds. Manmade ponds are also common throughout the area. Most of these range in size from 0.25 acres to 1.0 acre with maximum depths of less than 5 to 10 feet. There are currently fifteen manmade ponds with permanent water on the refuge.

3.2.2 Listed, Proposed, and Candidate Species

Three federally listed species are known to occur within or near the boundary of

the refuge. Listed species include: gray bat, Indiana bat, and bald eagle. The gray bat inhabits limestone karst areas in southern Illinois. The only known cave inhabited by the gray bat in Illinois is 40 miles to the east of the Refuge. The Indiana bat winters in caves and abandoned mine tunnels. Females have their young in hollow trees or beneath the bark of trees while males summer in caves or wander in small groups. The refuge contains potential maternity and foraging habitat for the Indiana bat.

In addition to federally listed species, nearly 102 state listed species exist in or near the Refuge. Several bird species are on the Illinois endangered, threatened, or species of special concern lists. Among the species included on these lists are the barn owl, Cooper's hawk, red-shouldered hawk, great egret, Mississippi kite, Bachman's sparrow, Bewick's wren, Swainson's warbler, and loggerhead shrike. The State endangered dusky salamander and eastern ribbon snake and the State threatened Strecker's chorus frog are found within refuge boundaries. State endangered fishes in the region are the cypress minnow and bigeye shiner. State threatened fish species are the redspotted sunfish, and bantam sunfish.

3.2.3 Other Wildlife Species

The Cypress Creek NWR contains some of the most diversified wildlife habitat in Illinois. Waterfowl, shorebirds, wading birds, raptors, songbirds, reptiles, amphibians, furbearers, and other mammals utilize the refuge.

Even though this area has undergone intense degradation, the small amount of habitat left still supports a diverse wildlife community. The area has traditionally been important to waterfowl and other migratory birds. Due to its strategic location in the Mississippi flyway, the area continues to provide excellent habitat for most birds using the flyway, especially during spring and fall migrations. Peak migrational counts number in the hundreds of thousands and include geese, ducks, shorebirds, wading birds, and countless other avian species. The wide array of avian species occur because of the diversity of habitats within or near the refuge boundary. To date, 251 avian species have been identified in the Cache River basin. Other common avian species present include wild turkey, northern bobwhite, mourning dove and American woodcock.

The Refuge area contains 47 known species of mammals. Common mammals considered to be resident species include and abundance of white-tailed deer, squirrel, bobcat, river otter, cotton tail rabbit and swamp rabbit.

The Cache River and Cypress Creek wetlands area contains 54 known species of reptiles and amphibians. Of the 20 species of frogs and toads in the state, 18 have

been recorded in the watershed. The yellow-bellied watersnake and timber rattlesnake are also found in the area.

Eighty-five species of fishes are known from 77 sites in the Cache River watershed (Cache River Area Assessment, 1997). Common fish species found in the Cache River and major tributaries include: gizzard shad, carp, white crappie, largemouth bass, warmouth, bluegill, longear sunfish, orangespotted sunfish, channel catfish and freshwater drum.

3.3 Land Use

Land use within the 488,000 acre Cache River watershed boundary has changed a great deal over the last fifty years. The entire area was historically a forest bottomland hardwood system with numerous forested wetlands and cypress and scrub/shrub swamps. Most clearing and drainage was done to convert forested areas to agricultural production. Currently, land use in the watershed is composed of 25.6% existing forest, 3.9% reforestation, 2.3% wetlands, 37.2% grassland, 28.5% cropland, 1.3% open water and 1.2% other.

3.4 Cultural Resources

Vast tracts of naturally flooded bottomland within the Cache River basin have provided habitat for migratory birds and other wildlife, which in turn have attracted humans for the past 12,000 years or more. Low ridges bordering the swamp were favored locations for native Americans to camp and harvest the wildlife resources of the area. Euro-American hunters, trappers, and soldiers passed through the Cache River basin in the 18th century, followed by settlers in the 19th century. The intense human use of the area is recorded in the archeological sites that can be found throughout the refuge.

Section 106 of the National Historic Preservation Act of 1966, as amended, requires the Service to evaluate the effects of any of its actions on cultural resources (historic, architectural, and archaeological properties) that are listed or eligible for listing in the national Register of Historic Places. In 1995, a comprehensive cultural resource overview for Cypress Creek NWR was developed to provide information on the locations of known and undiscovered sites, as well as criteria to evaluate these resources.

3.5 Local Socio-economic Conditions

Socio-economics of the Cache River watershed include low per capita incomes, high unemployment rates, out-migration, and high population dependency ratios. From 1980 to 1990 the area lost 2.6 percent of its population, ending the decade with 61,867 persons. Only 37.1 percent of the region's population was in the labor force while the state's proportion was 53 percent. Unemployment rates were higher in every county than the

state's 1990 average of 6.2 percent. These data reflect a population and an economy that can hardly be described as vibrant and growing. (Beck, Burde, Davie, Gates, Hollenhorst, Kraft, Sharpe, Wagner and Woolf, 1993)

4. ENVIRONMENTAL CONSEQUENCES

4.1 Alternative A - Open to Year Around Fishing (Preferred Alternative)

4.1.1 Habitat Impacts

The proposed action may result in concentrated trampling of vegetation at access points to the Cache River and around the perimeter of refuge ponds. This activity is expected to be mainly during the growing season and is not expected to destroy vegetation or cause excessive erosion. Fishing access will be primarily by foot or boat, however some illegal vehicle and All Terrain Vehicle (ATV) use can be anticipated. This type of illegal activity will be addressed with an active law enforcement program as it is when associated with other wildlife-dependent uses.

4.1.2 Biological Impacts

The refuge fishing program will allow the general public an opportunity that was once afforded to only a segment of the population because of private land and access issues. It will allow for the consumptive use of a renewable resource without adversely impacting fish populations, habitat or other refuge objectives. Because of the Mississippi Rivers restocking influence on the Cache River and anticipated low fishing pressure, it is expected that fish will be harvested at levels that will provide recreational use, while still maintaining viable populations. Anglers will be allowed to harvest frogs and turtles, in addition to fish, when legally licensed under existing Illinois fishing regulations. State size and bag limits for these species will ensure a sustained population without limiting a food resource for other wildlife species that might utilize frogs and/or turtles for a food source. Overall, refuge fishing regulations will closely match state regulations on the adjoining Cache River State Natural Area. These regulations have proven effective at protecting the resource and allowing a sustainable harvest for recreational purposes. Public understanding and compliance with refuge fishing regulations will be enhanced if the regulations closely match state regulations.

The proposed action may result in temporary disturbance to wildlife from boat traffic and bank fishing activity. Based on historical use of the area, boat use on the Cache River through the refuge is expected to be fairly low. Some disturbance to waterfowl and wading birds may occur from boat traffic or bank fishing. Fishing interest and pressure is expected to be low during the fall and winter when most waterfowl use the refuge. Given the low fishing pressure during fall and

winter and availability of “Closed Areas”, wildlife disturbance associated with fishing is not expected to negatively impact any species. Fishing tackle such as hooks, and fishing line left by anglers may pose some risk to wildlife. These impacts are expected to be minimal. Refuge personnel will continually educate fishermen about the importance of taking old fishing line, hooks and litter out of the refuge.

4.1.3 Listed, Proposed, and Candidate Species

Fishing is not likely to adversely impact threatened or endangered species that may occur on the refuge such as the gray bat, Indiana bat and bald eagle (see Section 7 evaluation). If bald eagle nests are located on the refuge, restrictive zones will be established.

4.1.4 Cultural Resources

The proposed action will not effect any known cultural resource sites. Any future facilities developed to support this action i.e. boat ramps or fishing piers will be subject to cultural resource review.

4.1.5 Environmental Justice

The Executive Order 12898 on Environmental Justice issued by President Clinton on February 11, 1994, requires all federal agencies to assess the impacts of federal actions with respect to environmental justice. The Executive Order states that, to the extent practicable and permitted by law, neither minority nor low-income populations may receive disproportionately high and adverse impacts as a result of a proposed project.

The proposed action should be a positive benefit to the public including minority or low-income populations. Public lands and waters will be made available for recreational fishing without charge to the public. This can be of particular benefit to any low-income residents in the area that may not be able to pay or travel to other more distant facilities and bank fishing opportunities will be of value to those groups that cannot afford a boat. Fishing opportunities would be made available to all visitors and attempts would be made to standardize refuge regulations with state fishing regulations for ease of understanding.

4.1.6 Cumulative Impacts

The proposed action will provide opportunities for the visiting public to pursue fishing on the refuge in addition to hunting, wildlife observation, wildlife photography, and environmental education and interpretation. These other

wildlife-dependent recreation opportunities are ongoing and collectively result in 36,750 visitor days per year. Cypress Creek NWR provides a unique biologically diverse area for these activities. Although there will be good fishing opportunities on the refuge, the fishing program is not expected to attract a large number of anglers. Numerous high quality fishing opportunities are available for both boat and bank anglers at nearby Ohio and Mississippi River locations, Mermet Lake, Horseshoe Lake, Little Grassy and Devil's Kitchen Lakes and Lake of Egypt.

Fishing on the refuge will likely appeal to a small subset of the areas angling public who like to fish smaller bodies of water with small boats or bank fish along the river or small ponds found throughout the refuge. Consequently the increase in visitation associated with fishing is expected to be small compared to the current visitation from other wildlife-dependent recreational use. Opening the refuge to recreational fishing provides a year round opportunity for a growing fishing demand.

Cumulative impacts on refuge habitat and wildlife disturbance associated with fishing are expected to be minimal due to seasonal nature of fishing and dispersed fishing locations. Most fishing can be expected to occur in the spring and summer when most other refuge visitation is for wildlife observation, photography and environmental education/interpretation. Although there may be some overlap in areas used by these users and refuge anglers, particularly on the river and swamps, a larger portion of the fishing activity can be expected on refuge ponds that are largely unused by other refuge visitors.

4.2 Alternative B (No Action)

4.2.1 Habitat Impacts

There would not be any direct habitat impacts associated with Alternative B.

4.2.2 Biological Impacts

Alternative B would preclude the harvest of a sustainable natural resource. Additional food resources would be available for predatory wildlife under this alternative compared to alternative A and C, but the difference is expected to be negligible. This alternative would cause the least disturbance to wildlife from boat and foot traffic, while eliminating any hazards to wildlife associated with discarded fishing line or tackle.

4.2.3 Listed, Proposed, and Candidate Species

All threatened and endangered species would continue to be protected under this

alternative. Potential disturbance to these species would be less under this alternative.

4.2.4 Cultural Resources

All cultural resources would continue to be protected under this alternative. Potential disturbance to cultural resources would be less under this alternative.

4.2.5 Environmental Justice

Under this alternative the public would be denied a wildlife-dependent recreational opportunity, which is one of the six priority purposes for refuges nationwide. Low-income or minority populations would be prevented from enjoying fishing opportunities and the harvest of fish for the table.

4.2.6 Cumulative Impacts

There are no known cumulative impacts associated with Alternative B.

4.3 Alternative C - Open Refuge to Season Fishing Only

4.3.1 Habitat Impacts

Habitat impacts associated with this alternative are expected to be the same as Alternative A. Although fishing would only be permitted from March 15 to September 30, trampling of vegetation and erosion associated with this alternative would be very similar to that under Alternative A.

4.3.2 Biological Impacts

Biological impacts on the fishery under this alternative would be very similar to Alternative A. Seasonal fishing closures would reduce the overall annual harvest to some degree. However, the amount is expected to be small considering that most fishing interest and pressure does not occur in the fall and winter. This alternative would not minimize disturbance to wildlife from boat traffic. The Cache River is regulated by the state of Illinois in terms of boat use and fishing within the river. Boat traffic and fishing from a boat in the river would not be regulated by this alternative. Although bank fishing along the river and refuge ponds would be limited to seasonal use, other unregulated uses of the river would continue under this alternative. A seasonal fishing closure on the refuge would be completely different from the adjoining Cache River State Natural Area. Such a difference,

unless necessary to protect a specific refuge resource or purpose, would lead to confusion with area anglers who would likely fish on both the refuge and adjoining state area.

Disturbance to wildlife, particularly waterfowl and wading birds would be reduced to some degree under this alternative by eliminating bank fishing along the river and refuge ponds during the fall and winter.

4.3.3 Listed, Proposed, and Candidate Species

Alternative C would have the same impact on threatened and endangered species as Alternative A.

4.3.4 Cultural Resources

Alternative C would have the same impact on cultural resources as Alternative A.

4.3.5 Environmental Justice

A. Alternative C would have the same impact on environmental justice as Alternative

4.3.6 Cumulative Impacts

Alternative C would have cumulative impacts very similar to Alternative A. Because this alternative would only allow seasonal fishing, increased visitation, wildlife disturbance and meeting fishing demand would be slightly less than Alternative A.

4.4 Summary of Environmental Consequences by Alternative

Environmental Consequence	ALTERNATIVES		
	Alternative A (Proposed Action)	Alternative B (No Action)	Alternative C
Habitat/vegetation	Minor seasonal trampling	NA	Minor seasonal trampling

Biological	Renewable fishery is utilized by public for recreational fishing. Fishing regulations would closely match adjoining state area regulations. Potential for minor wildlife disturbance throughout the year	No use of a renewable fishery resource or opportunity for recreational fishing on the refuge	Renewable fishery is utilized by for recreational fishing. Potential for minor wildlife disturbance on a seasonal basis. Fishing seasons would be different from adjoining state area.
Listed, Proposed, and Candidate Species	Not expected to effect any listed species. Any future bald eagle nest would be protected with closed areas.	NA	Not expected to effect any listed species. Any future bald eagle nest would be protected with closed areas.
Cultural Resources	None expected	NA	None expected
Environmental Justice	Recreational fishing provided with seasons, methods and harvest limits matching with adjoining state areas.	NA	Recreational fishing provided with methods and harvest limits matching adjoining state areas, but different seasons.
Cumulative Impacts	Increase overall refuge visitation and help meet fishing demand on a year round basis. Potential for minimal wildlife disturbance	NA	Increase overall refuge visitation and help meet fishing demand on a seasonal basis. Potential for minimal wildlife disturbance

5. List of Preparers

U.S. Fish and Wildlife Service - Cypress Creek National Wildlife Refuge
Dennis W. Sharp, Refuge Manager

6. Consultation and Coordination With the Public and Others

Refuge staff met with personnel from IDNR's Cache River State Natural Area and Division of Fisheries to scope out fishery resources in the Cache River area, current statewide and Natural Area regulations that effect fishing and any other fishing related issues. Earlier copies of this draft environmental assessment were reviewed by refuge staff, the Regional Office of the Service, and personnel from the Illinois Department of Natural Resources. Public notice will be given in Fall 2003 to allow the public to comment on the fishing plan. A notice soliciting public review and comment on the Cypress Creek Recreational Fishing Plan and this Environmental Assessment will be placed in local papers. Copies of the plan and environmental assessment will be available for public review at the refuge office and the library at Shawnee College.

7. References Cited

Beck, B., J. Burde, K. Davie, R. Gates, T. Hollenhorst, S. Kraft, D. Sharpe, M. Wagner, and A. Woolf. 1993. Ecologica-Economic Modeling In The Cache River Basin: The Challenge of Economic Modeling on a Watershed Basin – A Potential Framework for Sustainable Development. Final Report submitted to The Illinois Field Office of The Nature Conservancy. 163 pp.

Illinois Department of Natural Resources. 1997. Cache River Area Assessment: Volume 1, part II. State of Illinois, Department of Natural Resources, Natural History Survey Division, Office of Scientific Research and Analysis, Champaign. 212 pp.