

U.S. DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

ENVIRONMENTAL ASSESSMENT

for

Opening portions of Cypress Creek National Wildlife Refuge for  
Hunting as Proposed in the 1992 Hunting Plan

Regional Director  
U.S. Fish and Wildlife Service  
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Abstract:

The U.S. Fish and Wildlife Service proposes to open portions of the Cypress Creek National Wildlife Refuge for hunting of Canada geese, white-tailed deer, and other incidental species which are primarily upland game. This proposal is being made so that the Refuge can comply with its major objectives and goals as for habitat improvement and land acquisition are concerned. Alternatives considered in this proposal include: A) No change to existing programs, B) opening select areas that are time spaced and consistent with Refuge objectives, C) Opening only select units for hunting and D) Achieve population control by utilizing the staff and/or other Fish and Wildlife Service personnel.

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## PURPOSE OF AND NEED FOR ACTION

### **SECTION 1.1 BACKGROUND/INTRODUCTION**

The U.S. Fish and Wildlife Service (FWS) proposes that portions of the Cypress Creek National Wildlife Refuge be opened to hunting. The open area includes approximately 3200 acres and is located in Southern Illinois within the Cache River basin (Figure 2). The Cache River watershed includes land in Alexander, Johnson, Pulaski, Union, Massac and Pope counties. The Refuge itself is located in a section of the Cache basin known as the Lower Cache and will eventually encompass 35,200 acres (purchase boundary). Areas that are proposed to be opened to hunting are shown as shaded in areas in figures 3,4,5,6,7, and 8 and represent parcels owned or managed by the FWS as of the date of December 31, 1991. Yearly updates of these boundaries will be made as additional parcels are bought and approved for hunting.

The Refuge is a part of a joint-venture (lower Mississippi) for the enhancement of habitat for waterfowl. To achieve this goal, land acquisition is a high priority and once land is secured it will be developed to concentrate on the particular restoration and management of bottomland forests that will result in the enhancement of the regions waterfowl resources. In addition to the habitat advantages, the proposed action will result in hunter use days being made available to the public.

Specific objectives of the hunting program are:

1. To Control Large Build-up of Wintering Populations of Canada Geese. While an important part of the waterfowl community, Canada geese are not the main focus of management activities at Cypress Creek Refuge. Without a hunting program, large goose buildups are inevitable and could interrupt existing distribution strategies that have been agreed upon by state and flyway groups. Presently the land base of the Refuge is not adequate to provide for a sanctuary situation for geese and most of the birds are located in an area of approximately 270 acres that heretofore has been closed to hunting (for three years).
2. To Control White-tailed Deer Populations. To control white-tailed deer populations to insure herd is free of disease and so that reforestation procedures can be implemented in a feasible manner.
3. Provide for Increased Public Opportunities for Outdoor Recreation. Hunting is a means of fulfilling the Services commitment to provide this kind of activity as a part of the public opportunity objective stated in the public's guideline for

completing the comments sheet on the draft environmental assessment for the authorization of the Refuge. This objective was also stated in the Refuge's approved final environmental assessment signed by James Gritman Regional Director, on June 26, 1990. All proposed hunting activity would be in accordance with state seasons and regulations.

The Refuge Reservation Act of 1962 (16 U.S.C. 460K) and the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668-ddee) provide authorization for hunting on National Wildlife Refuges. The effects of hunting on refuges have been examined in environmental review documents including the Final Environmental Statement on the Operation of the National Wildlife Refuge System (1976), Recommendations on the Management of the National Wildlife Refuge System (1978) and the Draft Environmental Impact Statement on the Management of the National Wildlife Refuges (1988). Nothing in the establishment authority (Emergency Wetlands Resources Act of 1986) precludes hunting on the Refuge. In summary, hunting, as here in proposed, is intended to: A) Be a valid wildlife management technique that will influence the distribution and abundance of certain wildlife species, B) A means of insuring healthy populations due to adequate population controls, C) a means of fulfilling the Services commitment to provide this kind of activity, D) to help discourage the proliferation of hunting clubs which could become an impediment in the land acquisition process.

#### SECTION 1.2 DECISIONS THAT NEED TO BE MADE

The Regional Director, U.S. Fish and Wildlife Service, Twin Cities, Minnesota, is the official responsible for determining the action to be taken in the proposal by choosing an alternative. He will also be required to determine whether the preferred alternative has a significant impact on the quality of human environment.

#### SECTION 1.3 ISSUES AND CONCERNS

The Service has involved the public (Refuge Advisory Committee), other federal and state agencies, and private conservation organizations in the development of the proposed hunting program. All comments reviewed to date were of a positive nature and suggestions were incorporated into the hunting plan.

The Fish and Wildlife Service has the following concerns:

- that large concentrations of geese on such a small area may present a potentially dangerous environment if disease should occur in the flock.

- that concentrations of geese in one area (such as Stallings tract) may cause the proliferation of hunting clubs being established within the unsecured portions of the purchase boundary. Once established, these lands are extremely difficult to acquire

through normal land acquisition procedures and would seriously impede the establishment of the Refuge.

- that certain upland and forest game populations may not be held in check if a total sanctuary program is offered which will then affect the major habitat improvement program for the area, i.e., reforestation of native hardwood communities.

- that there is an opportunity for public outdoor recreation that is consistent with Refuge objectives.

- that there be sufficient funds for the field station to develop and to conduct the proposed hunting.

#### SECTION 1.4 PERMITS, LICENSES AND OTHER COMPLIANCES REQUIRED

Permits: No federal, state or local permits or licenses are required for the Refuge public hunting program.

Endangered Species: The following federally listed threatened or endangered species may be present in the project area. The only confirmed sighting is the bald eagle.

Bald eagles	Endangered
Pink musket	
pearly mussel	Endangered
Gray bat	Endangered
Indiana bat	Endangered
Orange footed	
pearly mussel	Endangered
Interior least tern	Endangered
Pallid sturgeon	Proposed endangered
Prices Potato Bean	Proposed endangered

The bald eagle is a fairly common migrant and winter resident along the rivers and on wildlife refuges in southern Illinois and is known to winter along the Cache River. The proposed Refuge and hunting area does not contain any known nesting sites, although the native hardwoods could provide nesting areas in the future. The interior least tern is a summer resident and uncommon local migrant in southern Illinois. It has been observed in the nearby Horseshoe Lake Conservation Area. Both mussels and the pallid sturgeon have been found in the nearby Ohio River but not in the Cache River or its tributaries.

Also, one plant species is proposed to be listed on the federal list (Price's potato bean) but has not been found on the proposed hunting area or within the Refuge purchase boundary.

Hunting-related disturbance probably would affect only one species, the bald eagle, if it becomes a regular resident of the Refuge. Hunting activities will not be a factor with other endangered species because they are not actively using the Refuge during the hunting season and/or have not been indicated as having occurred in the hunting area. Vegetative disturbance would be minimal because

removal of any flora is not allowed. In the case of the Indiana bat, the only known area (within the purchase boundary) in which they might occur is not included in the hunting area.

A consultation pursuant to Section 7 of the Endangered Species Act was conducted as a part of the Environmental Assessment for refuge establishment. The consultation process concluded that establishment of the refuge with the objectives as stated would not affect the recovery of any federally listed species that may be found on the area. Endangered species concerns were reviewed by the Illinois Department of Conservation and members of The Nature Conservancy staff responsible for completing the natural areas inventory of the proposed hunting area. Both groups have concurred that the hunting proposal would not be an impediment to the recovery of any of the federally listed species that occur on or near the area.

Historic Preservation: Areas to be opened to hunting contain evidence of pre-historic Indian camps as demonstrated by the abundant presence of flint chips. No above ground features such as mounds, etc., exist on the area. No unique historical or archeological structures are known to exist on the area. Where new facilities may be required, the Section 106 process of the National Historic Preservation Act will be followed.

## ALTERNATIVES

### SECTION 2.1 INTRODUCTION

This chapter will explain how alternatives were formulated, describe alternatives, compare alternatives, and identify the preferred alternative.

### SECTION 2.2 FORMULATION OF ALTERNATIVES

Alternatives were developed that would be consistent with the on-going development and acquisition of the refuge, and future biological management of the area.

### SECTION 2.3 ALTERNATIVES ELIMINATED FROM DETAILED STUDY

An alternative that would permit unrestricted access for hunting on all FWS purchased land for the Refuge during all applicable state and federal seasons on time periods was eliminated due to unacceptable disturbance to non-target species. Also, an alternative that would only permit specific types of hunting on a specific unit basis, i.e., goose hunting only in the Butter Ridge unit; white-tailed deer and upland game in the Cypress Creek unit; etc., was eliminated because the concerns listed in Section 1.3 are not unit specific, allowing goose hunting in one unit would cause birds to concentrate in an adjacent unit where sanctuary would be provided. Also, an alternative that would have site personnel achieve population control was eliminated due to enormous logistical and man-power shortages. The Refuge, as now envisioned,

would require control efforts on a nearly sixty (60) mile long corridor.

#### SECTION 2.4 DESCRIPTION OF ALTERNATIVES

The FWS developed two alternatives for detailed analysis. These alternatives respond to the issues and concerns in Section 1.3.

##### Alternative A. No Hunting (No Action)

This alternative would not permit the Refuge to realize its goals as far as land acquisition and habitat improvement because it basically is a sanctuary situation at present. Large concentrations of geese on a small area could also be damaging to continued good health of the goose flock. As stated earlier, land acquisition that is needed to fully develop the Refuge would be impeded.

##### Alternative B. Allow hunting only on portions of the presently acquired parts of the Refuge

This alternative would allow hunting only on portions of the presently acquired portions of the refuge that is consistent with Refuge objectives and which is in accordance with state and federal regulations. This alternative would permit hunting as outlined in the Refuge hunting plan and would take into consideration the concerns expressed in Section 1.3. Time spacing would be used to minimize undue disturbance on non-target species. Examples of this would be not permitting night hunting or any spring season hunting which would keep the area open for night roosting by various species of wildlife. Targeted species would be the primary focus of harvests such as geese and white-tailed deer although a minor amount of incidental hunting for other species would also occur. Harvest estimates are difficult to project in that the hunter response is not known at this time. Hunter use days would probably be minimal perhaps 300-400 days.



regions contain unique plant and animal species influenced and molded by the habitat and environmental condition within the specific region. The bottomland hardwood forest represents the transition zone between permanent water areas and uplands. In this area cypress and tupelo become increasingly less frequent while sweet gum, swamp cottonwood oak, elm oak, sugarberry, hickory, and maple become more common.

There is little animal abundance data other than a preliminary waterfowl survey conducted by the Refuge staff. This survey indicated 12,000 to 20,000 geese being present in the Butter Ridge unit and as many as 8,000 ducks there also. Deer abundance as evidenced by state kill records is above average in the areas of the Refuge that contain suitable cover. An abundance of deer has also been determined by the site staff as a result of over-browsing (estimated at 50% of seedling stock planted). The Cache River area offers a wide variety of habitat for many other types of wildlife also. The great blue heron, green herons and egrets are regular inhabitants in the area. Mammal species associated with this type of environment and considered as average in abundance includes red and gray foxes, fox and gray squirrels, mink, muskrat, beaver, swamp and cottontail rabbits, white-tailed deer, raccoon, opossum, and coyotes. These species have been listed in the natural areas inventory completed for the area.

#### ENVIRONMENTAL CONSEQUENCES

##### Alternative A. - No Hunting (NO ACTION)

To continue the existing program and do nothing would result in the following environmental consequences. No hunting on the Stallings tract would tend to favor the build-up of excessively large concentrations of geese in that area. Those large concentrations could lead to the additional proliferation of hunting clubs around the tract and would make those parcels nearly impossible to acquire because of inflated land prices. If hunting clubs do get established, harvest may be greater than what is desirable as the birds will have to leave the sanctuary area at some time to feed, probably late in the season. Concentrated hunting pressure around the periphery of the sanctuary zone will put additional stress on the birds. Large concentrations of geese are very susceptible to disease when confined to small areas and this would be the case here. Also, reforestation, a major habitat management thrust on the area, would be seriously impacted. This observation is reinforced by the present browsing assessment of deer by the Refuge staff. If these areas are left alone, reforestation would occur but at a much slower pace and would produce the less desirable species for wildlife (maple and willow) which we are trying to avoid. One of the major problems affecting the Cache river is the enormous amount of sediment being carried into it from the watershed. The best way to correct this is with a rapid establishment of woody vegetation and a return to the original hydrology.



No hunting would not be consistent with the original objectives for the establishment of the Refuge as stated in the EIA (that dealing with providing public outdoor opportunity).

Alternative B. - Allow Hunting Only on Portions of the Presently Acquired Parts of the Refuge

Allowing hunting on portions of the presently acquired portions of the Refuge that is consistent with Refuge objectives and which is in accordance with state and federal regulations.

The environmental consequences of allowing hunting will first and foremost affect distribution of certain wildlife which will prove to be of benefit to certain habitat improvement projects such as reforestation by allowing desirable woody seedlings to develop when left free of browsing pressure. Hunting will tend to prevent the buildup of Canada goose concentrations thus improving or maintaining the status quo of distribution patterns in place for southern Illinois. Disturbance of non-targeted species that use the area could result in additional stress on these animals but that stress is thought to be minimal. Important habitat would not be altered as Refuge rules prevent the removal of any wildflowers and/or plant materials thus reducing the risk of removal of threatened or endangered species. All traffic in and out of the hunting areas is by foot, only which is also an additional safeguard. As new areas are acquired, surveys will determine the extent of their use by bats or other endangered animals and if found to be in conflict with the hunting program, will not be included in requests for these areas to be a part of the hunting zone. Fulfillment of this objective would permit the Refuge to comply with the objective dealing with public opportunity for outdoor recreation.

Endangered Species Although hunting may cause intrusion and some disturbance to rare and endangered species, that disturbance is not thought to be significant and would not jeopardize the recovery of any of the species that are federally listed for the area. Bald eagles will certainly be near any concentrations of waterfowl, but, past experience with other southern Illinois waterfowl refuges has shown they will remain a safe distance away from humans and would not tolerate a lot of disturbance. Nesting activity for this specie occurs after what would be a normal goose season end date therefore would not be affected. Other endangered species are either hibernating and/or migrants and the timing of the hunting season program should pose no problem for their continued well being. A minor amount of noise from shooting may adversely affect hibernating bats but, again, that affect would be minimal.

LIST OF PREPARERS

This document was written by Al Novara, U.S. Fish and Wildlife Service, Cypress Creek National Wildlife Refuge Biologist and reviewed/edited by Gerald Updike, U.S. Fish and Wildlife Service, Cypress Creek National Wildlife Refuge Project Manager, and Max Hutchison, Ecologist, The Nature Conservancy. Details of the hunting program are contained in the proposed site hunting plan previously submitted.

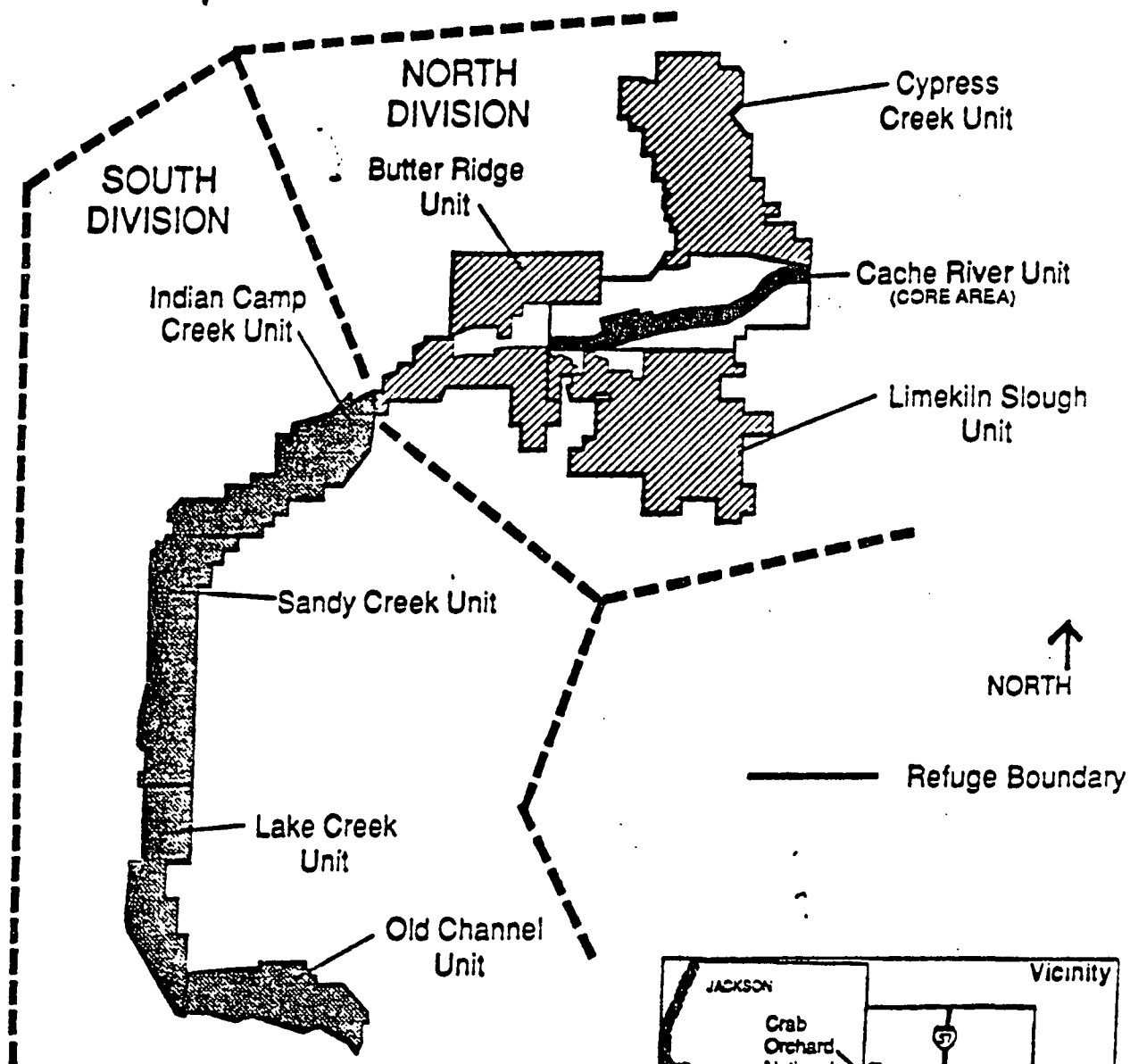
Record of Consultation and Coordination.

The hunting proposal has been discussed and reviewed by the following groups and/or personnel.





<u>NAME</u>	<u>AFFILIATION</u>	<u>INPUT</u>
Kenny Moore	Ill. Dept of Conservation	Law Enforcement
Paul Willms	Ill. Dept of Conservation Biologist	Hunting Inputs
Dennis Thornburg	Ill. Dept of Conservation	Waterfowl
Dan Woolard	Ill. Dept of Conservation	Local hunting problems
Mike Murphy	Ill. Dept of Conservation	Maintenance of openings for hunting
Dave Maginel	The Nature Conservancy	Compatibility with TNC hunting program
Refuge Advisory Committee	28 people - local public use group	Public's reaction to hunting program
Wendall Crews	Crab Orchard NWR	Hunting Plan Document
Jim Cameron	Crab Orchard NWR	Environmental Assessment
Max Hutchison	The Nature Conservancy	Environmental assessment and Section 7 evaluation
Brent Manning	Director, Illinois Department of Conservation	States concurrence on hunting program

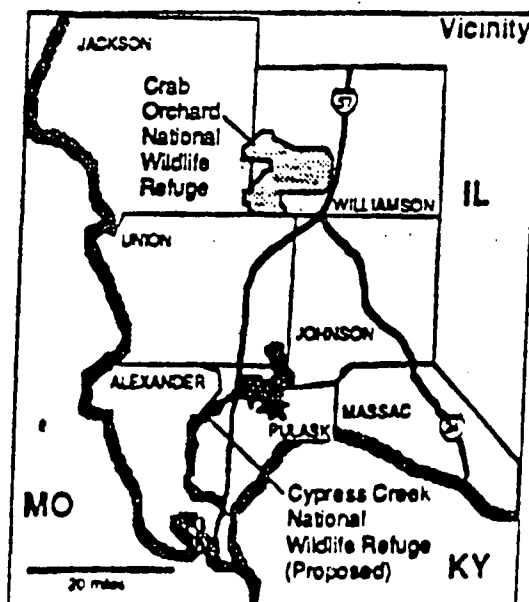
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**FIGURE 1 . Cypress Creek National Wildlife Refuge  
General Management Objectives**

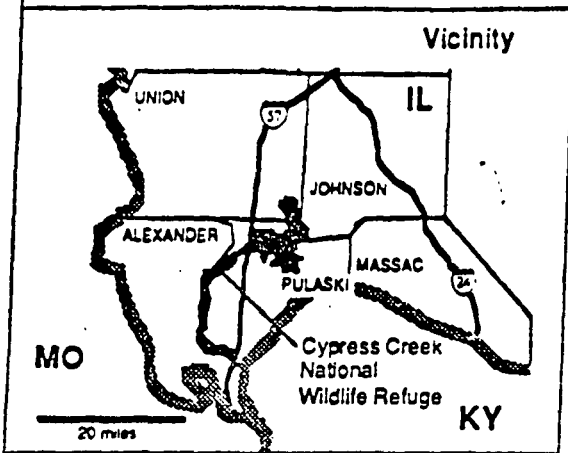


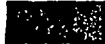

**PRIMARY OBJECTIVES**

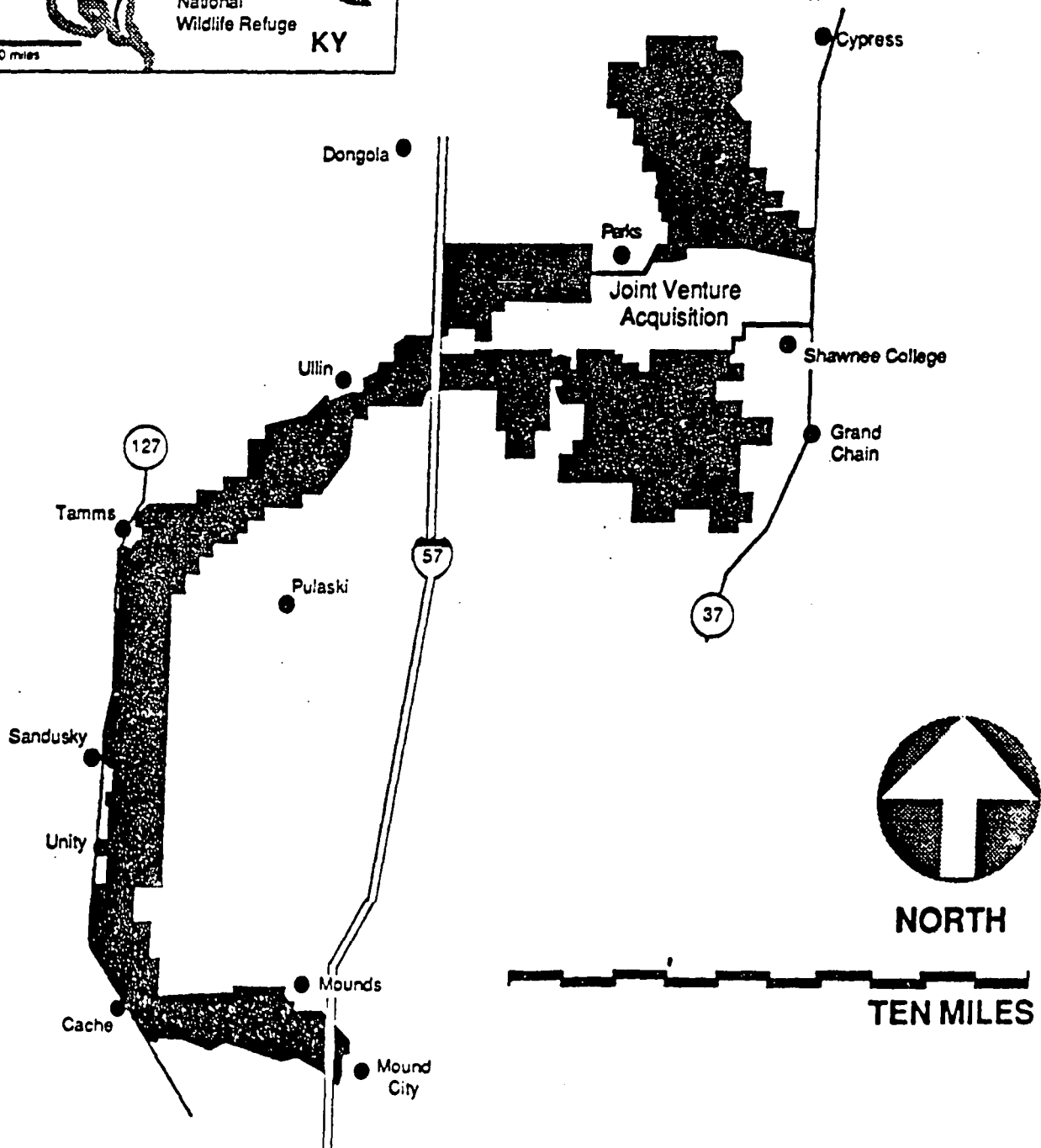
-  Protection of natural features, threatened and endangered species.
-  Joint Venture Acquisition Area
-  Protection and restoration of bottomland forests and wetlands for the enhancement of the core natural area.
-  Protection, restoration, and management of bottomland forests and wetlands.



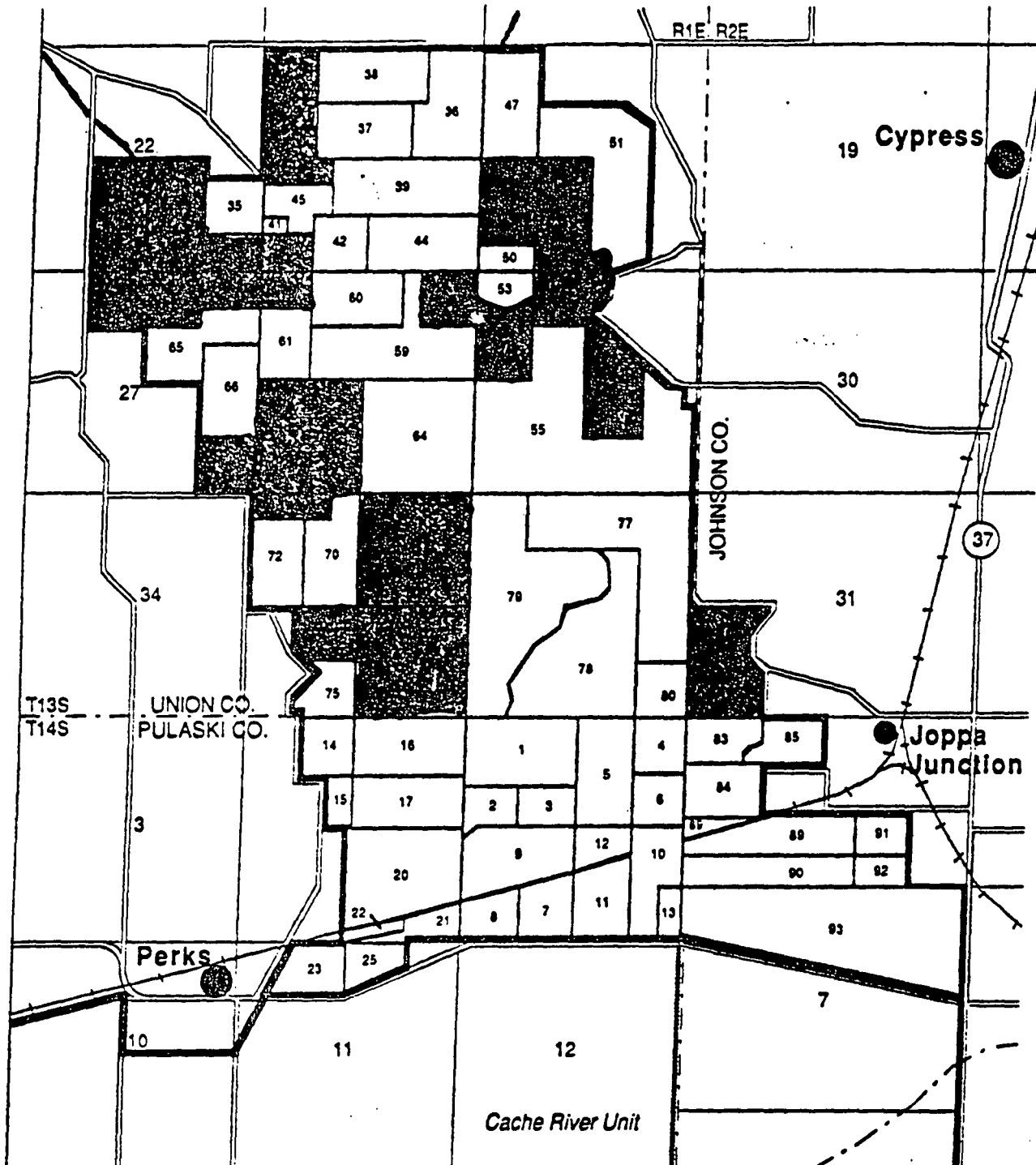
**FIGURE 2 Cypress Creek National Wildlife Refuge**  
ILLINOIS



-  PURCHASE BOUNDARY  
U. S. Fish and Wildlife Service
-  JOINT VENTURE ACQUISITION  
Illinois Department of Conservation  
The Nature Conservancy  
Ducks Unlimited

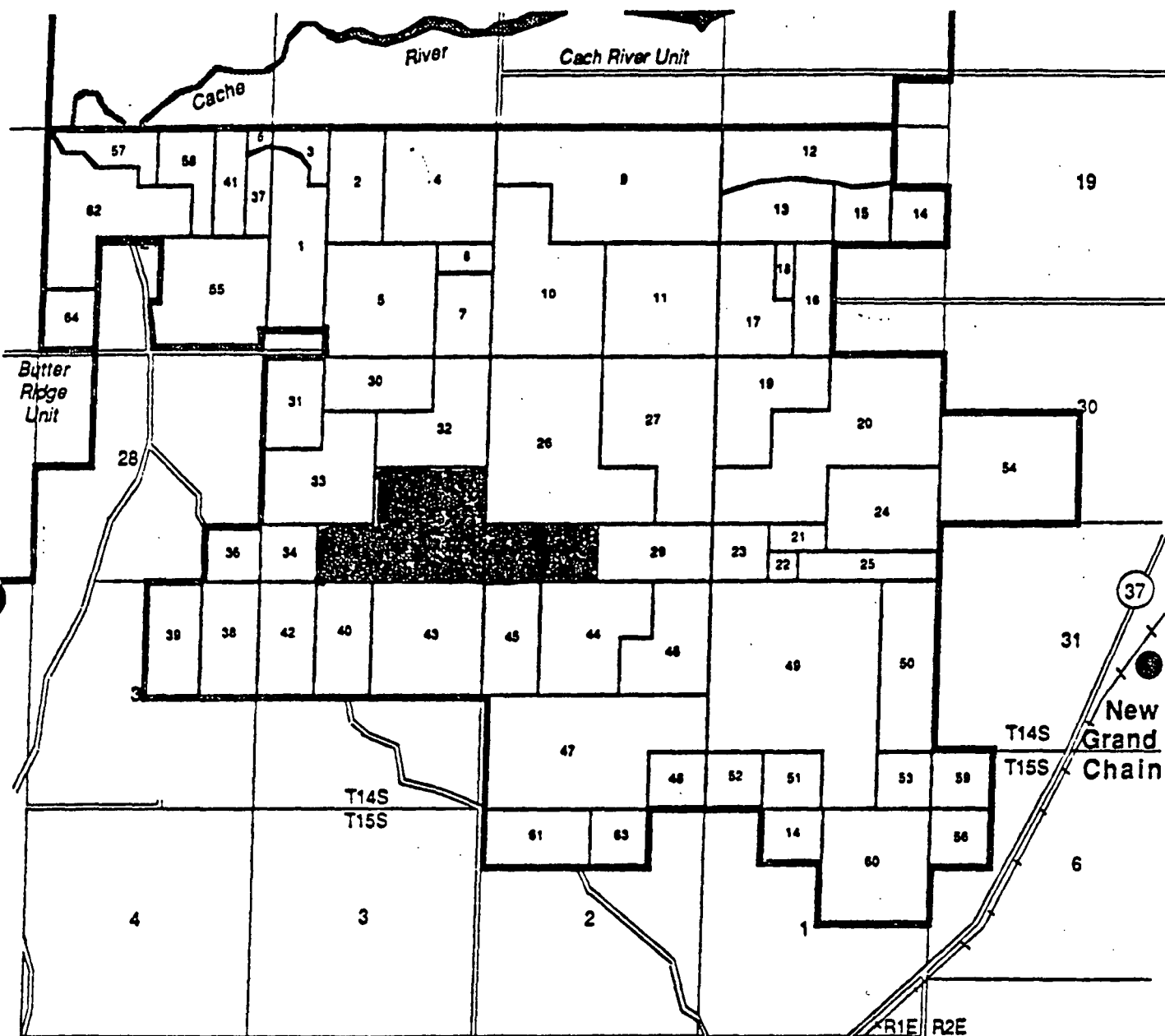


**FIGURE 3** Cypress Creek National Wildlife Refuge  
Cypress Creek Unit



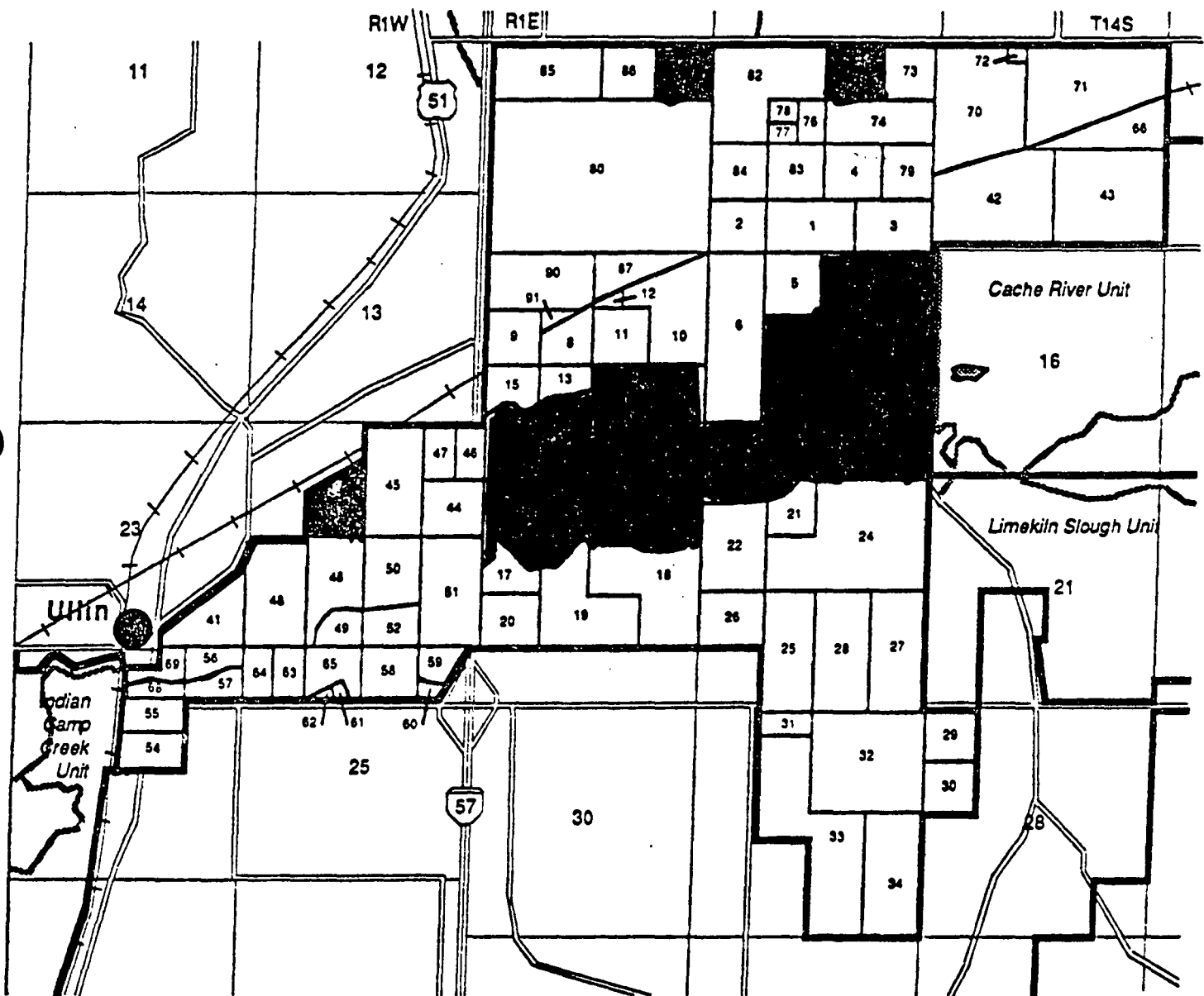
SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING

**FIGURE 4** Cypress Creek National Wildlife Refuge  
Limekiln Slough Unit



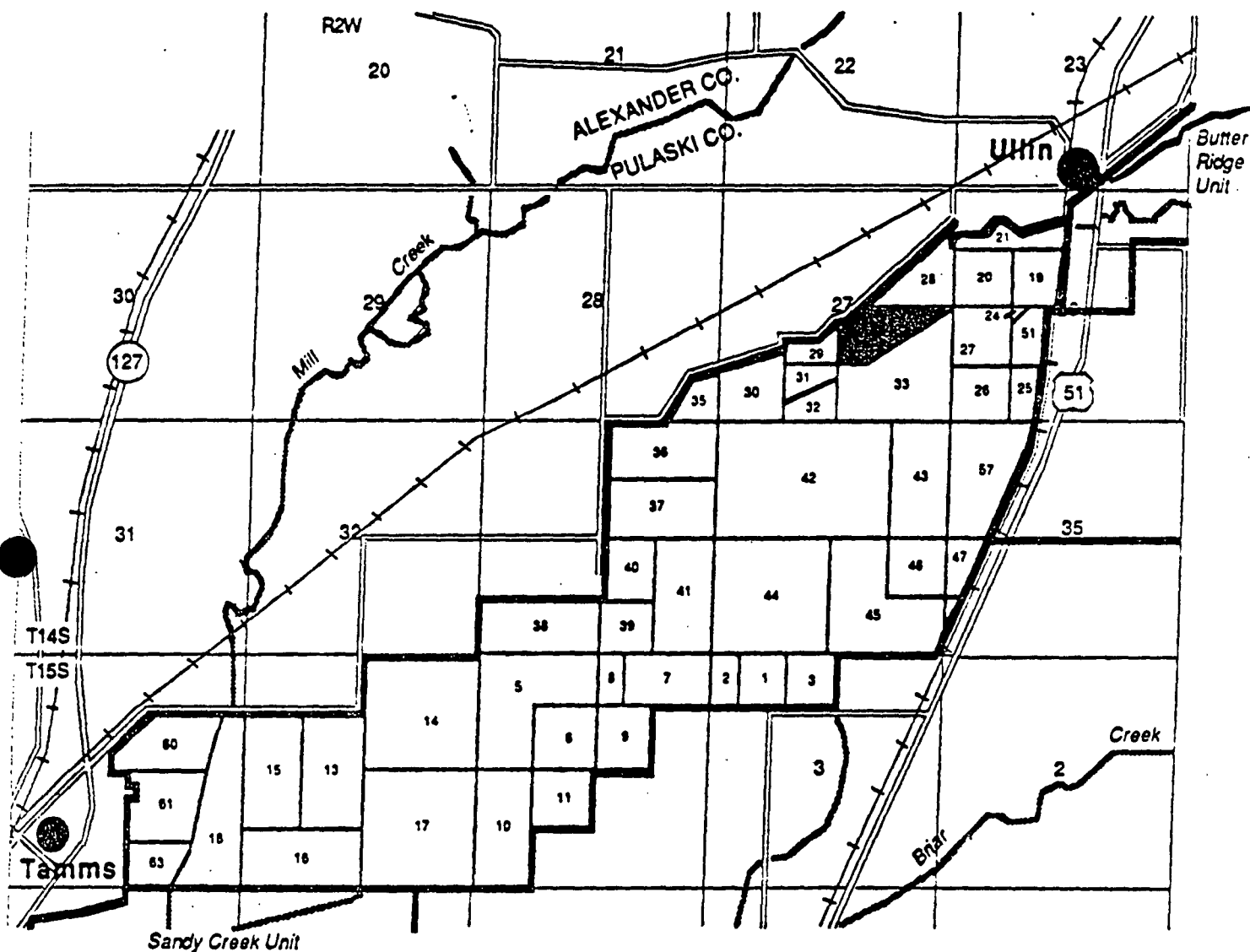
SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING

**FIGURE 5** Cypress Creek National Wildlife Refuge  
Butter Ridge Unit



SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING

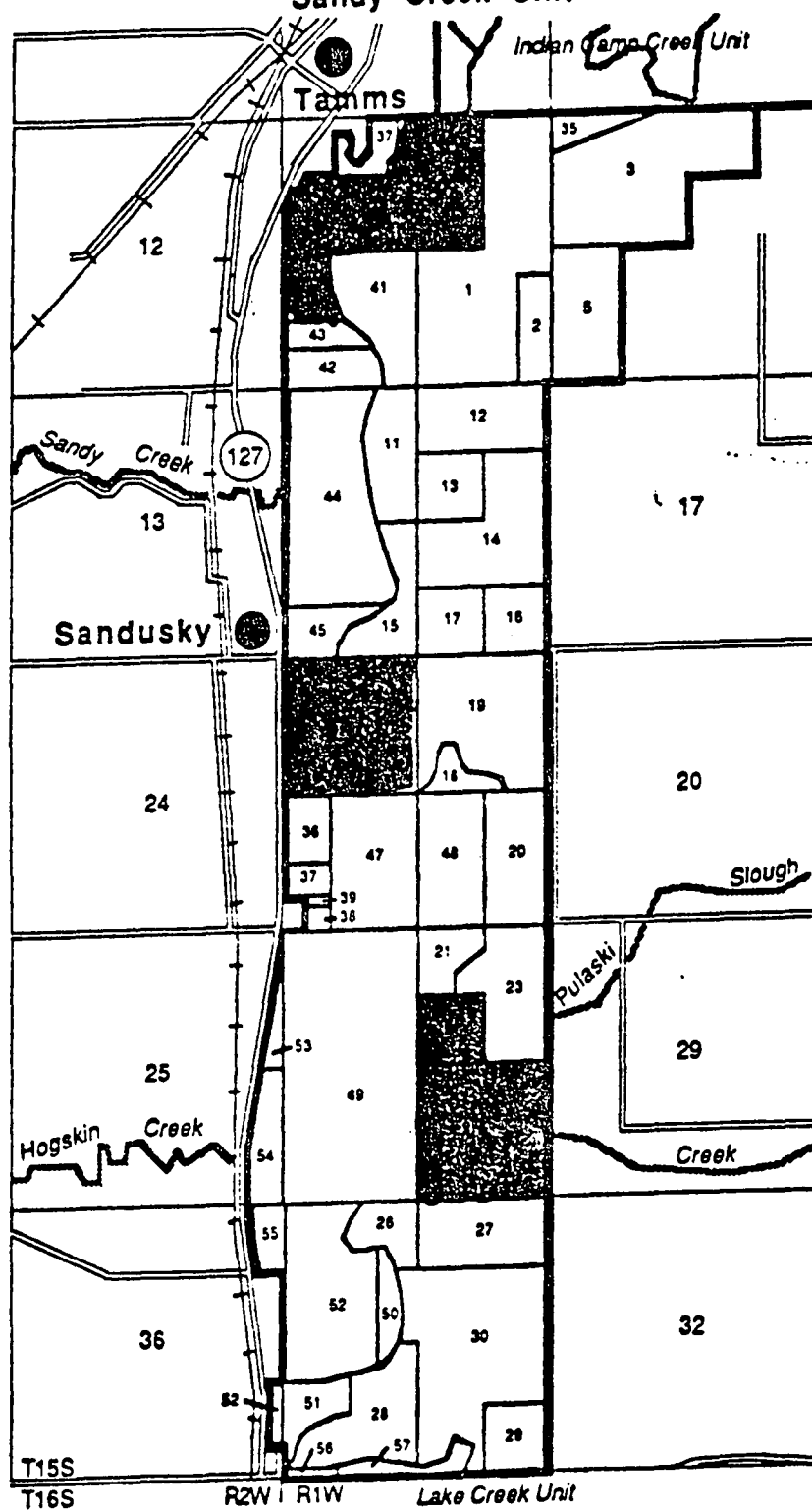
**FIGURE 6** Cypress Creek National Wildlife Refuge  
Indian Camp Creek Unit



SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING

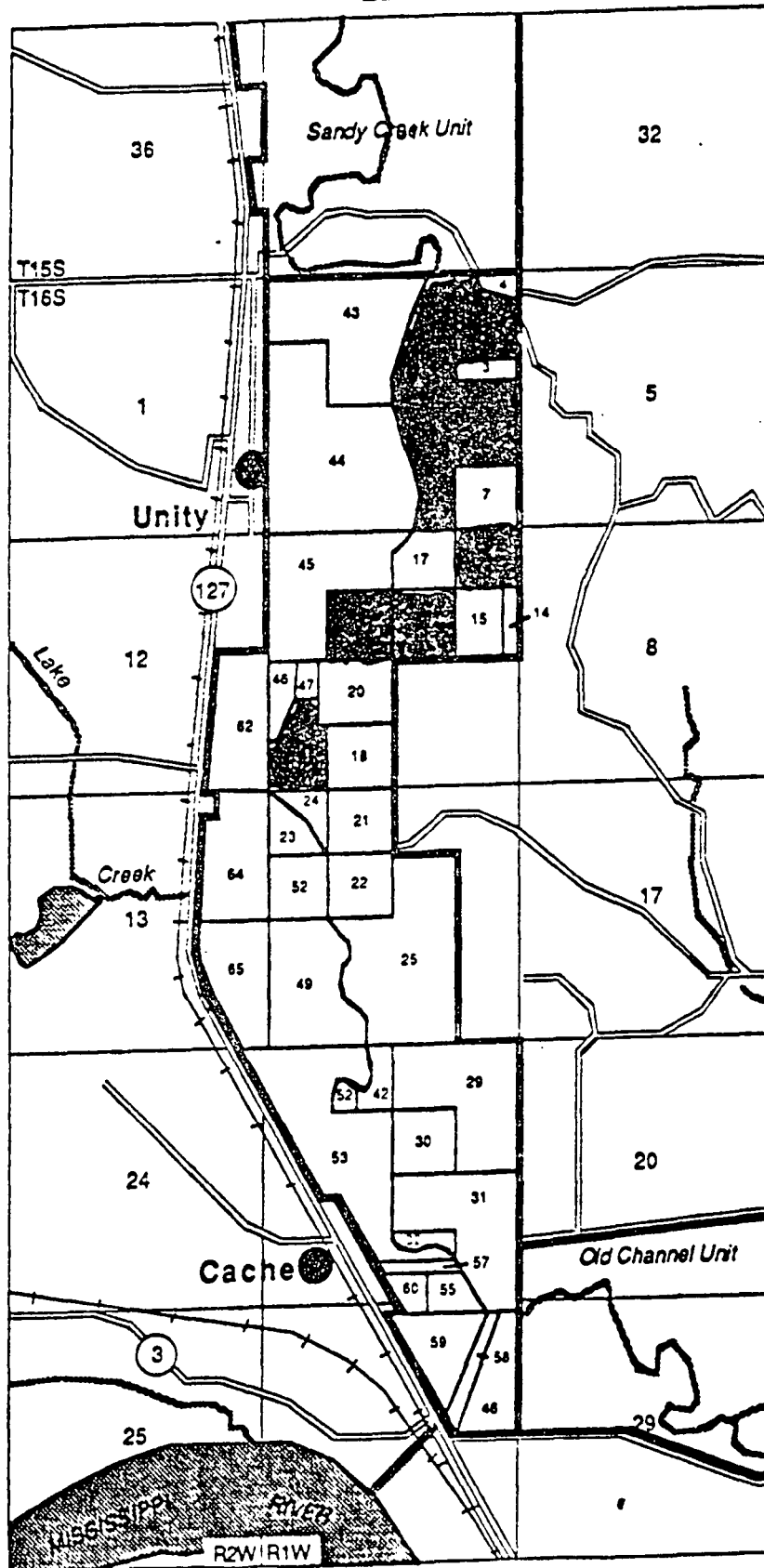


**FIGURE 7** Cypress Creek National Wildlife Refuge  
Sandy Creek Unit



SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING

**FIGURE 8** Cypress Creek National Wildlife Refuge  
Lake Creek Unit



SHADED AREAS ARE THE PROPOSED AREAS TO BE OPEN TO HUNTING