U.S. Fish & Wildlife Service

FINAL LAND PROTECTION PLAN AND FINAL ENVIRONMENTAL ASSESSMENT
FOR THE EXPANSION OF

FELSENTHAL AND UPPER OUACHITA NATIONAL WILDLIFE REFUGES

Felsenthal National Wildlife Refuge
Ashley and Union Counties, Arkansas

Upper Ouachita National Wildlife Refuge
Morehouse Parish, Louisiana

Southeast Region

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FINAL LAND PROTECTION PLAN

I. Introduction and Purpose

A. PROJECT DESCRIPTION

This Final Land Protection Plan (Final LPP) identifies the new acquisition boundaries for the expansion of Felsenthal and Upper Ouachita National Wildlife Refuges (NWRs). Working with partners, the Fish and Wildlife Service (Service) delineated up to 49,103 acres between the refuges to protect and manage bottomland hardwood forests and upland pine forests in Union and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana (Figure 1). The expansion of Upper Ouachita NWR will occur east of the refuge. These lands include 3,196 acres of bottomland hardwood forests and 14,159 acres of upland pine forests. The expansion of Felsenthal NWR will occur south, west, and east of the refuge. These lands include 20,630 acres of bottomland hardwood forests and 11,118 acres of upland pine forests. These acres are encompassed by the acquisition boundary in Alternative 2 of the Final Environmental Assessment (Final EA) for the expansion of these refuges. The purposes of this Final LPP are to:

- Provide landowners and the public with an outline of the Service's policies, priorities, and protection methods for land in the project area;
- Assist landowners in determining whether their property lies within the acquisition boundary; and
- Inform landowners about the Service's long-standing policy of acquiring land only from willing sellers.

The Final LPP presents Felsenthal and Upper Ouachita NWRs' objectives for wildlife and their associated habitats within a newly approved acquisition boundary. Within approved acquisition boundaries, the Service is able to enter into negotiations for the protection of environmentally sensitive lands. The most urgent needs for acquiring an interest in these lands are as follows:

- To protect contiguous bottomland hardwood forests adjacent to the Ouachita River.
- To protect lands between both national wildlife refuges to increase core habitat for neotropical migratory songbirds, wintering waterfowl, and black bears.
- To protect existing and potential habitat for the endangered red-cockaded woodpecker.
- To protect existing and potential habitat for the threatened Louisiana black bear.

B. REFUGE PURPOSES

Felsenthal NWR was authorized by Congress as mitigation for the Ouachita-Black Rivers Navigation Project. The refuge was established with the fee-title transfer of 65,000 acres from the Corps of Engineers (by direct authority granted in the navigation project legislation) to the Service in 1985 (Figure 2). The legislative purposes for which Felsenthal NWR was established are "for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon" (16 U.S.C. 664, Fish and Wildlife Coordination Act) and "for incidental fish and wildlife-oriented recreational development; the protection of natural resources; and the conservation of endangered species or threatened species" (16 U.S.C. 460k-1).

Upper Ouachita NWR was established in 1978, when 20,834 acres were purchased under the authority of the Migratory Bird Conservation Act of 1929, as amended, and the Wetlands Extension Act of 1976. In 1997 and 1998, an additional 16,191 acres, known as the Mollicy Unit, were purchased east of the Ouachita River under the Migratory Bird Conservation Act of 1929. Between 1997 and 2004, the Service acquired about 4,939 acres of upland pine from the Nature Conservancy of Louisiana. In 2011, the Service purchased approximately 4,000 acres of bottomlands from The Conservation Fund. Currently, the fee-title lands for Upper Ouachita NWR cover 46,834 acres (Figure 2). The refuge's current acquisition boundary encompasses 62,989 acres and includes the area north of the Mollicy Unit, all inholdings, and areas west and south of the refuge on the west side of the Ouachita River. The legislative purpose for which Upper Ouachita NWR was established is "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds" (Migratory Bird Conservation Act, 16 U.S.C. 715d) and for "the conservation of the wetlands of the nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions" (16 U.S.C. 3901b).

The vision statement for Upper Ouachita NWR states that the refuge "will conserve, enhance, and restore the integrity of bottomland hardwood forests, other wetlands, and upland mixed pine-hardwood habitats primarily in the upper West Gulf Coastal Plain and Mississippi Alluvial Valley. Moist-soil and cropland habitats will be managed to benefit a variety of migratory waterfowl, shorebirds, and associated species. A diversity of wildlife species will be fostered while maintaining opportunities for the public to enjoy wildlife-dependent recreation. Future resource protection will be strategically charted for establishing habitat conservation linkages in the Lower Mississippi River Ecosystem through partnerships and collaboration" (USFWS 2008).

The vision statement for Felsenthal NWR states, "The South Arkansas National Wildlife Refuge Complex provides a diversity of habitats for wintering waterfowl, migratory birds, threatened and endangered species, and resident wildlife, and provides enhanced wildlife-dependent public use opportunities. The Complex protects, manages, and restores an intricate system of rivers, creeks, sloughs, buttonbush swamps, and lakes throughout a vast bottomland hardwood forest that gradually rises to an upland forest community. The Complex will continue to serve the American people by offering opportunities for compatible, wildlife-dependent recreation such as hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. In addition, the Complex will seek partnerships that promote environmental stewardship, foster research opportunities to enhance resource management and restoration efforts, and protect historical and cultural resources of the Complex" (USFWS 2010).

Figure 1. Project map

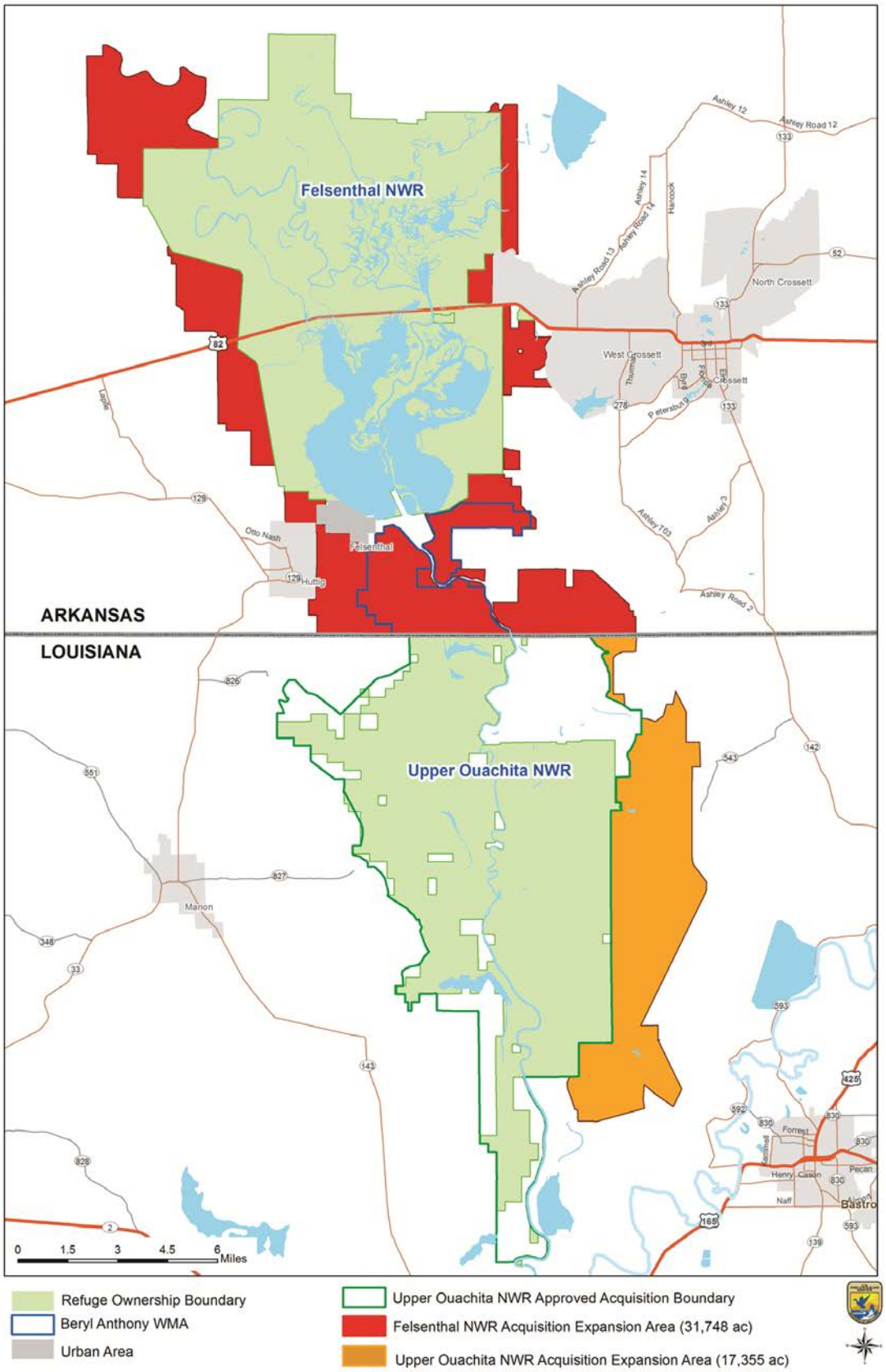
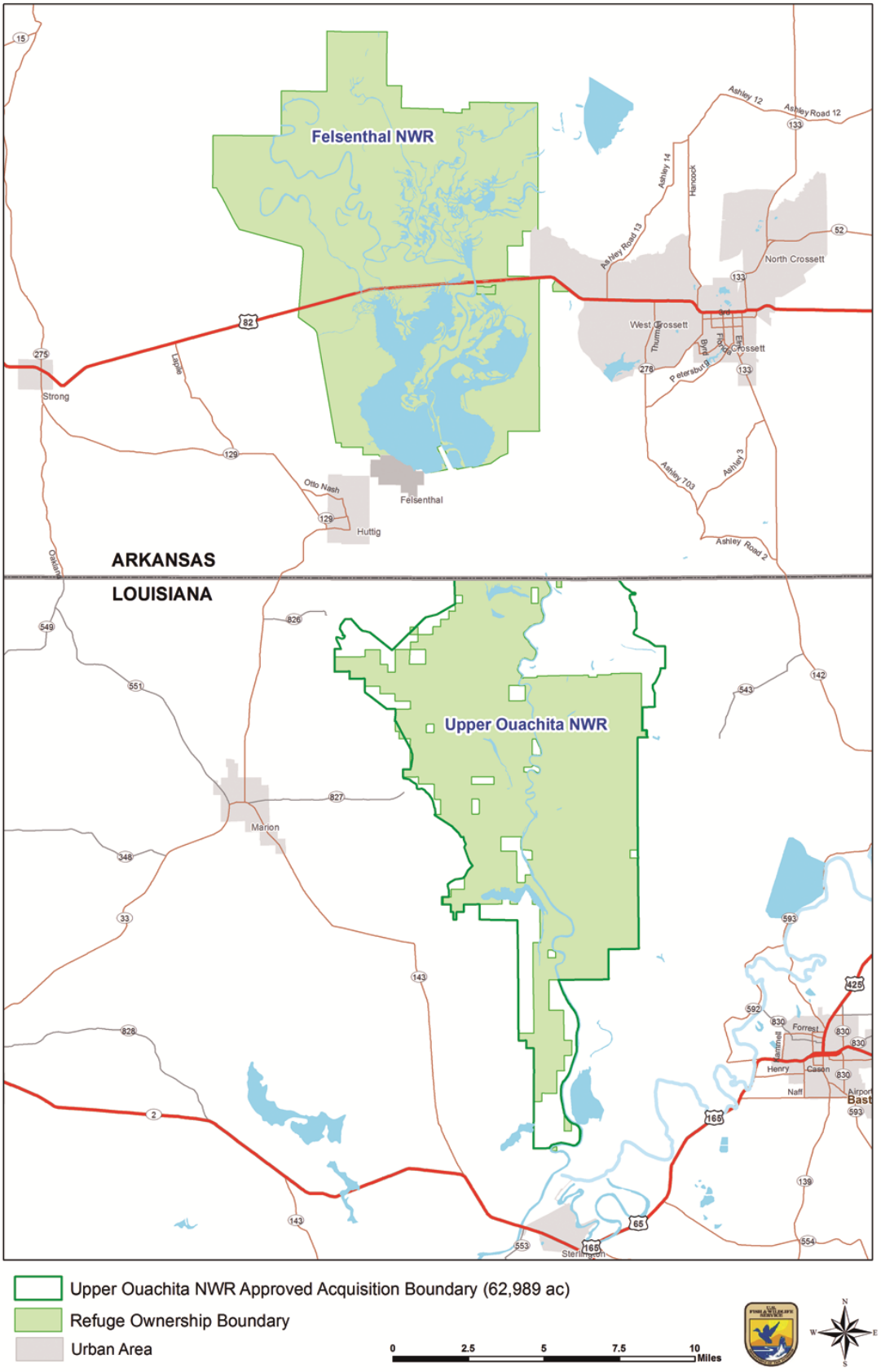


Figure 2. Location of Felsenthal and Upper Ouachita NWRs



II. Resources

A. RESOURCES TO BE PROTECTED

This landscape expansion will ultimately allow for the conservation of more than 177,000 contiguous acres of wildlife habitat. More than 120,000 acres of bottomland floodplain habitat and 58 river miles will be protected. A total of 50 red-cockaded woodpecker groups will come under federal protection. This landscape expansion will bring 25,277 acres of upland pine and mixed pine-hardwood forest and 23,826 acres of bottomland hardwood forest under Service protection.

The expansion areas will increase the core area size of forest blocks and provide necessary corridors for bears and other wildlife. These lands are used by neotropical migratory birds following the Ouachita River during their spring and fall migrations, as well as nesting prothonotary, Swainson's and worm-eating warblers, Mississippi kites, and wood ducks. Hundreds of thousands of wintering waterfowl utilize these bottomland hardwood forests annually (USFWS 2008; USFWS 2010). Rafinesque's big-eared and southeastern myotis bats, both priority species in the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC 2009), utilize the large hollow trees found in these forests.

Prime black bear habitat is characterized by relatively inaccessible terrain, thick understory vegetation, abundant hard and soft mast foods, and den sites (BBCC 2005). Habitat fragmentation can result in increased mortality as bears are forced to forage on less-protected sites, travel farther to forage, or cross barriers such as roads (Pelton 2001). In a fragmented landscape, the provision of high-quality habitat, with a mixture of habitat components and seasonal resource needs, is increasingly important, so that individual bears can survive within smaller home ranges and limit exposure to potential mortality factors associated with travel between fragments (e.g., road crossings) and use of alternate habitats (e.g., agricultural fields, neighborhoods for human food) (BBCC 2005). Telemetry data on Louisiana black bear movements have demonstrated that habitat linkages should be considered in management plans intended to ensure the viability of the Louisiana black bear population in fragmented habitats (Weaver 1999). Repatriation efforts took place between 2000 and 2007, when 55 females and 116 cubs were reintroduced into their former range of southern Arkansas, mainly on Felsenthal NWR (USFWS 2010). Under Service ownership, the lands will be managed for the benefit of black bears through silvicultural improvements that provide thick understory vegetation, den trees, and mast (LMVJV 2007; USFWS 2011). These lands will contribute to the black bear reintroduction efforts at Felsenthal NWR and to the recovery of the federally threatened black bear in Louisiana.

Breeding bird surveys conducted by Service personnel in the bottomland hardwood forests on Upper Ouachita NWR have recorded the presence of many priority species of the GCPO LCC, including the hooded warbler, Kentucky warbler, prothonotary warbler, white-eyed vireo, orchard oriole, yellow-throated warbler, and Acadian flycatcher (GCPO LCC 2009) (Table 1). This expansion will bring over 25,000 acres of bottomland hardwood forest under Service management. The Service manages these forests for the benefit of forest interior songbirds according to guidelines set forth by the Lower Mississippi Valley Joint Venture (LMVJV 2007).

The expansion areas are located in the Mississippi Flyway, which is a critical ecoregion for migrating and wintering dabbling ducks, wood ducks, and geese in North America (Reinecke et al. 1989). Davis et al. (2008) found that female mallards spent the majority of their time in bottomland hardwood forests on Upper Ouachita NWR, underscoring the importance of these forests to wintering waterfowl.

Rice (2009) found 34 roost trees of Rafinesque's big-eared bats and 8 roost trees of southeastern myotis bats on Upper Ouachita NWR in bottomland hardwood forests. The refuge biologist has also found a roost tree of southeastern myotis bats, with well over 500 individuals on Upper Ouachita NWR. It is well known that both species utilize large cavity trees in mature forests for maternity roosts (Gooding and Langford 2004, Stevenson 2008, Rice 2009, Barclay and Kurta 2007). Under the preferred alternative, an additional 26,680 acres of bottomland hardwood forest will be protected.

Approximately 58 river miles will be protected under this expansion. The Ouachita River originates in the Ouachita Mountains of west-central Arkansas, near the Oklahoma border. It flows south through northeastern Louisiana, drains into the Little River at Jonesville, Louisiana, and then joins the Tensas River to form the Black River, which empties into the Red River. The Ouachita River has a drainage basin of 10,825 square miles at the refuge. The drainage basin in Arkansas is mostly forested, resulting in extremely high-quality water when it flows through the refuge, even during flood periods. The Corps of Engineers operates a series of locks and dams on the river, including one at Felsenthal, Arkansas (USFWS 2011). These locks and dams were installed in the 1970s to maintain a 9-foot channel for navigation purposes.

Upper Ouachita NWR recently completed the largest river floodplain restoration in the country. The refuge's Mollicy Unit is located on the east side of the Ouachita River. Former landowners in the 1960s cleared the 19,000-acre area of its mature bottomland hardwood forest for agriculture and built a ring levee to keep the Ouachita River from flooding the farmed fields. In the late 1990s, the Service acquired the property and planted over 4 million trees in the largest bottomland hardwood reforestation project in the country. In 2010, the Service partnered with The Nature Conservancy to reconnect the Mollicy Unit floodplain with the Ouachita River, by breaking the levee in several places. Due to this restoration, natural flooding is occurring and subsequently facilitating seed dispersal, sediment deposition, nitrogen and carbon storage, nutrient recycling, and plant establishment. It also increases primary production, decomposition rates, and species and genetic diversity (Bayley 1995). The expansion areas along the Ouachita River will contribute to the floodplain restoration project by protecting 58 miles of forested areas along the river from deforestation. When forests are clear-cut, the increased temperatures and soil erosion reduce water quality.

The major value of the upland pine communities will be to contribute to the conservation and management of the endangered red-cockaded woodpecker (RCW). The RCW population on the expansion area east of Upper Ouachita NWR has 29 family groups, the highest density population in north Louisiana and the largest private land subpopulation in the state. In addition to this large population of RCWs, 21 active RCW groups are known to occur on the expansion areas surrounding Felsenthal NWR. Many older pine stems (60 + years) distributed across this area provide suitable cavity sites, as well as much needed foraging habitat. With proper management, these habitats could support additional RCW groups. The upland sites within the expansion boundary are extremely important in that they provide much needed additional foraging habitat for the 14 existing RCW groups on Felsenthal NWR (at current refuge population, the existing refuge acreage of upland pine communities is not sufficient to meet federal landowner guidelines for RCW foraging habitat requirements). In addition, large populations of RCWs exist on the Ouachita National Forest in central Arkansas and Kisatchie National Forest in central Louisiana. Habitat restoration in the expansion areas will provide a link between the two larger RCW populations for dispersing birds, thereby increasing their genetic diversity (Will McDearman, RCW Recovery Coordinator, personal comm.).

THREATS TO THE RESOURCE

Development

Increased development and urbanization within the ecosystem stresses all of the resources of the West Gulf Coastal Plain. Forest fragmentation, road-associated impacts, degradation, fragmentation and loss of habitat, incompatible public uses, exotic species introduction, hydrologic modifications, and introduced predators are some of the human impacts to the natural resources of this region. One of the primary threats to wildlife in this area is the destruction of habitat due to residential and commercial development.

Fragmentation of Habitats and Habitat Degradation

Private timber companies own the majority of large tracts of undeveloped land in north Louisiana and south Arkansas. Often commercial silvicultural practices do not focus on wildlife habitat management objectives.

Some forest management practices could cause lower habitat quality for some species and could cause erosion and decreased water quality when streamside management zones are not used. The promotion of the profitable pine plantation has led to monocultural stands devoid of plant diversity, leading to a loss of wildlife diversity. Another common practice on private timber lands is to bed the soil, forever altering the hydrology, to plant offsite species. Locally, this practice is often conducted to convert a bottomland hardwood forest to a loblolly pine plantation.

RCW Population Loss

RCW populations on private lands are legally allowed to be managed much less intensively, often causing a decline in populations. Although current private landowners manage RCW groups to maintain the existing population, the management philosophy could change if lands are sold to a non-governmental entity. Federal regulations do not require private landowners to conduct prescribed burning, hardwood control, or artificial cavity installation, which are needed to maintain population size.

Global Climate Change

The effects of global climate change will gradually increase in north Louisiana and south Arkansas over the next 100 years. According to the report, *Global Climate Change Impacts in the United States* (Karl et al. 2009), it is expected there will be higher temperatures, less rainfall, particularly in winter and spring, increased storm intensity and frequency, and more drought throughout the Southeast. It is anticipated that temperatures will increase by at least 4.5^{o}F by 2080, and fire severity will increase 10 to 30 percent within the next 50 years. Climate change impacts of higher temperatures will likely cause the spread of invasive species and small changes to native plant and animal distributions. Migratory birds will probably breed and winter a little further north. More southern, tropical species, (i.e., black-bellied whistling ducks, and wood storks) already have extended their ranges into Louisiana. Invasive species such as *Salvinia*, water hyacinth, and tallowtree, will become more established and extend their ranges further north. As sea levels rise, the coastal marshes of south Louisiana will be drastically reduced. Consequently, refuge lands to the north will need to provide habitat for displaced migratory birds, such as wintering waterfowl.

B. RELATIONSHIP OF PROJECT TO LANDSCAPE CONSERVATION GOALS AND OBJECTIVES

GULF COASTAL PLAINS AND OZARKS LANDSCAPE CONSERVATION COOPERATIVE

To ensure that the Service is "putting science in the right places," the Directorate determined in April 2009, that it needed a national, geographic framework for implementing landscape conservation. Just as migratory bird flyways have provided an effective spatial frame of reference to build capacity and partnerships for international, national, state, and local waterfowl conservation, this geographic framework will provide a continental platform upon which the Service can work with partners to connect site-specific efforts to larger biological goals and outcomes.

In its meeting on August 4-6, 2009, the Directorate approved a map of the geographic framework developed by a team of experts from the Service and the U.S. Geological Survey from across the country. The map defines geographic areas that provide a spatial frame of reference for building and targeting science capacity that will support the Service and its partners in planning and designing conservation strategies at landscape scales. It also allows the Service to more precisely explain to partners, Congress, and the American public why, where, and how it targets conservation resources and how its science-based efforts connect to a greater whole. Currently, Upper Ouachita and Felsenthal NWRs fall in the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC) (Table 1).

Table 1. Priority habitats and species of the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC 2009)

Bottomland forest
Swainson's warbler
Hooded warbler
Cerulean warbler
Wood thrush
Prothonotary warbler
American woodcock
Southeastern myotis
Rafinesque's big-eared bat
black bear
Mesic Hardwood Forest
Cerulean warbler
Hooded warbler
Worm-eating warbler
Wood thrush

Mesic Hardwood Forest
Kentucky warbler
Southeastern myotis bat
Northern long-eared myotis bat
black bear
Pine Woodlands and Savannas
Brown-headed nuthatch
Canebrake rattlesnake
black bear
Savanna
Red-cockaded woodpecker
Bachman's sparrow

FELSENTHAL NWR COMPREHENSIVE CONSERVATION PLAN (USFWS 2010)

The comprehensive conservation plan (CCP) goals and objectives that support this expansion for Felsenthal NWR are as follows (USFWS 2010):

Goal 1. Protect, maintain, enhance, and restore healthy and viable populations of migratory birds, resident wildlife, fish, and native plants, including all federal and state threatened and endangered species found within southern Arkansas in a manner that supports national and international treaties, plans, and initiatives.

***Objective 1.1. Threatened and Endangered Species - Red Cockaded Woodpecker*:** Over the 15-year life of the CCP, continue to support threatened and endangered species through surveys, habitat management, research, and recovery.

Objective 1.6. Threatened and Endangered Species - Red Cockaded Woodpecker: Annually coordinate and collaborate with neighboring landowners to stabilize the RCW population in the geographic area.

Goal 2. Protect, maintain, enhance, and where appropriate, restore suitable habitat for the conservation and management of migratory birds, resident wildlife, fish, and native plants, including all federal and state threatened and endangered species endemic to the Complex.

Objective 2.1. Forest Management: Over the 15-year life of the CCP, manage 50,000 acres of forests to provide a diversity of native plant and animal species found in the Ouachita/Saline River Basin, to fulfill the mission and purposes of the refuge.

Objective 2.2. Forest Management - Red Cockaded Woodpecker: Over the 15-year life of the CCP, actively manage approximately 9,000 acres of pine stands for RCW habitat in accordance with the recovery plan.

UPPER OUACHITA NWR COMPREHENSIVE CONSERVATION PLAN (USFWS 2008)

The CCP goals and objectives that support this expansion for Upper Ouachita NWR are as follows (USFWS 2008):

Goal A. Promote the conservation and management of migratory bird diversity, resident wildlife, and species of special concern in support of national, regional, and ecosystem habitat and population goals.

Objective A-23. Species of Special Concern: Support the Louisiana black bear recovery efforts and continue to provide habitat to support this species.

Goal B. Restore, enhance, manage, and maintain healthy bottomland hardwood and upland forests to support a natural diversity of plant and animal species and to foster the ecological integrity of the Lower Mississippi River Ecosystem.

Goal D. In collaboration with private landowners, LDWF, and other public and private organizations, strategically plan growth by connecting refuge lands or wetland management district units to provide wildlife benefits and conservation of archaeological resources and habitats where feasible for future and present generations.

C. PARTNERSHIP EFFORTS AND RELATED RESOURCES

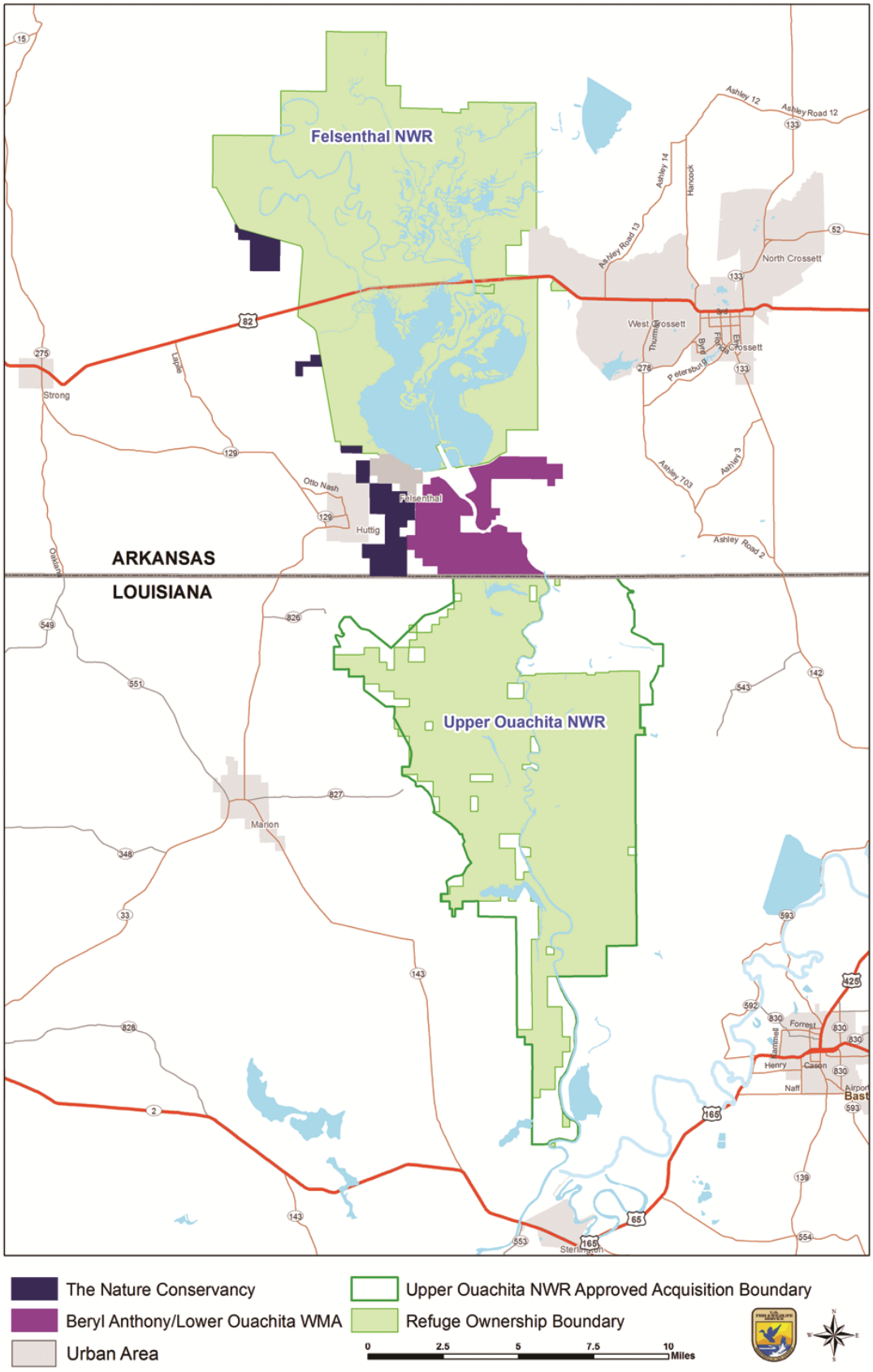
This project is a landscape planning effort that is part of the Department of the Interior's America's Great Outdoors initiative. Partners include:

- Fish and Wildlife Service of the U.S. Department of the Interior
- State of Arkansas – Arkansas Fish and Game Commission, Beryl Anthony Lower Ouachita WMA
- State of Louisiana – Louisiana Department of Wildlife and Fisheries
- The Nature Conservancy
- Ducks Unlimited
- Area landowners
- The general public
- Timber and investment landowners
- Private property owners and property rights organizations
- Developers and realtors
- News media
- Scientific and academic community

Within this expansion area is the 7,000-acre Beryl Anthony Lower Ouachita Wildlife Management Area (WMA), which is administered by the Arkansas Game and Fish Commission. This WMA shares a common boundary across the entire southern end of Felsenthal NWR, and it also shares a common boundary with the north end of Upper Ouachita NWR. For practical purposes, the WMA is considered to be an "inholding" between the two refuges (Figure 3).

In addition, the 21 groups of RCWs located west of Felsenthal NWR are on land owned by The Nature Conservancy (Figure 3). The Nature Conservancey has an agreement to manage the RCWs until 2031.

Figure 3. Related resources



III. Land Protection Strategy

A. ACTION AND OBJECTIVES

In determining how to achieve the fish and wildlife habitat protection goals for the project lands identified in this document, the Service considered and evaluated three alternatives. Alternative 2 is the Service's preferred alternative, because it better serves the outlined purposes and needs, as well as the stated goals, objectives, visions, and purposes of the two refuges. This project seeks to meet both present and future land conservation and resource protection needs for Upper Ouachita and Felsenthal NWRs. By protecting additional conservation lands critical to the management of refuge resources, it is tied to many of the goals and objectives (Chapter II) of the two refuges' comprehensive conservation plans (USFWS 2008; USFWS 2010).

B. LAND PROTECTION PRIORITIES

The Service's Preferred Action (Alternative 2) will result in the acquisition of up to 49,103 acres of wildlife habitat as an expansion of Upper Ouachita and Felsenthal NWRs, through a combination of fee-title purchases from willing sellers and less-than-fee-title purchases (e.g., conservation easements and cooperative agreements) from willing sellers. The Service believes these are the minimum interests necessary to conserve and protect the fish and wildlife resources in these areas.

The private property has been prioritized for acquisition using the following criteria:

- Biological significance;
- Existing and potential threats;
- Significance of the area to refuge management and administration; and
- Existing commitments to purchase or protect land.

Three categories of land acquisition have been established, with the highest priority being the Priority I lands. A description of the lands within each of the three priority groups is given below. Table 2 summarizes the Service's land protection priorities and methods of acquisition. Figure 4 shows the locations of the project areas and their respective priority groups.

PRIORITY GROUP I

The most important resources within this project are those lands between Felsenthal and Upper Ouachita NWRs (Figure 5 and Figure 8). These lands, comprised of bottomland hardwood forests, will join the two refuges and protect both sides of the Ouachita River for approximately 58 miles. This area contains the Beryl Anthony Lower Ouachita WMA, owned by the State of Arkansas. At this time, the Arkansas Game and Fish Commission is interested in the Service having management rights on the WMA. The majority of acres in this group are owned by The Nature Conservancy, Potlatch Land and Lumber Company, Barrs and Glawson, Plum Creek Timber Company, and Ouachita ATP, LP.

Table 2. Land protection priorities for the expansion and recommended methods of acquisition

Priority Group	Parcel ID #	Type of Landowners	Approximate Acreage	Methods of Acquisition (minimum interest)	Map Location
I	4	Private	50	Fee Title	Figure 5
	5,6,7	State Govt	7,416	MOU	Figure 5
	9, 95,100	Private	2,4228	Fee Title	Figure 5 and Figure 8
	14	Private	81	Fee Title	Figure 5
	15	Private	140	Fee Title	Figure 5
	17,18	Private	457	Fee Title	Figure 5
	22, 23, 24	Private	153	Fee Title	Figure 5
	34	Private	46	Fee Title	Figure 5
	36	Private	41	Fee Title	Figure 5
	37	Private	61	Fee Title	Figure 5
	39, 40, 41, 42, 43	Private	1,394	Fee Title	Figure 5
	47, 48, 49, 50, 51, 57	Private	894	Fee Title	Figure 5
	60,61,62,63,64,65, 66	Private	623	Fee Title	Figure 5
	72, 73	Private	108	Fee Title	Figure 5
	80	Private	44	Fee Title	Figure 5
	82,83,84	Non-profit Private	2,534	Fee Title	Figure 5
	89, 90, 91	Fed Govt	93	Fee Title	Figure 5
	1	Private	53	Fee Title	Figure 5
	92, 102	Private	496	Fee Title	Figure 5
II	8	Private	20	Fee Title	Figure 6
	11	Private	247	Fee Title	Figure 6
	16	Private	38	Fee Title	Figure 6

Priority Group	Parcel ID #	Type of Landowners	Approximate Acreage	Methods of Acquisition (minimum interest)	Map Location
	35	Private	42	Fee Title	Figure 6
	46, 52,53,54,55,56	Private	4,222	Fee Title	Figure 6
	81	Private	81	Fee Title	Figure 6
	85, 86, 87, 88	Non-profit Private	1,037	Fee Title	Figure 6
	68	Private	43	Fee Title	Figure 6
	2	Private	56	Fee Title	Figure 6
	21,25,26	Private	4,521	Fee Title	Figure 6
	32,33	Private	1,097	Fee Title	Figure 6
	101	Private	1,574	Fee Title	Figure 7
III	12	Private	680	Fee Title	Figure 7
	13	Private	37	Fee Title	Figure 7
	38	Private	398	Fee Title	Figure 7
	75	Private	42	Fee Title	Figure 7
	77	Private	318	Fee Title	Figure 7
	78,79	Private	520	Fee Title	Figure 7
	93	Private	38	Fee Title	Figure 7
	98	Private	162	Fee Title	Figure 8
	96	Private	16,500	Fee Title	Figure 8
	99	Private	229	Fee Title	Figure 8

PRIORITY GROUP II

This priority group includes those lands adjacent to the western and eastern boundaries of Felsenthal NWR (Figure 6). The lands west of the refuge are upland pine forests that are home to 21 RCW groups. Most of this land is owned by The Nature Conservancy and Plum Creek Timber Company. The Nature Conservancy intends to sell its lands to the Service within the next three years. The lands northwest of the refuge are comprised of bottomland hardwood forests surrounding the Ouachita River as it enters Felsenthal NWR. The lands to the east are mostly pine forest.

PRIORITY GROUP III

This priority group includes those lands on the northeastern boundary of Felsenthal NWR and the eastern boundary of Upper Ouachita NWR (Figures 7 and 8). The lands northeast of Felsenthal NWR consist of bottomland hardwoods surrounding the Saline River and pine forests. The lands to the east of Upper Ouachita NWR are mostly upland pine forests currently supporting 29 RCW groups.

With the above criteria in mind, the Service has configured its refuge boundaries for fee-title and conservation easement areas. The Service reserves the right to be flexible with the detailed priority list above, because a number of factors also influence the priority of land protection, including the willing sellers and the availability of funding. In addition, the Service must be flexible in its methods and priorities of land protection to meet the needs of individual landowners.

C. LAND PROTECTION OPTIONS

The Service acquires lands and interests in lands, such as easements, and management rights in lands, such as leases or cooperative agreements, consistent with legislation or other congressional guidelines and executive orders, for the conservation of fish and wildlife and to provide wildlife-dependent public uses for recreational and educational purposes. These lands include national wildlife refuges, national fish hatcheries, research stations, and other areas.

The Service will use the following options to implement this Final LPP:

Option 1: Management or land protection by others
Option 2: Less-than-fee-title acquisition by the Service
Option 3: Fee-title acquisition by the Service

When land is needed to achieve fish and wildlife conservation objectives, the Service seeks to acquire the minimum interest necessary to meet those objectives, and acquire it only from willing sellers. The Service's project includes a combination of Options 1, 2, and 3 above. The Service believes this approach offers a cost-effective way of providing the minimal level of protection needed to accomplish refuge objectives, while also attempting to meet the needs of local landowners.

OPTION 1. MANAGEMENT OR LAND PROTECTION BY OTHERS

A great deal of land adjacent to and ecologically important to the project is already owned by the Service's partners or managed by the partners through conservation easements. It should also be emphasized that the protection of this area fits well into a large landscape-scale wildlife and habitat corridor that is being pieced together in the area. This project will serve as an important keystone in this conservation effort. The following partners both manage and own properties in the project area or have properties that are ecologically associated with the project area:

- National Wildlife Refuge Association
- The Nature Conservancy
- State of Louisiana - Louisiana Department of Wildlife and Fisheries
- State of Arkansas - Arkansas Game and Fish Commission, Beryl Anthony WMA
- U.S. Department of Agriculture - Natural Resources Conservation Service
- U.S. Department of the Interior - Fish and Wildlife Service
- Area landowners
- General public

Figure 4. Project area land acquisition priority groups

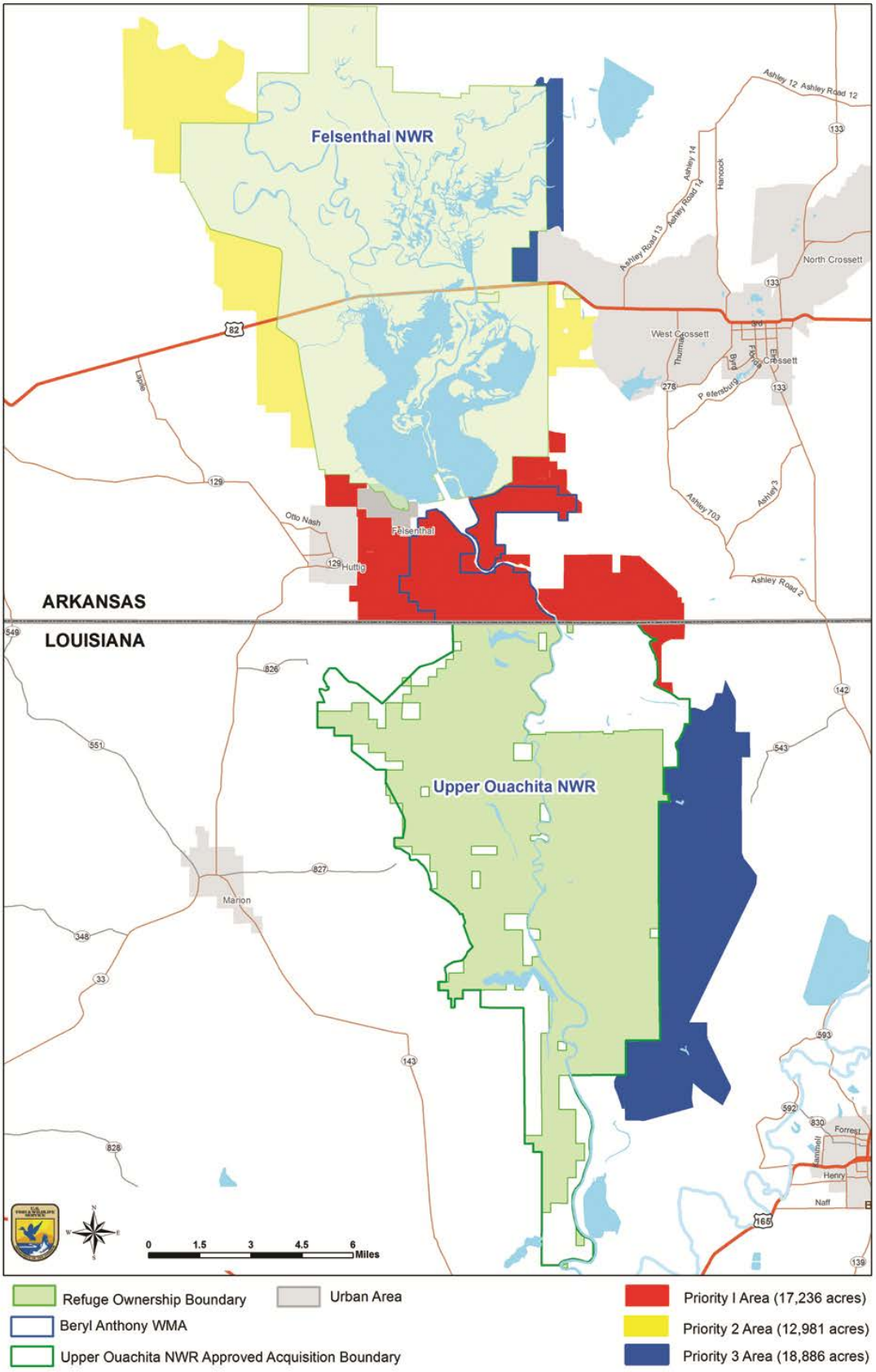


Figure 5. Landowner parcel map for Alternative 2 (Priorities I and II Lands)

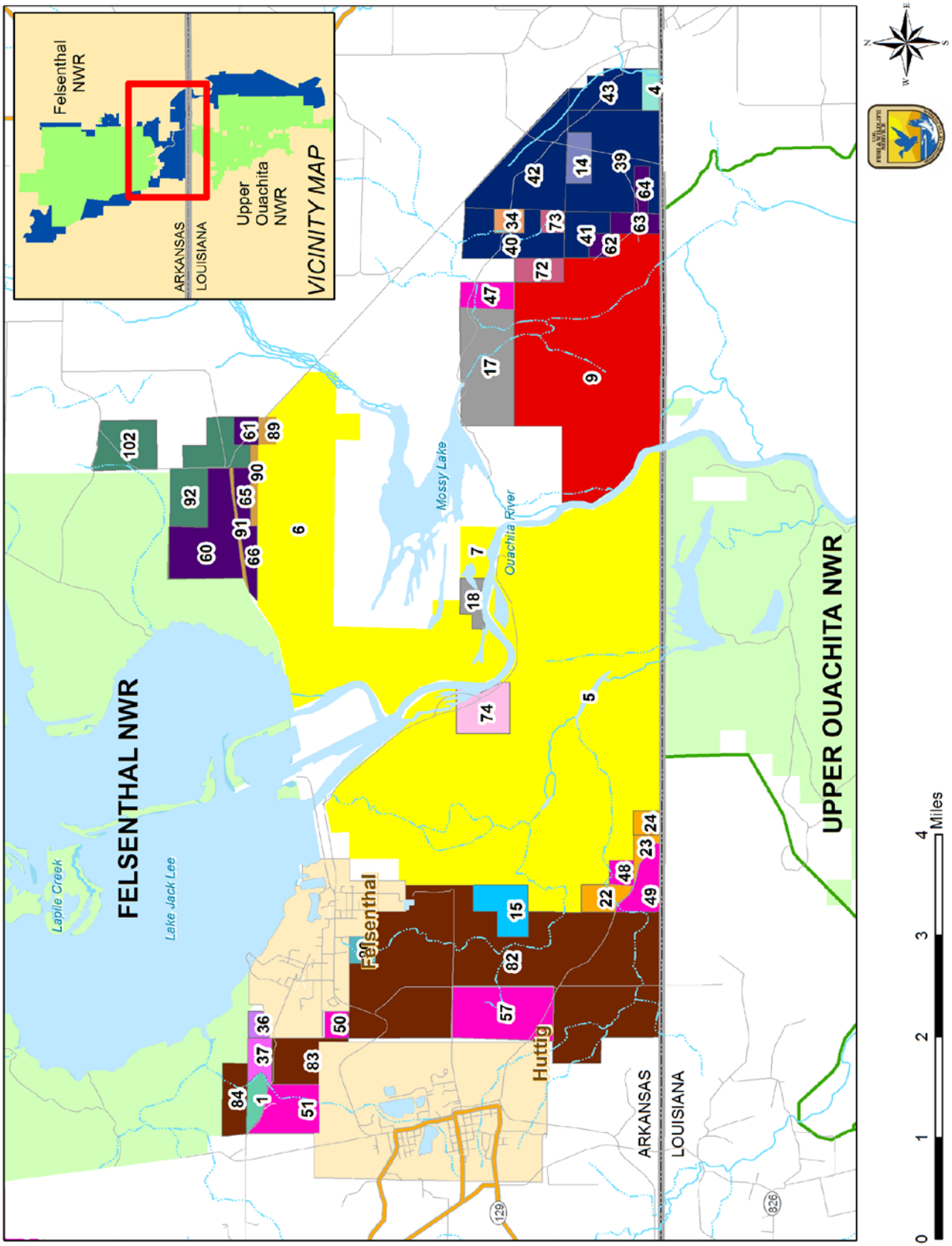


Figure 6. Landowner parcel map for Alternative 2 (Priority II Lands)

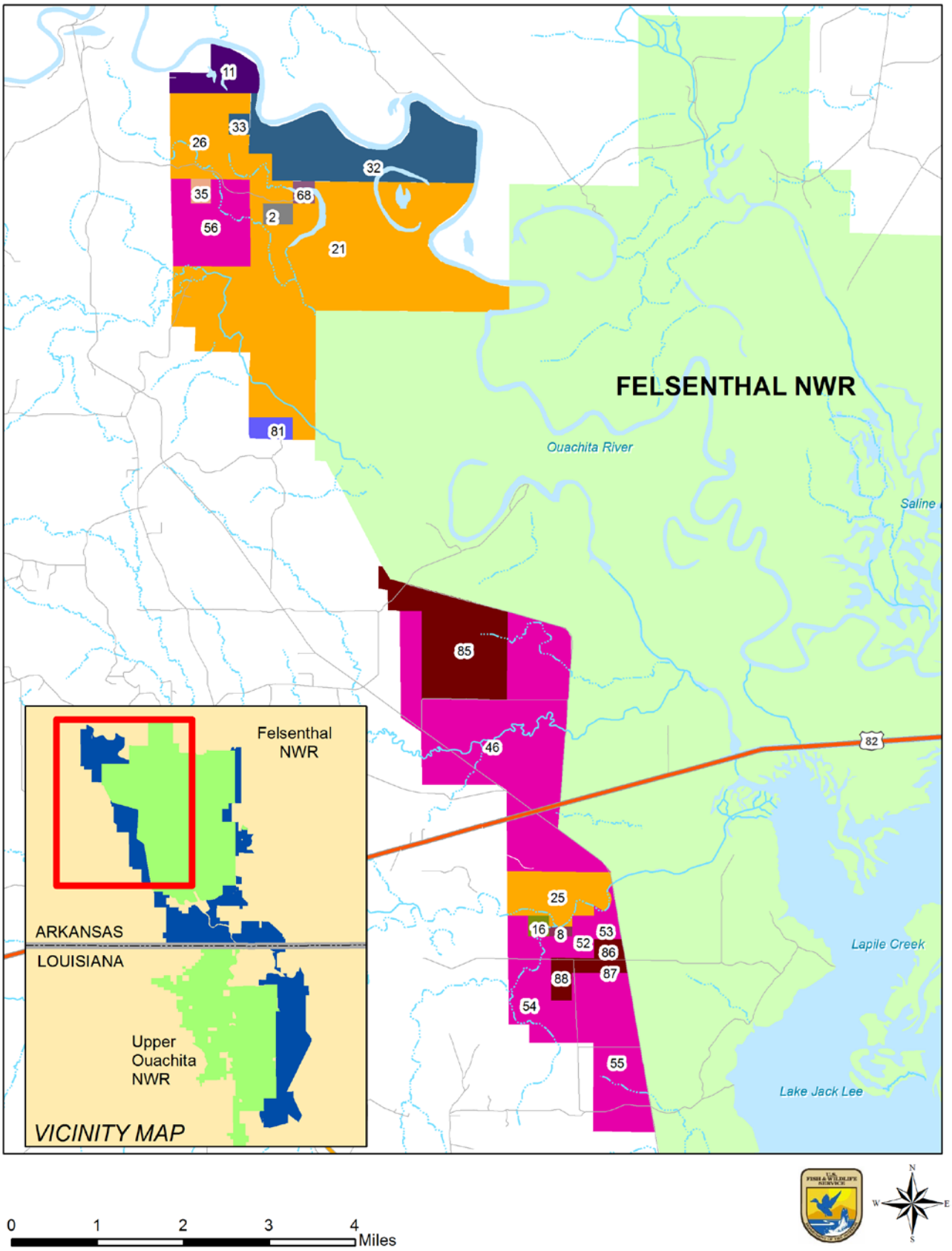


Figure 7. Landowner parcel map for Alternative 2 (Priorities II and III Lands)

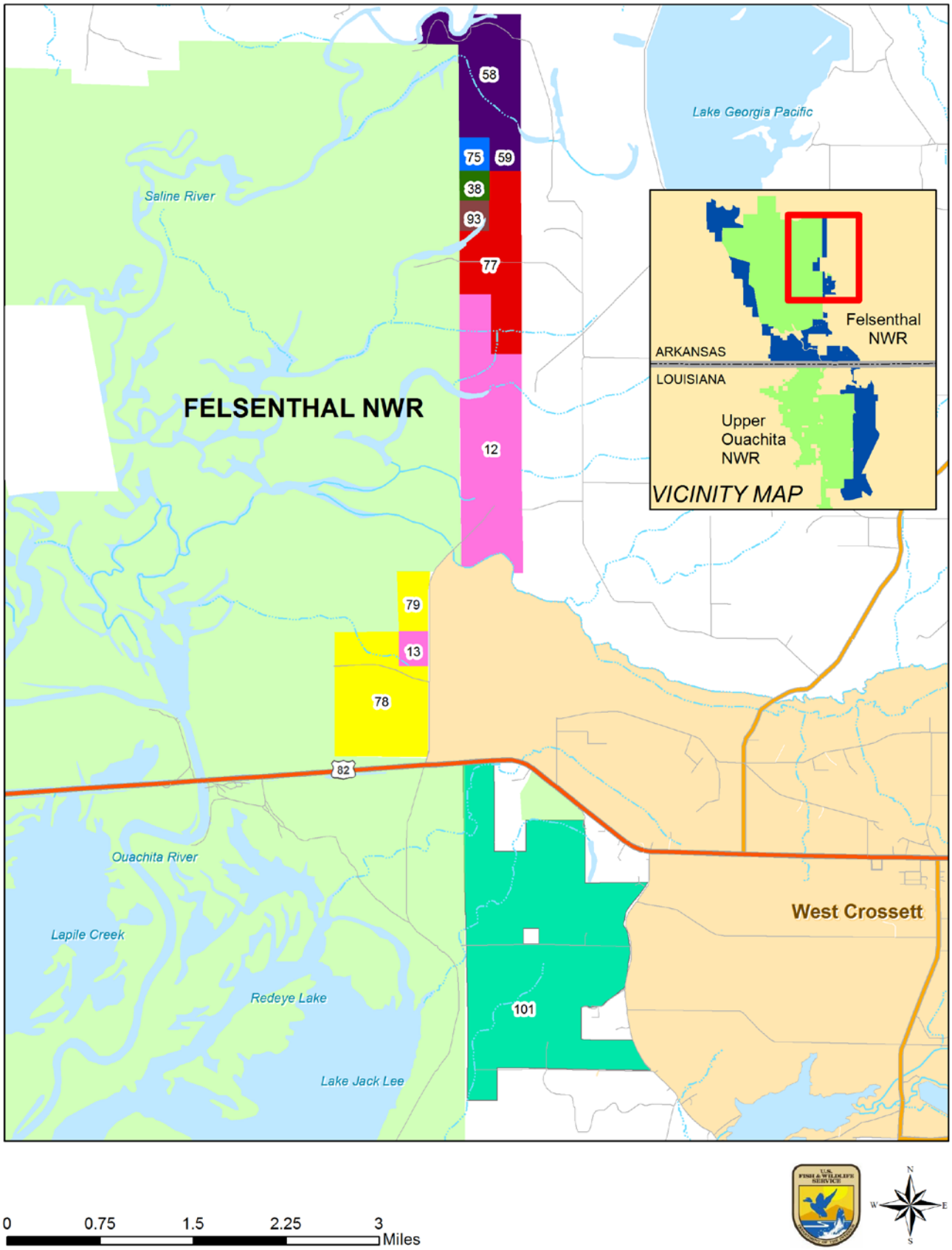
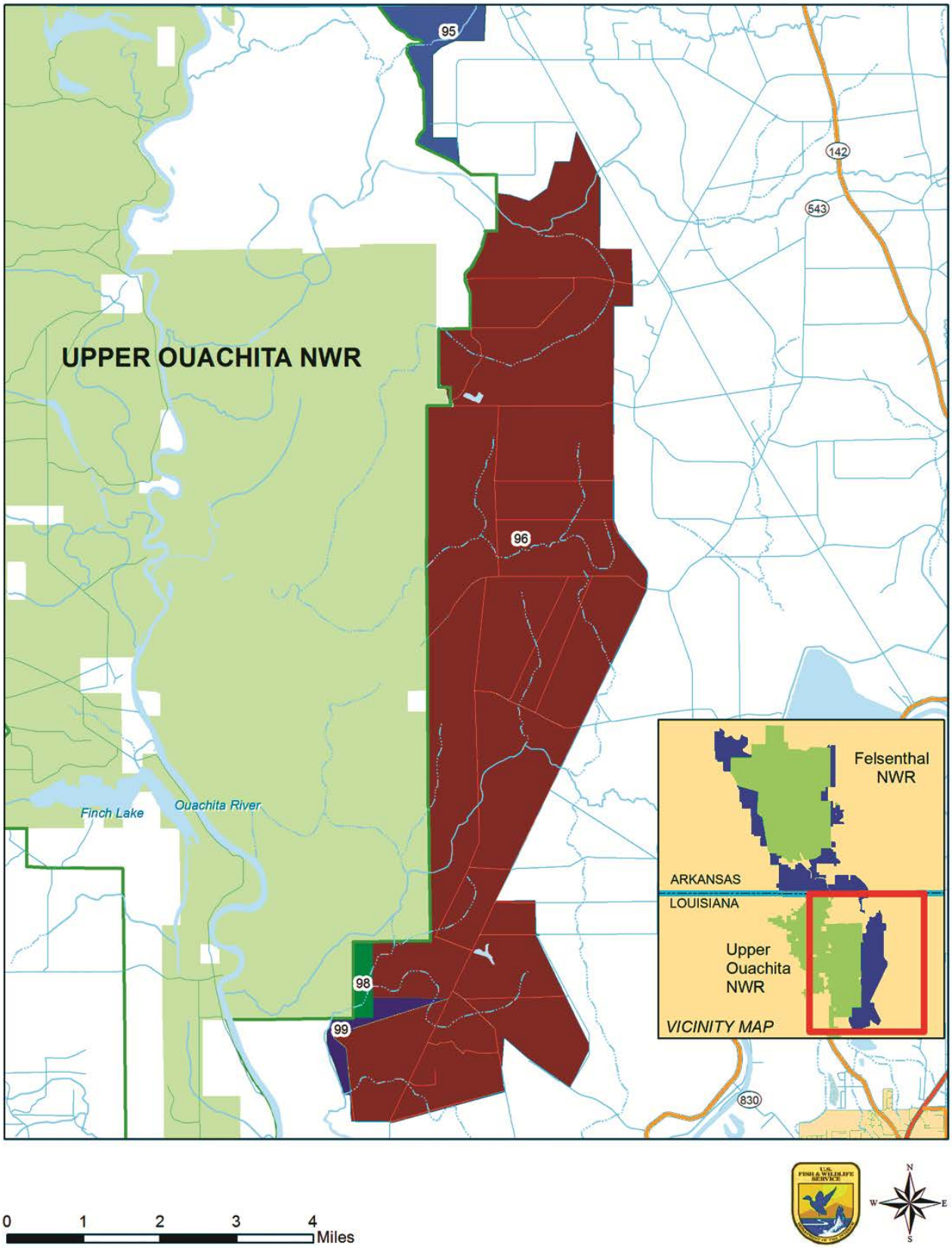


Figure 8. Landowner parcel map for Alternative 2 (Priority III Lands)



OPTION 2. LESS-THAN-FEE-TITLE ACQUISITION BY THE SERVICE

Under Option 2, the Service will protect and manage land by purchasing only a partial interest, typically in the form of a conservation easement. This option leaves the parcel in private ownership, while allowing Service control over the land use in a way that enables the Service to meet its goals for the parcel, or that provides adequate protection for important adjoining parcels and habitats. The structure of such easements will provide permanent protection of existing wildlife habitats, while also allowing habitat management or improvements and access to sensitive habitats, such as for endangered species or migratory birds. It also will allow for public use where appropriate. The Service will determine, on a case-by-case basis, and negotiate with each landowner, the extent of the rights it will be interested in purchasing. Those rights may vary, depending on the configuration and location of the parcel, the current extent of development, the nature of wildlife activities in the immediate vicinity, the needs of the landowner, and other considerations.

In general, any less-than-fee-title acquisition will maintain the land in its current configuration, with no further subdivision. Easements are a property right, and typically are perpetual. If a landowner later sells the property, the easement continues as part of the title. Properties subject to easements generally remain on the tax rolls, although the change in market value may reduce the assessment. The Service does not pay refuge revenue-sharing payments on easement rights. Where the Service identifies conservation easements, it will be interested primarily in purchasing development and some wildlife management rights. Easements are best when:

- Only minimal management of the resource is needed, but there is a desire to ensure the continuation of current undeveloped uses and to prevent fragmentation over the long-term and in places where the management objective is to allow vegetative succession;
- A landowner is interested in maintaining ownership of the land, does not want it to be further developed, and would like to realize the benefits of selling development rights;
- Current land use regulations limit the potential for adverse management practices;
- The protection strategy calls for the creation and maintenance of a watershed protection area that can be accommodated with passive management; or
- Only a portion of the parcel contains lands of interest to the Service.

The determination of value for purchasing a conservation easement involves an appraisal of the rights to be purchased, based on recent market conditions and structure in the area. The Land Protection Methods section (Section D) further describes the conditions and structure of easements.

OPTION 3. FEE-TITLE ACQUISITION BY THE SERVICE

Under Option 3, the Service will acquire parcels in fee-title from willing sellers, thereby purchasing all rights of ownership. This option provides the Service with the most flexibility in managing priority lands, and ensuring the protection in perpetuity of nationally significant trust resources.

Generally, the lands the Service will purchase require more than passive management (e.g., controlling invasive species, mowing or prescribed burning, planting, or managing for the six priority public uses). The Service will only use fee-title acquisition when adequate land protection is not assured under other ownerships, active land management is required, or the Service determines the current landowner would be unwilling to sell a partial interest like a conservation easement.

In some cases, it may become necessary to convert a previously acquired conservation easement to fee-title acquisition: for example, when an owner is interested in selling the remainder of interest in the land on which the Service has acquired an easement. The Service will evaluate that need on a case-by-case basis.

D. LAND PROTECTION METHODS

The Service may use several methods for acquiring either a full or a partial interest in the parcels identified for land protection: (1) Purchase (e.g., complete title, or a partial interest like a conservation easement); (2) leases and cooperative agreements; (3) donations; and (4) exchanges.

PURCHASE

For most of the tracts in the boundary, the method is listed as fee-title purchase or easement purchase; however, the method the Service will ultimately use depends partly on a landowner's wishes.

Fee-Title Purchase

A fee-title interest is normally acquired when: (1) The area's fish and wildlife resources require permanent protection not otherwise assured; (2) land is needed for visitor use development; (3) a pending land use could adversely impact the area's resources; or (4) it is the most practical and economical way to assemble small tracts into a manageable unit.

Fee-title purchase conveys all ownership rights to the Federal Government and provides the best assurance of permanent resource protection. A fee-title interest may be acquired by donation, exchange, transfer, or purchase (as the availability of funding allows).

Easement Purchase

Easement purchase refers to the purchase of limited rights (less-than-fee-title) from an interested landowner. The landowner will retain ownership of the land, but will sell certain rights identified and agreed upon by both parties. The objectives and conditions of the Service's conservation easements will recognize lands for their importance to wildlife habitat or outdoor recreational activities, and any other qualities that recommend them for addition to the National Wildlife Refuge System.

Land uses that are normally restricted under the terms of a conservation easement include:

- Development rights (agricultural, residential);
- Alteration of the area's natural topography;
- Uses adversely affecting the area's floral and faunal communities;
- Private hunting and fishing leases;
- Excessive public access and use; and
- Alteration of the natural water regime.

LEASES AND COOPERATIVE AGREEMENTS

Potentially, the Service can protect and manage habitat through leases and cooperative agreements. Management control on privately owned lands could be obtained by entering into long-term, renewable leases or cooperative agreements with the landowners. Short-term leases can be used to protect or manage habitat until more secure land protection can be negotiated.

DONATIONS

The Service encourages donations in fee-title or conservation easement in the approved areas. The Service is not currently aware of any formal opportunities to accept donations of parcels within the land protection boundary.

EXCHANGES

The Service has the authority to exchange land currently in Service ownership for other land that has greater habitat and/or wildlife value or exchange Service owned timber for land. Inherent in this concept is the requirement to get a dollar-for-dollar value, with occasionally an equalization payment. Exchanges are attractive, because they usually do not increase federal land holdings or require purchase funds; however, they also may be very labor-intensive and take a long time to complete.

E. SERVICE LAND ACQUISITION POLICY

Once a land protection (refuge acquisition) boundary has been approved the Service contacts neighboring landowners to determine whether any are interested in selling. If a landowner expresses an interest and gives permission to the Service, a real estate appraiser will appraise the property to determine its fair market value. Once an appraisal has been approved, the Service can present an offer for the landowner's consideration.

Appraisals conducted by the Service or contract appraisers must meet federal as well as professional appraisal standards. In all fee-title acquisition cases, the Service is required by federal law to offer 100 percent of the property's appraised fair market value, which is typically based on comparable sales of similar types of properties.

The Service bases the land protection (refuge acquisition) boundary on the biological importance of key habitats. The establishment or expansion of this boundary gives the Service the approval to negotiate with landowners who may be interested or may become interested in selling their land in the future. With this internal approval in place, the Service can react more quickly as important lands become available. The Service's long-established policy is to work with willing sellers as funds become available, and the Service continues to operate under that policy. Lands within this boundary do not become part of the refuge unless their owners willingly sell or donate them to the Service.

F. FUNDING

Funding for land acquisition will likely come from the Land and Water Conservation Fund and from partners. Funds could be provided through the Land and Water Conservation Fund (LWCF), Migratory Bird Conservation Fund (MBCF), and non-governmental partners.

The LWCF and MBCF are not derived from traditional tax revenues. The MBCF is collected from the sale of federal duck stamps, entrance fees from certain national wildlife refuges, and import duties on arms and ammunition. The LWCF is derived from the sale of offshore oil leases. Both the LWCF and MBCF are intended for land conservation and may be used to purchase the land and/or permanent conservation easements.

IV. Coordination

A. AGENCY COORDINATION

Letters were sent to inform state, federal, and local agencies, as well as tribal governments and conservation organizations, of the Service's refuge expansion proposal; no unfavorable responses were received.

Two public scoping meetings were held, one in Arkansas and one in Louisiana. The meeting sites were the Economic Development Commission in Crossett, Arkansas, and the Visitor Center in Bastrop, Louisiana. The meetings were held on July 6 and 7, 2011, respectively. There were approximately 35 citizens in attendance at the Arkansas meeting and 15 in attendance at the Louisiana meeting. Initial public reaction to the refuge expansion was generally favorable. Many comments were directed toward wanting to expand the refuges into areas not initially delineated in the planning process. The Nature Conservancy, the Jena Band of Choctaw Indians, and the Mayor of Warren, Arkansas, were all in support of the expansion.

During the two public scoping meetings, support for the expansion was expressed and several landowners indicated that they would be willing sellers. Some questions and concerns were raised by individuals regarding property taxes; where the money to purchase lands would come from; the more restrictive hunting seasons or regulations on refuges than those on private or state lands; how the Corps of Engineers manages the Ouachita River; and concern about whether the Service would buy or take land from unwilling sellers.

B. STRATEGIC HABITAT CONSERVATION AND LANDSCAPE CONSERVATION COOPERATIVES

Strategic habitat conservation (SHC) is a means of applying adaptive management across large landscapes. Landscape conservation cooperatives (LCCs) would facilitate SHC (USFWS 2008). This expansion will apply the SHC framework as outlined in the National Ecological Assessment Team report. SHC involves an ongoing cycle of biological planning, conservation design, conservation delivery, outcome-based monitoring, and assumption-based research.

The Service uses LCCs as a means of implementing SHC. LCCs will be formal science and management partnerships between the Service, U.S. Geological Survey, other federal agencies, states, tribes, non-governmental organizations, universities, and others to increase applied conservation science capacity in support of fish and wildlife management within specific landscapes. The tools developed by the LCCs will allow Service offices, and many partners, to implement on-the-ground actions in the most effective locations to meet their goals. Upper Ouachita and Felsenthal NWRs are located in the Gulf Coastal Plains and Ozarks LCC, which is in the process of being developed.

I. Purpose and Need for Action

A. INTRODUCTION

The Service will acquire, protect, and manage certain bottomland hardwood forests and upland pine forests in Union and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana, as additions to the Felsenthal and Upper Ouachita NWRs.

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" (National Wildlife Refuge System Improvement Act of 1997). National wildlife refuges provide important habitat for native plants and many species of mammals, birds, fish, insects, amphibians, and reptiles. They also play a vital role in conserving threatened and endangered species. Refuges offer a wide variety of wildlife-dependent recreational opportunities and many have visitor centers, wildlife trails, and environmental education programs. Nationwide, about 25 million visitors annually hunt, fish, observe and photograph wildlife, or participate in educational and interpretive activities on refuges.

The action to expand the boundaries of Felsenthal and Upper Ouachita NWRs, as described in this Final Environmental Assessment (Final EA) and detailed in the Final LPP, will support the mission of the National Wildlife Refuge System. The scope of this Final EA is limited to the acquisition of lands for the expansion of Felsenthal and Upper Ouachita NWRs. The lands for acquisition in Arkansas will be administered by Felsenthal NWR; those for acquisition in Louisiana will be administered by Upper Ouachita NWR. This Final EA is not intended to cover the development and/or implementation of detailed, specific programs for the administration and management of those lands. Both Upper Ouachita NWR and Felsenthal NWR have approved comprehensive conservation plans (USFWS 2008 and USFWS 2010, respectively) that will dictate the management of the lands.

Public uses on the project areas will include those approved under the two refuges' existing compatibility determinations. Felsenthal NWR has approved compatibility determinations for hunting; fishing; wildlife observation; wildlife photography; environmental education and interpretation; bicycling; boating; swimming; beach use; hiking/backpacking; horseback riding; furbearer trapping; forest management; firewood cutting; dog field trials; commercial fishing; camping; berry picking; all-terrain vehicle use; and power boating. Upper Ouachita NWR has approved compatibility determinations for hunting; fishing; wildlife observation; wildlife photography; environmental education; interpretation; bicycling; hiking; walking; jogging; boating; all-terrain vehicles; field trials; plant gathering; timber harvest; and firewood cutting. As the lands or interests in lands are acquired, the Service will modify both of the refuges' current step-down management plans to incorporate the new lands and resources. At that time, these modified refuge management plans will be reviewed in accordance with the Departmental requirements of the National Environmental Policy Act.

B. PURPOSE AND NEED

This Final EA presents a plan for the protection of additional fish and wildlife habitats in Union and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana, through the expansion of the Felsenthal and Upper Ouachita NWRs. This project will expand the acquisition boundaries of both refuges by up to 49,103 acres.

Acquisition boundaries are administrative lines delineating areas in which the Service may consider negotiations with willing landowners for acquisition of an interest in land. Lands within a refuge acquisition boundary do not become part of the refuge unless and until a legal interest is acquired through a management agreement, easement, lease, donation, or purchase. Lands within an acquisition boundary are not subject to any refuge regulations or jurisdiction unless and until an interest is acquired. Land interests are acquired from willing sellers only. Any landowner that has land within an approved acquisition boundary, even though the surrounding parcels may have been purchased by the Service, retains all the rights, privileges, and responsibilities of private land ownership. This includes, but is not limited to, the right to access, hunting, vehicle use, and control of trespass; the right to sell the property to any other party; and the responsibility to pay local real estate or property taxes.

The purpose of the expansion will be to contribute to the mission and goals of the National Wildlife Refuge System through the following actions:

- Conducting landscape-scale SHC necessary to conserve the important resources found in the Ouachita River watershed through partnerships.
- Protecting and enhancing habitats for federal trust species and species of management concern, with special emphasis on species listed under the Endangered Species Act, along with the protection of state listed species.
- Protecting and enhancing habitat corridors and implementing other wildlife adaptation strategies to help buffer the impacts of global climate change.
- Providing opportunities for hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation.
- Protecting historic properties; facilitating archaeological and historical investigations regarding human occupation, land use, and paleoecology; and interpreting the region's history and culture.

Within approved acquisition boundaries, the Service is able to enter into negotiations for the protection of environmentally sensitive lands. The most urgent needs for acquiring an interest in these lands are as follows:

- To protect contiguous bottomland hardwood forests adjacent to the Ouachita River.
- To protect lands between both national wildlife refuges to increase core habitat for neotropical migratory songbirds, wintering waterfowl, and black bears.
- To protect existing and potential habitat for the federally listed (endangered) RCW.
- To protect existing and potential habitat for the federally listed (threatened) Louisiana black bear.

C. BACKGROUND

Felsenthal NWR was authorized by Congress as mitigation for the Ouachita-Black Rivers Navigation Project. Its establishment occurred with the fee-title transfer of 65,000 acres from the Corps of Engineers (by direct authority granted in the navigation project legislation) to the Service in 1975 (Figure 9).

Upper Ouachita NWR was established in 1978, when 20,834 acres were purchased under the authority of the Migratory Bird Conservation Act of 1929, as amended, and the Wetlands Extension Act of 1976. In 1997 and 1998, an additional 16,191 acres were purchased east of the Ouachita River, known as the Mollicy Unit, under the Migratory Bird Conservation Act of 1929. Between 1997 and 2004, the Service acquired about 4,939 acres of upland pine forests from the Nature Conservancy of Louisiana. In 2011, the Service purchased approximately 4,000 acres of bottomland hardwood forests from The Conservation Fund. Currently, the fee-title lands for Upper Ouachita NWR cover 46,834 acres (Figure 9). The refuge's current acquisition boundary encompasses 62,989 acres and includes the area to the north of the Mollicy Unit, all inholdings, and areas west and south of the refuge on the west side of the Ouachita River.

D. PREFERRED ALTERNATIVE

The expansion of Felsenthal NWR will occur to the south, west, northeast, and northwest of the refuge in Union and Ashley Counties, Arkansas (Figure 10). These lands include 20,630 acres of bottomland hardwood forests and 11,118 acres of upland pine forests. The bottomland hardwood forests provide habitat for black bears, wintering waterfowl, wading birds, bald eagles, and neotropical migratory songbirds. The upland pine forests currently provide habitat for 21 family groups of RCWs.

The expansion of Upper Ouachita NWR will occur to the east of the refuge in Morehouse Parish, Louisiana (Figure 10). This expansion will include 3,196 acres of bottomland hardwood forests and 14,159 acres of upland pine forests. The bottomland hardwood forests provide habitat for the threatened Louisiana black bear, wintering waterfowl, wading birds, bald eagles, and neotropical migratory songbirds. The upland pine forests currently provide habitat for 29 family groups of RCWs, the highest density population in north Louisiana.

The Service will acquire, protect, and manage these lands through fee-title purchases, leases, conservation easements, and/or cooperative agreements from willing sellers. All lands and waters acquired in Arkansas will be managed by the Service as part of Felsenthal NWR, and all lands and waters acquired in Louisiana will be managed by the Service as part of Upper Ouachita NWR. The objectives of the expansion will be to:

- Protect contiguous bottomland hardwood forests adjacent to the Ouachita River;
- Protect lands between both national wildlife refuges to increase core habitat for neotropical migratory songbirds, wintering waterfowl, and black bears;
- Protect existing and potential habitat for RCWs; and
- Protect existing and potential habitat for the threatened Louisiana black bear.

Figure 9. Location of Felsenthal and Upper Ouachita NWRs

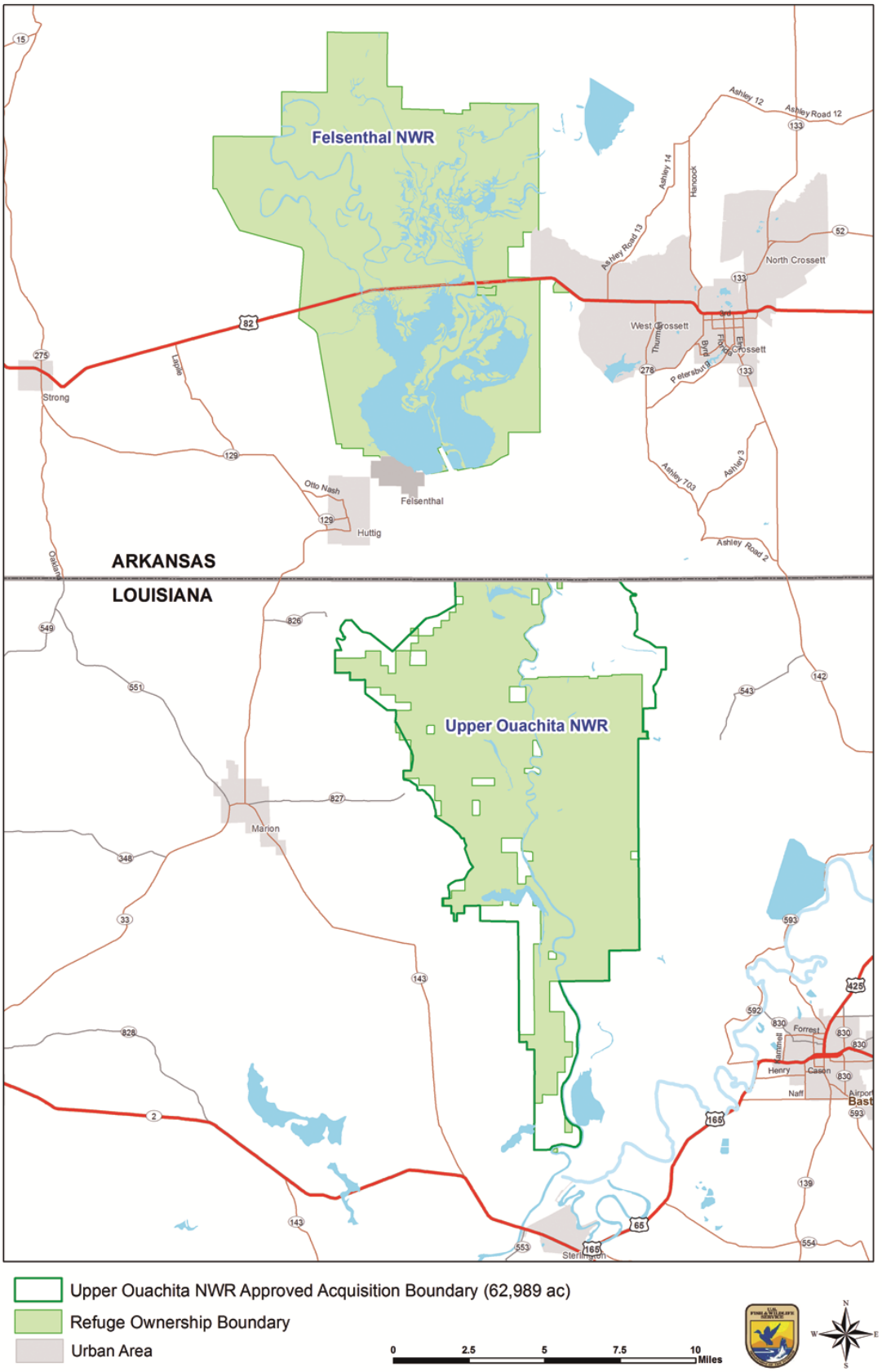
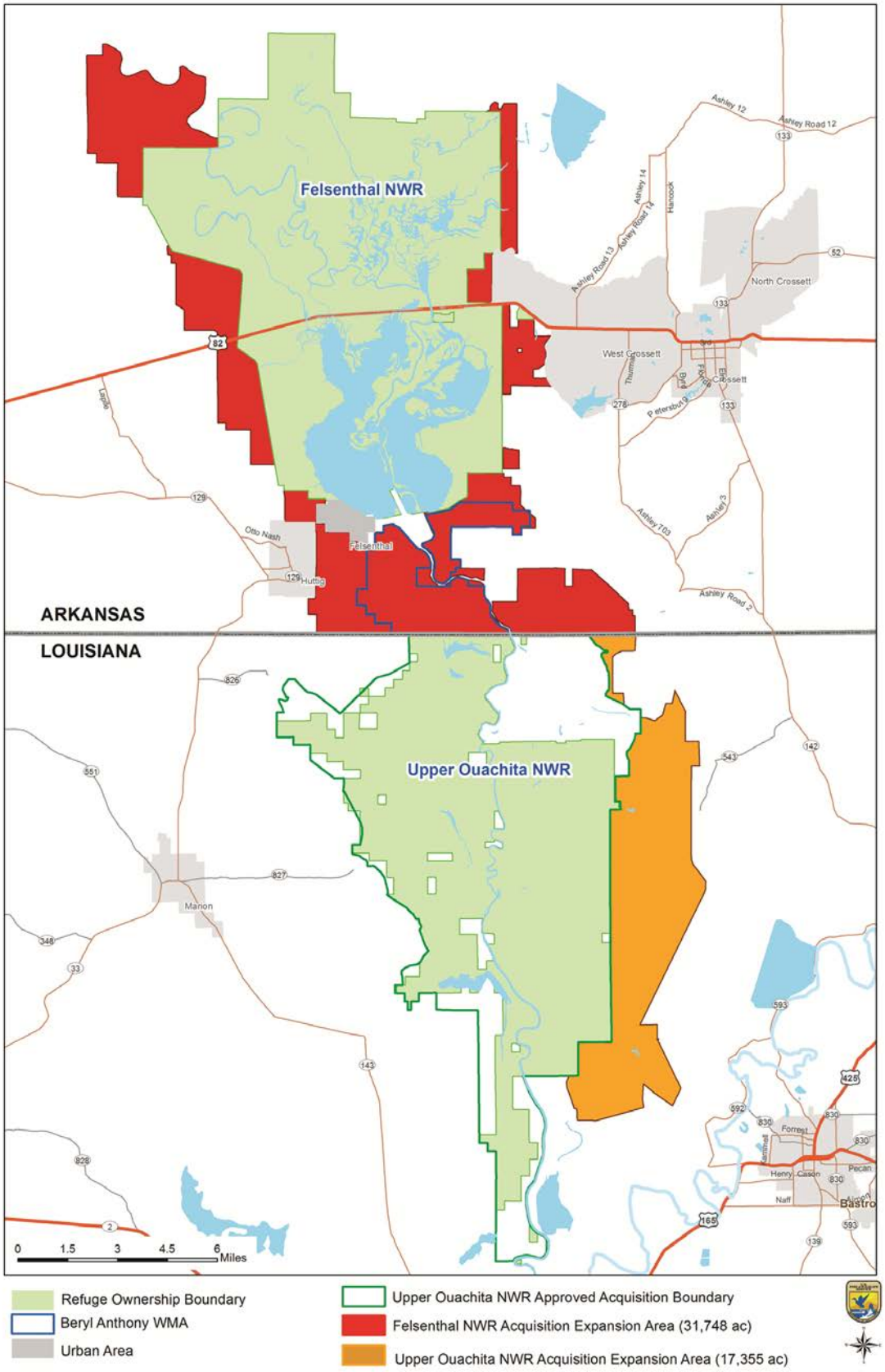


Figure 10. Expansion lands, Felsenthal and Upper Ouachita NWRs



It is anticipated that funding for this project will be provided through the Migratory Bird Conservation Fund or the Land and Water Conservation Fund. The authority for the use of these funds for land acquisition is the Emergency Wetlands Resources Act of 1986 and the Migratory Bird Conservation Act of 1929.

E. COORDINATION AND CONSULTATION

The Service has consulted and coordinated the development of this project with landowners within the expansion area, congressional representatives, Arkansas Governor's office, Arkansas Game and Fish Commission, Arkansas Natural Heritage Commission, Arkansas Natural Resources Commission, Louisiana Governor's Office, Louisiana Department of Wildlife and Fisheries, Louisiana Natural Heritage Commission, Natural Resources Conservation Service, Fish and Wildlife Service, National Park Service, Farm Services Agency, Army Corps of Engineers, The Nature Conservancy, The Conservation Fund, National Wildlife Refuge Association, Ducks Unlimited, Audubon Arkansas, Arkansas Wildlife Federation, Louisiana Wildlife Federation, County Judges in Union, Bradley, and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana, Chitimacha Tribe of Louisiana, Tunica-Biloxi Indian Tribe of Louisiana, Coushatta Tribe of Louisiana, Jena Band of Choctaw Indians, Mississippi Band of Choctaw Indians, area farmers and landowners, interested citizens, local businesses, conservation organizations, and statewide media.

Letters were sent to inform state, federal, tribal, and local agencies and conservation organizations of the Service's acquisition boundary expansion proposal. No negative responses were received from these entities during the scoping phase of this project.

The Service held two public scoping meetings, one at the Economic Development Commission in Crossett, Arkansas, on July 6, 2011, and the other at the Visitor Center in Bastrop, Louisiana, on July 7, 2011. There were approximately 35 citizens in attendance at the Arkansas meeting and 15 in attendance at the Louisiana meeting.

The Service received a total of 26 comments on the proposed expansion from the public scoping meetings. Initial public reaction to the proposed expansion of both refuges was generally favorable. Many comments were directed toward wanting to expand the refuges to areas not initially delineated in the planning process. Some questions and concerns were also raised by individuals regarding property taxes; where the money to purchase the lands would come from; the more restrictive hunting seasons or regulations on refuges than those on private or state lands; buying up land where individuals have hunting leases; how the Corps of Engineers manages the Ouachita River; whether the acquisition of lands would affect the operation and maintenance of the Ouachita River Navigation Project in Arkansas and Louisiana; whether the Service is coordinating with the Corps of Engineers; whether the appraisal of lands would devalue the property due to RCW management; and concern that the Service would buy or take land from unwilling sellers.

II. Affected Environment

This chapter describes the environment that would be affected by the implementation of any of the alternatives. It is organized under the following impact topics, which include physical resources, habitat and land use, fish and wildlife resources, related resources, climate change, socioeconomic and sociocultural conditions, and cultural resources.

A. PHYSICAL RESOURCES

The affected environment includes 25,277 acres of upland pine and mixed pine-hardwoods and 23,826 acres of bottomland hardwood forests. These acreages are located in southern Arkansas and northern Louisiana adjacent to Upper Ouachita and Felsenthal NWRs, which lie within the Gulf Coastal Plains and Ozarks (GCPO) Landscape Conservation Cooperative (LCC).

CLIMATE

The climate of the project area is typical of northern Louisiana and southern Arkansas in that it is largely determined by the large land mass to the north, the subtropical latitude, and the Gulf of Mexico to the south. Prevalent winds are from the south or southeast. Summer weather is predictable, with regular thundershowers that develop rapidly. Occasionally, periods of hot, dry weather may interrupt the normally moist summer conditions. During late summer and fall, hurricanes and tropical storms may move across coastal Louisiana. Such occurrences may produce unusually heavy rainfall in the project area, and, at times, bring damaging winds. Fall, winter, and spring weather is more variable, with cold polar continental air alternately replacing the warmer humid subtropical air. Large cyclonic winter storms usually track north of the project area. Occasionally, when these storms track farther south, ice storms, heavy rains, sleet, or even snow may result.

Temperatures normally range between 20°F to 70°F during the winter and 70°F to 95°F during the summer. The average annual growing season is 237 days. Mean annual precipitation is 49.6 inches. Thirty percent of the total occurs in the wettest months of February through April, and 15.7 percent in the driest months of August through October. Snowfall and ice storms are uncommon occurrences.

TOPOGRAPHY AND HYDROLOGY

The majority of the lands are within the Lower Ouachita-Bayou de L'Outre watershed. The central physical feature of the area is the Ouachita River and includes an extensive system of bayous, sloughs, and lakes separated by woodlands and cleared bottomlands.

The Ouachita River originates in the Ouachita Mountains of west-central Arkansas, near the Oklahoma border. It flows south through northeastern Louisiana, drains into the Little River at Jonesville, Louisiana, and joins the Tensas River to form the Black River, which empties into the Red River. The drainage basin in Arkansas is mostly forested, resulting in extremely high-quality water when it flows through Louisiana, even during flood periods. A series of three major reservoirs are located on the Ouachita River in Arkansas. The Corps of Engineers operates a lock and dam at Felsenthal, Arkansas, approximately two river miles north of the state line. The combined effects of the dams on the river exert considerable influence on river stages. In northern Louisiana, the Ouachita River is a slow-moving, muddy river that averages 300 feet wide when at pool stage. The normal low-water (pool stage) elevation of the Ouachita River in northern Louisiana during the dry summer months is 52.4 feet above mean sea level (MSL), a level maintained by a navigational lock

and dam at the town of Columbia, approximately 98 river miles downstream from Upper Ouachita NWR. At Felsenthal NWR in southern Arkansas, the normal low-water (pool stage) elevation of the Ouachita River during the dry summer months is 65.0 feet above MSL, again a level maintained by the system of locks and dams on the river. The lock and dam controlling the pool stages at Felsenthal NWR is in the town of Felsenthal, which lies on the south boundary of the refuge. Bottomland hardwood forests within the project lands can flood when the Ouachita River rises. The duration of flooding during the growing season varies from one to five months. Flooding may begin as early as November, but in some years it may not occur until January or February. Floodwaters may persist until July, but usually recede in June. Thus, the flood season basically occurs January through June. The highest elevation on the project lands is approximately 120 feet above MSL.

A small percentage of the expansion area to the northeast of Felsenthal NWR is in the Lower Saline watershed. The Saline River is about 204 stream miles long and is a tributary to the Ouachita River. It is the last free-flowing river in the Ouachita drainage basin. It originates in the Ouachita Mountains in central Arkansas and flows southward until it joins the Ouachita River at Felsenthal NWR, forming a delta-type bayou. The Saline River basin covers approximately 3,350 square miles of drainage area.

B. HABITAT AND LAND USE

The 25,277 acres of upland pine and mixed pine-hardwoods include young pine plantations, mid-successional pine stands, and some mature pine-hardwood stands (Figure 11). This acreage is primarily owned by private timber companies that are managing the stands for pine timber production. Most of the pine is loblolly, with a few shortleaf pines present. Hardwood species present include white oak, Southern red oak, water oak, sweetgum, blackgum, hickory, and post oak. Understory species include little bluestem, *Vaccinium*, American beautyberry, sassafras, *Smilax*, *Vitis*, and deciduous holly. Midstory species include pine, oaks, red maple, hickory, dogwood, and cherry.

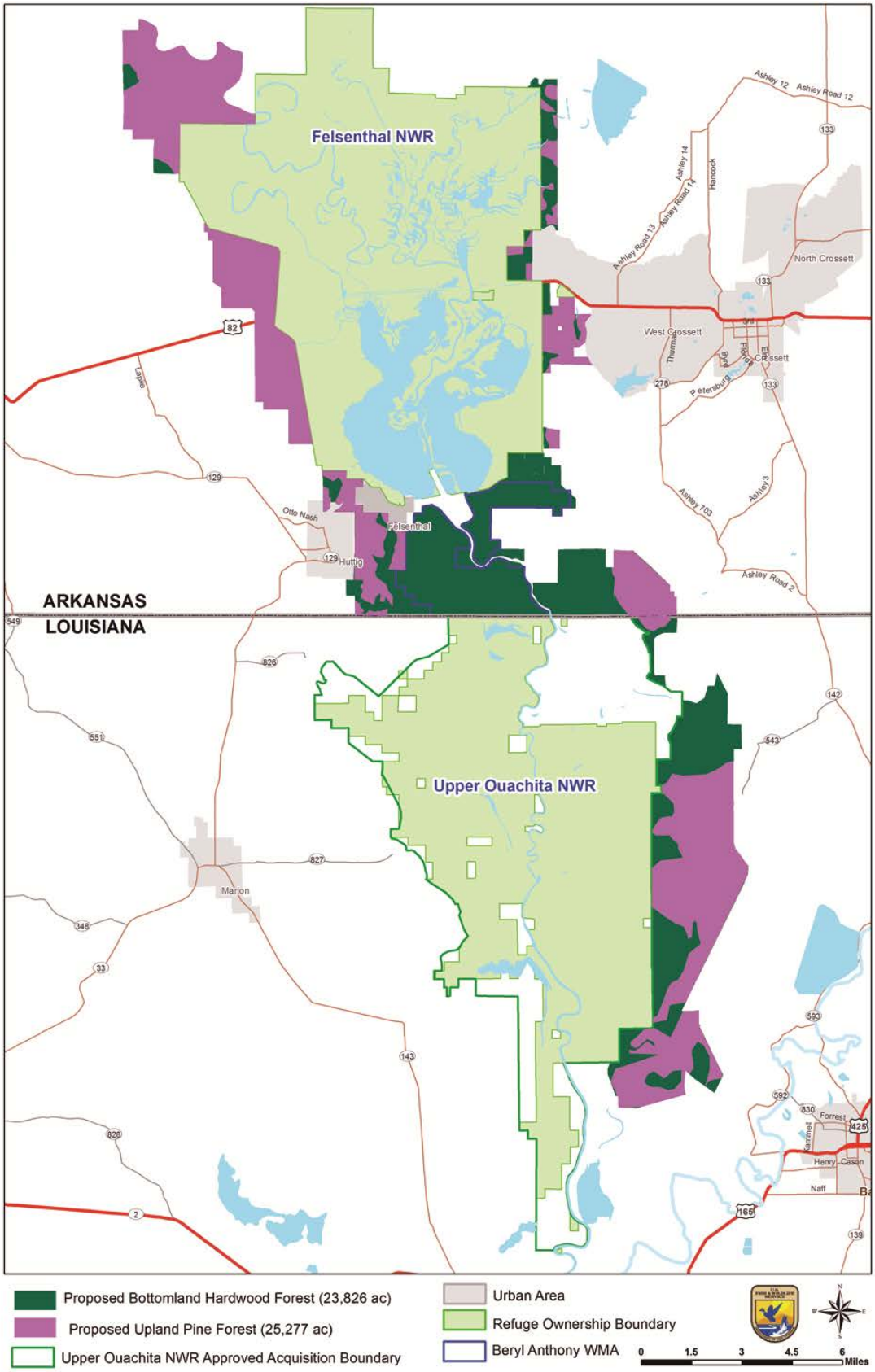
The 23,826 acres of bottomland hardwood forests (Figure 11) are owned by the Arkansas Game and Fish Commission, which manages the lands for wildlife; by timber companies that manage the lands for production; and by private individuals that manage the lands for hunting game. The bottomland forests consist of baldcypress, overcup oak, bitter pecan, locust, willow oak, Nuttall's oak, sweetgum, hackberry, and cedar elm. Understory and midstory species include swamp privet, deciduous holly, buttonbush, and water elm.

C. WILDLIFE RESOURCES

The upland pine forests provide habitat for the RCW. Other species of concern that utilize this habitat type include the brown-headed nuthatch, northern bobwhite, Henslow's sparrow, Bachman's sparrow, and red-headed woodpecker. Other wildlife present in the upland pine habitat include wild turkey, white-tailed deer, three-toed box turtle, fox squirrel, and hog-nosed snake.

The bottomland hardwood forests provide habitat for wintering waterfowl, other migratory birds, and the threatened Louisiana black bear. Other species of concern include the Kentucky warbler, wood stork, bald eagle, Swainson's warbler, prothonotary warbler, hooded warbler, and alligator snapping turtle. Other wildlife present in the bottomland hardwood habitat include wild turkey, white-tailed deer, squirrels, Acadian flycatchers, wood ducks, wintering waterfowl, wading birds, and shorebirds.

Figure 11. Habitat types of expansion lands



D. FISHERY RESOURCES

The areas' fishery resources include those species that inhabit large river floodplains, such as the alligator gar, paddlefish, catfish, and American eel. The project areas also have numerous small creeks and bayous that are largely surrounded by forests. These areas harbor many species of minnows, shiners, sunfish, and bass. Freshwater mussels are also present in the Ouachita River and its tributaries. When the Ouachita River floods its banks in the spring, large areas of highly important fishery spawning grounds and nursery habitats become available within the flooded forests. Concurrently, primary producers thrive on the structure provided by the flooded timber, which forms the basis of the aquatic food chain.

E. RELATED RESOURCES

The Beryl Anthony Lower Ouachita Wildlife Management Area, administered by the Arkansas Game and Fish Commission, is within the expansion boundary. On the western side of Felsenthal NWR, The Nature Conservancy owns 3,572 acres. The locations of both of these areas are shown in Figure 4.

F. CLIMATE CHANGE

The effects of global climate change will gradually increase in north Louisiana and south Arkansas over the next 100 years. According to the report entitled, Global Climate Change Impacts in the United States (Karl et al. 2009), it is expected there will be higher temperatures and less rainfall, particularly in the winter and spring, increased storm intensity and frequency, and more drought throughout the southeast. It is anticipated that temperatures may increase by at least 4.5^{o}F by 2080 and fire severity will increase 10 to 30 percent within the next 50 years. Climate change impacts of higher temperatures may likely cause the spread of invasive species and small changes to native plant and animal distributions. Migratory birds may breed and winter farther north. More southern, tropical species, such as black-bellied whistling ducks and wood storks, may extend their ranges into Louisiana. Invasive species such as *Salvinia*, water hyacinth, and tallowtree may become more established and extend their ranges farther north. As sea levels rise, the coastal marshes of south Louisiana may be drastically reduced. Consequently, refuge lands north of the coast, such as those in north Louisiana and south Arkansas will need to provide habitat for displaced migratory birds, such as wintering waterfowl.

G. SOCIOECONOMIC AND SOCIOCULTURAL CONDITIONS

The rural setting and sparse population of the project area are characteristic of much of north Louisiana and south Arkansas. The population estimates, percentage of population change, percentage of individuals below the poverty level, and per capita annual incomes are listed in Table 3 (U.S. Census Bureau 2010). Forest products, natural gas production, agriculture, and light industry provide the main economic bases in this area.

Table 3. Population estimates, percent population change, percentage of individuals below poverty level, and per capita annual incomes in Morehouse Parish, Louisiana, and Ashley, Bradley, and Union Counties, Arkansas

Parish/County	Population	% Change in Population	% of people below poverty	Median Household Income ($)
Morehouse (LA)	27,979	-9.8	25.9	28,908
Ashley (AR)	21,853	-9.7	21.7	35,773
Bradley (AR)	11,508	-8.7	27.6	29,221
Union (AR)	41,639	-8.7	23.3	35,005

Source: U.S. Census Bureau 2010.

H. CULTURAL RESOURCES

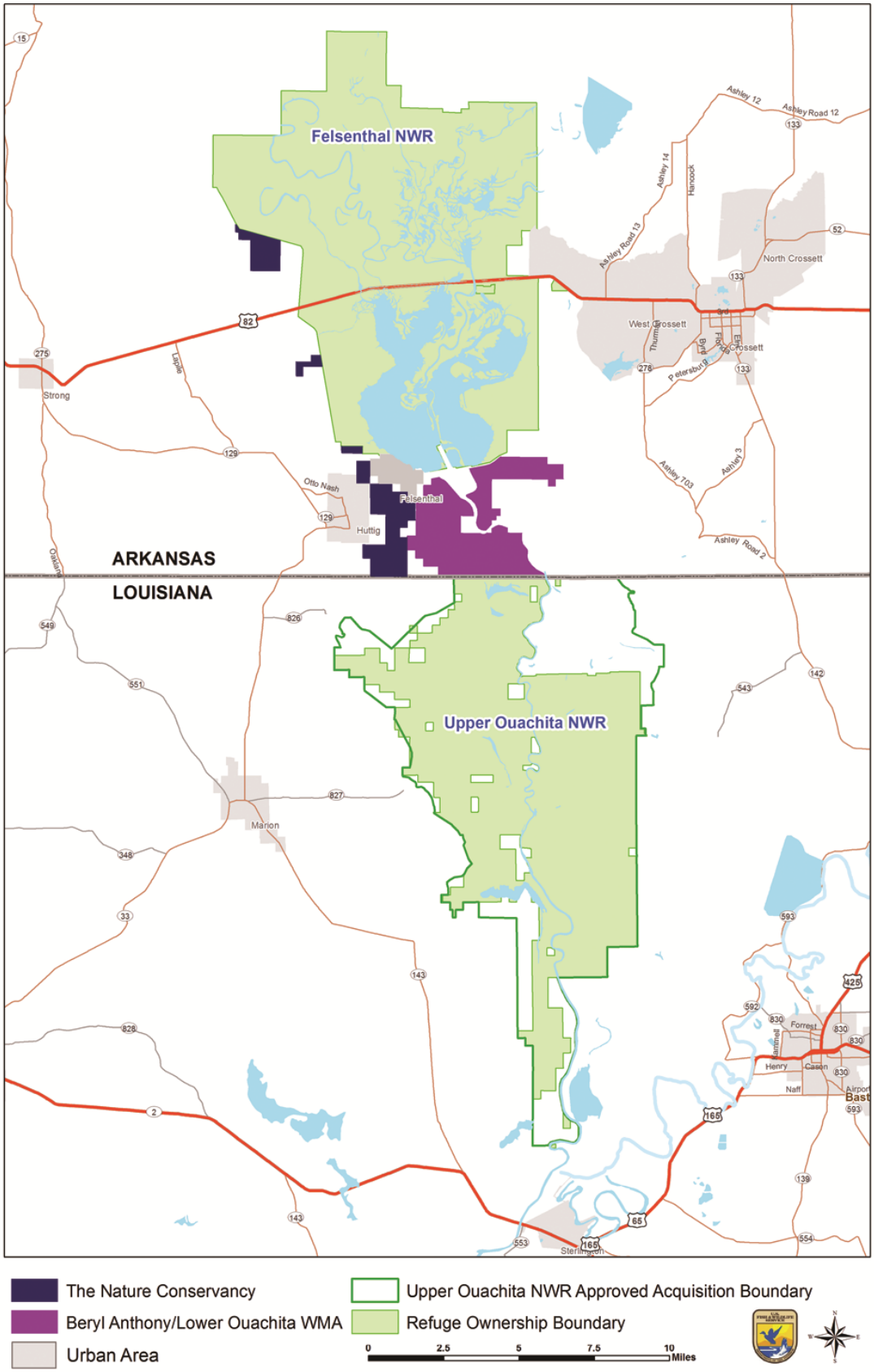
The National Register of Historic Places (NRHP), established by Congress in 1966, is the nation's official list of significant historic properties. The NRHP recognizes five basic types of historic properties: historic buildings, such as plantation houses; courthouses or log cabins; historic structures, such as old bridges, lighthouses or forts; historic districts, such as old residential or commercial neighborhoods; historic sites, such as battlefields or Indian mounds; and historic objects, such as old steamboats or fire engines. It is important to note that not every historic site or old building or neighborhood is eligible for the NRHP. Properties must have some type of significance: properties that are closely associated with an important person, event, or development; buildings that are architecturally significant because they are important examples of a particular style or type, or a method of construction; and, properties that are archaeologically significant because the remains yield information about the nation's history or prehistory. Generally, properties are not placed on the NRHP if they are less than 50 years old, if the period of their historical significance is less than 50 years old, or if they have been significantly altered.

Each state has a historic preservation office which is responsible for nominating buildings, sites, districts, etc., to the NRHP. In Louisiana, this program is administered by the Division of Historic Preservation, which is part of the Office of Cultural Development, Department of Culture, Recreation and Tourism. In Arkansas, this program is administered by the Arkansas Historic Preservation Program. None of the expansion areas are known to contain any sites that may be eligible for inclusion on the NRHP at this time, and they will not be designated as scientific sites. Official designation as scientific sites, as part of the planning process, also carries the risk of alerting illegal artifact collectors to the location of these sites. The Archaeological Resources Protection Act of 1979 specifically prohibits making available to the general public the location of any archaeological site, if such notification may create a risk of harm to the site.

Section 106 of the National Historic Preservation Act of 1966, as amended, and Section 14 of the Archaeological Resources Protection Act require the Service to evaluate the effects of any of its actions on cultural resources (e.g., historical, architectural, and archaeological) that are listed or eligible for listing in the NRHP. In accordance with these regulations, the Service coordinated the review of this project with the Arkansas and Louisiana State Historic Preservation Offices.

The Service believes that the acquisition of these lands will have no adverse effect on any known or yet-to-be-identified NRHP-eligible cultural resources. However, in the future, if the Service plans or permits any actions that might affect eligible cultural resources, it will carry out appropriate site identifications, evaluations, and protection measures as specified in the regulations and in Service directives and manuals.

Figure 12. Other conservation lands located within and near the expansion areas



III. Alternatives Including the Preferred Alternative

In determining how to achieve the fish and wildlife habitat protection goals for the project lands and waters identified in this document, the Service considered and evaluated three alternatives. These are:

A. ALTERNATIVE 1: NO ACTION

This is the "status quo" alternative. Under this alternative, the Service will not acquire any of the lands for the expansion of the refuges. The project lands will remain in private ownership and current land uses will continue. Protection of the fish and wildlife habitats and natural resource values of these lands will be contingent upon the enforcement of existing federal, state, and local environmental regulations (the Clean Water Act, state water quality and pollution laws, etc.), and the discretion of the private landowners.

B. ALTERNATIVE 2: PROTECTION AND MANAGEMENT OF UP TO 49,103 ACRES BY THE FISH AND WILDLIFE SERVICE (PREFERRED ALTERNATIVE)

Under this alternative, the Service will acquire up to 49,103 acres of bottomland hardwood and upland pine habitat for their protection and management as part of the Felsenthal and Upper Ouachita NWRs (Figure 13). These areas will be included in the approved acquisition boundaries for both refuges--31,748 acres for Felsenthal NWR and 17,355 acres for Upper Ouachita NWR. This alternative provides the maximum potential to manage for RCWs, Louisiana black bears, wintering waterfowl, and neotropical migratory songbirds.

The acquisition methods that could be used by the Service under this alternative are described as follows:

1. LEASES AND COOPERATIVE AGREEMENTS

Potentially, the Service can protect and manage habitat through leases and cooperative agreements. Management control on privately owned lands could be obtained by entering into long-term renewable leases or cooperative agreements with the landowners. Short-term leases can be used to protect or manage habitat until more secure land protection can be negotiated.

2. CONSERVATION EASEMENTS

Conservation easements give the Service the opportunity to manage lands for their fish and wildlife habitat values. Such management precludes all other uses that are incompatible with the Service's management objectives. Only land uses that will have minimal or no conflicts with the management objectives are retained by the landowner. In effect, the landowner agrees to transfer certain development rights to the Service for management purposes as specified in the easement.

Easements will likely be useful when: (1) Most, but not all, of a private landowner's uses are compatible with the Service's management objectives, and (2) the current owner desires to retain ownership of the land and continues compatible uses under the terms set by the Service in the easement.

Land uses that are normally restricted under the terms of a conservation easement include:

- Development rights (agricultural, residential, etc.);
- Alteration of the area's natural topography;
- Uses adversely affecting the area's floral and faunal communities;
- Private hunting and fishing leases;
- Excessive public access and use; and
- Alteration of the natural water regime.

3. FEE-TITLE ACQUISITION

A fee-title interest is normally acquired when: (1) The area's fish and wildlife resources require permanent protection not otherwise assured, (2) land is needed for visitor use development, (3) a pending land use could adversely impact the area's resources, or (4) it is the most practical and economical way to assemble small tracts into a manageable unit.

Fee-title acquisition conveys all ownership rights to the Federal Government and provides the best assurance of permanent resource protection. A fee-title interest may be acquired by donation, exchange, transfer, or purchase.

C. ALTERNATIVE 3: PROTECTION AND MANAGEMENT OF UP TO 47,070 ACRES BY THE FISH AND WILDLIFE SERVICE

Under this alternative, the Service will acquire up to 47,070 acres of bottomland hardwood and upland pine habitats for protection and management as part of Felsenthal and Upper Ouachita NWRs (Figure 14). The Service will acquire sufficient interest in the identified lands to prevent conflicting land uses and to manage the areas for their wildlife values.

The same acquisition methods as described in Alternative 2 will apply to this alternative.

Figure 13. Lands included in the project under Alternative 2

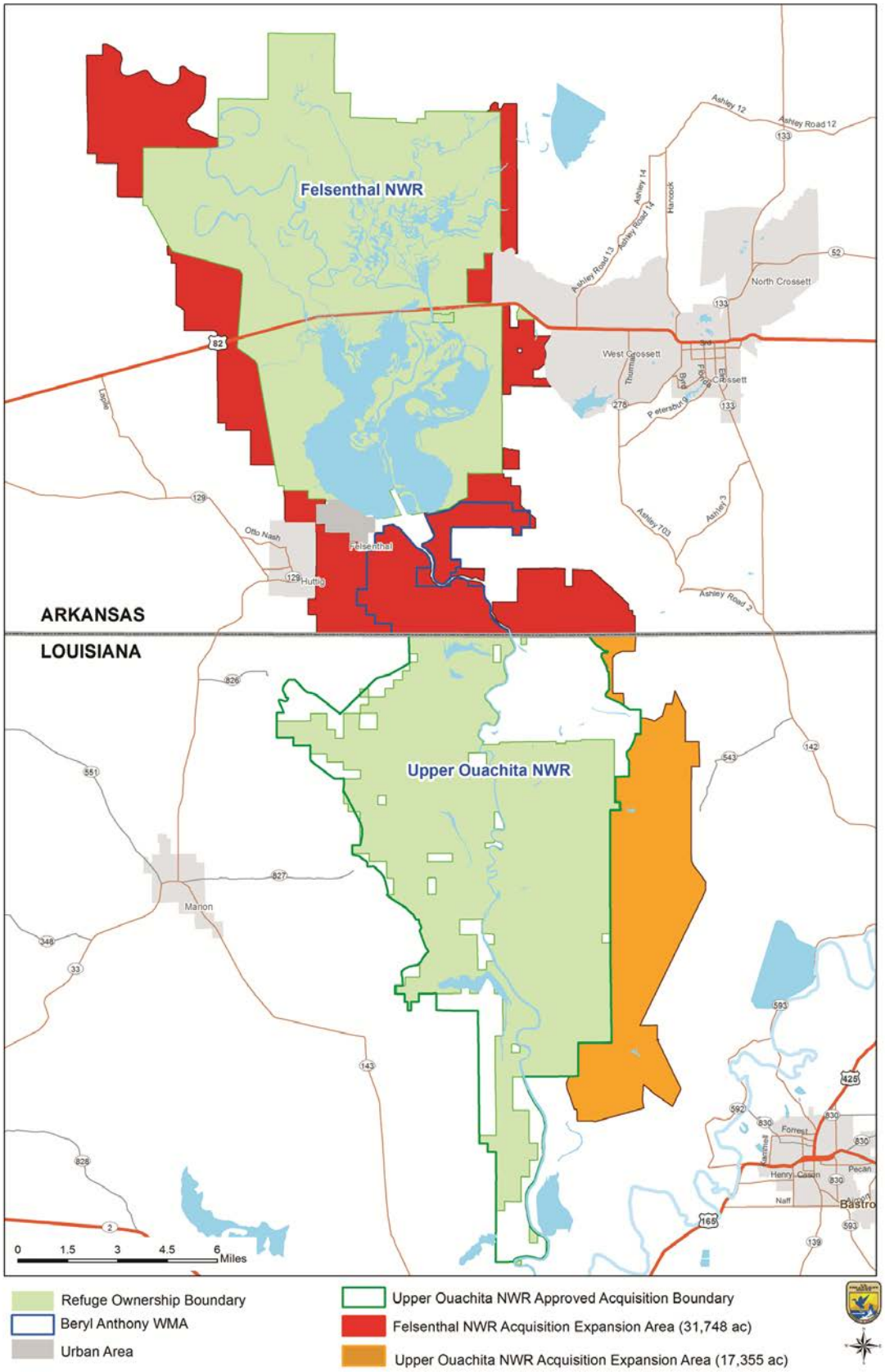
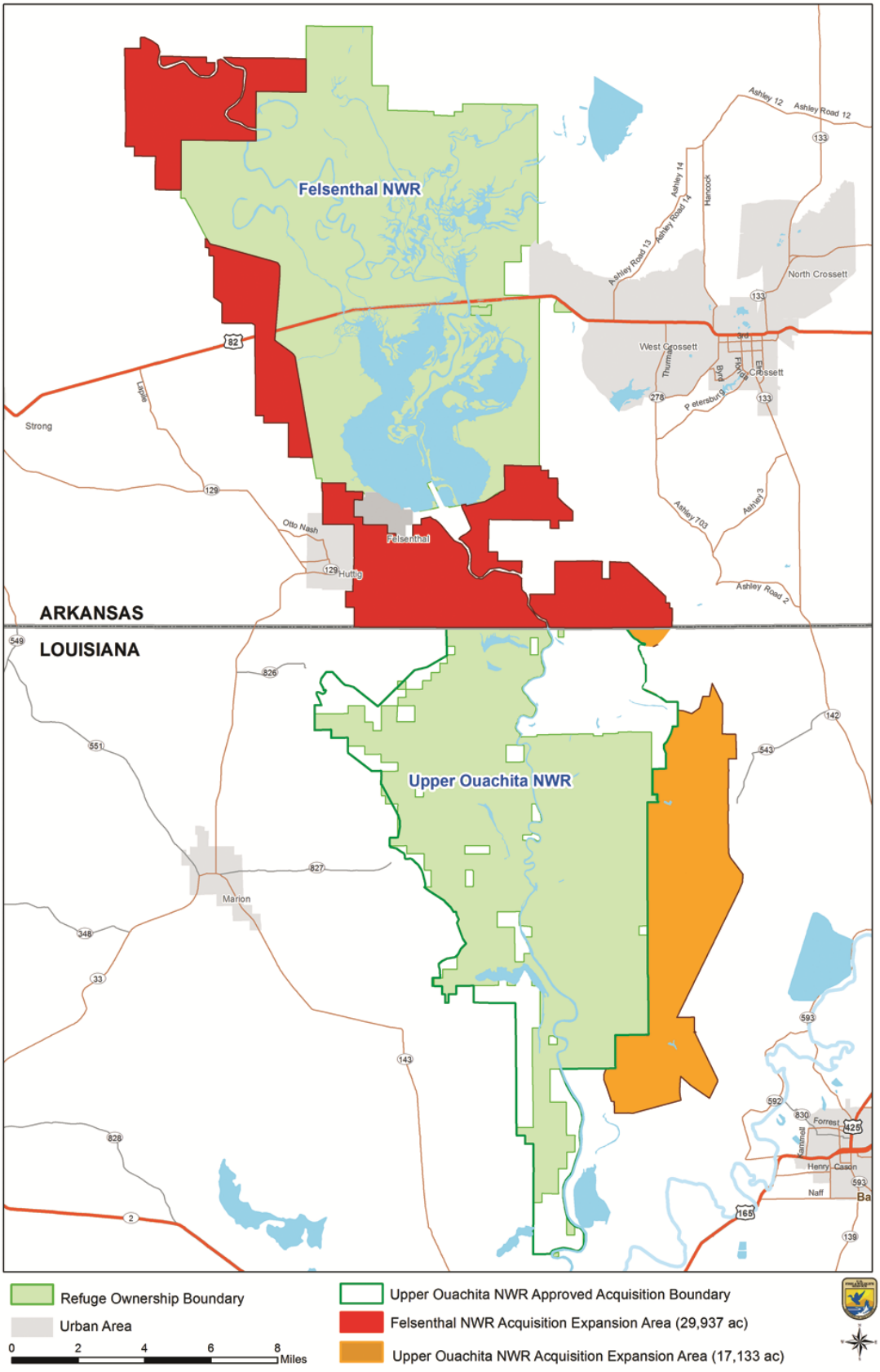


Figure 14. Lands included in the project under Alternative 3



IV. Environmental Consequences

This chapter analyzes and discusses the potential environmental impacts of the three management alternatives described in Chapter III.

A. ALTERNATIVE 1: NO ACTION

Under this alternative, the Service will take no action to acquire, protect, and manage any lands for the expansion of either the Felsenthal or Upper Ouachita NWR.

Future habitat protection under existing laws and regulations may be insufficient to prevent significant degradation of the areas' fish and wildlife resource values. Federal executive orders involving the protection of wetlands and floodplains only apply to federal agencies. They do not apply to habitat alterations by non-federal entities, which receive no federal funds.

The primary deterrent against the loss of resource values is the Corps of Engineers' Section 404 permit program, which is administered under the authority of the Clean Water Act. This program requires permits for most types of work in wetlands. Most of the wetlands in the project areas qualify for protection under this program. In addition, the States of Arkansas and Louisiana have regulatory authority over the area and will not permit any developments that will violate either state's water quality standards.

However, there is no assurance that the protection offered by these regulations will be consistent with protection of the areas' fish and wildlife resources. The regulatory programs are designed to accomplish different objectives. In addition, these programs are subject to changes in the law and to varying definitions and interpretations, often to the detriment of wetlands. The Corps of Engineers' regulatory authority provides for the issuance of Section 10 and/or Section 404 permits when it is not contrary to the public interest to do so and provided other conditions are met. Fish and wildlife conservation is only one of several public interest factors considered in permit issuance decisions. If fish and wildlife conservation is outweighed by other factors, permits that will alter the wetlands in the project areas could be issued.

The desired fish and wildlife protection objectives, therefore, cannot be achieved to any degree under this alternative. Specifically, implementation of the "No Action" alternative will adversely impact the areas' valuable fish, waterfowl, and wildlife habitats.

The potential adverse impacts of Alternative 1 include increased development and urbanization on the project areas. Forest fragmentation, road-associated impacts, degradation, habitat fragmentation and loss of habitat, incompatible public uses, exotic species introduction, hydrologic modifications, and introduced predators are some of the potential human impacts to the project areas. One of the primary threats to wildlife is destruction of habitat due to residential and commercial development.

Another potential threat to the project areas is incompatible forestry practices, such as clear-cutting; application of herbicides that decrease plant diversity; development of original forest stands to monocultural stands for even-aged timber management; and bedding of land to convert forests to offsite species. The practice of clear-cutting large acreages causes forest fragmentation, habitat loss, erosion, and decreased water quality. The application of herbicides to kill hardwood or broadleaf plants is a common private industry practice that decreases plant diversity and, in some cases, converts the habitat to a different type. The promotion of the profitable pine plantation has led to monocultural stands

devoid of plant diversity, leading to a loss of wildlife diversity. Another common practice on private timber lands is to bed the soil, forever altering the hydrology, to plant offsite species. Locally, this practice is often used to convert a bottomland hardwood forest into a loblolly pine plantation.

A potential threat to the project areas is a decline in the fishery resources as a result of incompatible land management practices. Disturbance to the soil from clear-cutting and development leads to sedimentation in nearby creeks and bayous. This, then, causes a decline in water quality. Water temperatures also increase when forests are cleared, causing less oxygen to be present in the water.

Another potential threat to the project areas, if the "No Action" alternative is implemented, will be a decline in the population of RCWs. Federal regulations do not require private landowners to conduct management practices that are favorable to the endangered RCW, such as prescribed burning, hardwood control, or artificial cavity installation (USFWS 2003). When these management tools are not utilized, RCW populations often decline.

Under Alternative 1, the two refuges will still allow the current wildlife-dependent recreational uses of hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. However, the project areas will not be acquired for protection and management by the refuges, and therefore, will not be opened to the public for wildlife-dependent recreational uses. Most of the project areas are leased by owners for hunting and fishing purposes. The members of each hunt club must pay an annual fee and membership is restricted.

B. ALTERNATIVE 2: PROTECTION AND MANAGEMENT OF UP TO 49,103 ACRES BY THE FISH AND WILDLIFE SERVICE (PREFERRED ALTERNATIVE)

Under this alternative, the Service will acquire up to 49,103 acres of habitat for protection and management as part of the Felsenthal and Upper Ouachita NWRs. The land protection priorities and methods of acquisition are summarized in Chapter III of the Final LPP.

The purpose of the project will be to:

- Protect contiguous bottomland hardwood forest adjacent to the Ouachita River;
- Protect lands between both national wildlife refuges to increase core habitat for neotropical migratory songbirds, wintering waterfowl, and black bears;
- Protect existing and potential habitat for the endangered RCW; and
- Protect existing and potential habitat for the threatened Louisiana black bear.

Under this alternative, the desired fish and wildlife protection objectives could be achieved.
The preferred alternative will ultimately allow for the conservation of over 177,000 contiguous acres of wildlife habitat, and the protection of 120,000 acres of bottomland floodplain habitat and 58 river miles. Additionally, 50 RCW groups will come under federal protection.

Only 20 percent of the historic bottomland hardwood forests are left today, most of which are highly fragmented (Tiner 1984). Black bears have been reintroduced to Felsenthal NWR to the north and these animals disperse to Upper Ouachita NWR regularly. The expansion areas will increase the core area size of forested blocks and provide necessary corridors for the bears and other wildlife. These lands are also important to neotropical migratory birds that follow the Ouachita River during their spring and fall migrations, as well as to nesting prothonotary, Swainson's and worm-eating warblers, Mississippi kites, and wood ducks.

Large expanses of bottomland hardwood forests are important for breeding cerulean warblers. This species is thought to have bred in this area historically, but has not been recorded in recent times. Wood storks use these areas during late summer to feed after dispersing from their breeding grounds. Bald eagles winter on the refuges, and several breeding pairs exist on the refuges and neighboring lands. Rookeries of great and little blue herons, anhingas, egrets, ibises, and night-herons are also present in these bottomlands. Hundreds of thousands of migratory waterfowl use these lands as wintering habitat, and the invertebrates and acorns found in flooded bottomlands are excellent food sources to help these birds store energy for breeding in the spring. Rafinesque's big-eared and southeastern myotis bats, both of which are species of concern, utilize the water tupelo-baldcypress brakes within the bottomland forests.

The major value of the upland pine communities will be the conservation and management of the endangered RCW. The RCW population on the expansion area east of Upper Ouachita NWR has 29 family groups, the highest density population in north Louisiana. In addition to this population of woodpeckers, 21 active RCW groups are known to occur on the expansion areas surrounding Felsenthal NWR. Many older pine stems (60 + years) distributed across this area provide suitable cavity sites, as well as much needed foraging habitat. With enhanced management, these habitats could support additional groups. Located immediately adjacent to refuge upland pine communities, the upland sites within the expansion boundary are extremely important in that they provide much needed additional foraging habitat for the 14 existing RCW groups on Felsenthal NWR (at the current refuge population, the existing refuge acreage of upland pine communities is not sufficient to meet federal landowner guidelines for RCW foraging habitat requirements). Long-term intensive habitat management will benefit RCWs in both Louisiana and Arkansas. Large populations of RCWs exist on Ouachita National Forest in central Arkansas and Kisatchie National Forest in central Louisiana. Habitat restoration in the expansion areas will provide a link between the two larger RCW populations for dispersing birds, thereby increasing their genetic diversity (Will McDearman, RCW Recovery Coordinator, personal comm.).

These uplands provide a retreat for resident species such as white-tailed deer and wild turkey during periods of extended flooding (up to six months or more in duration). They also support numerous migratory and resident bird species that utilize or require pine and pine-hardwood habitats. A few of these species are the red-tailed hawk, yellow-billed cuckoo, pileated woodpecker, pine warbler, red-headed woodpecker, eastern wood-peewee, eastern phoebe, brown-headed nuthatch, Bachman's sparrow, pine siskin, and American goldfinch.

The project areas also contain some upland hardwoods that are becoming an endangered ecosystem upon which many wildlife species depend. Hardwood species such as white, southern red and cherry-bark oak, along with various hickories, are disappearing due to intensive pine management by the forest industry. In fact, the mixed species pine-pine hardwood ecosystem of the West Gulf Coastal Plain is perhaps one of the most imperiled systems in the United States due to massive conversion to short-rotation, pine plantation monoculture by the commercial forest industry.

The historic range of black bears included all forested areas of North America. In the southeastern United States, the species was eliminated from 90 percent of its former habitat. The black bears in Louisiana are federally listed as threatened. Repatriation efforts took place between 2000 and 2007, when 55 females and 116 cubs were reintroduced to their former range in southern Arkansas, mainly Felsenthal NWR (USFWS 2010). Black bears are present on both Upper Ouachita and Felsenthal NWRs and often travel back and forth among the two. The acquisition of the project lands will connect the two refuges, providing a contiguous block of bottomland hardwood forest. Because habitat fragmentation can result in increased mortality as the bears are forced to forage on less-

protected sites, travel farther to forage, or cross barriers such as well-travelled roads (Pelton 2001), the black bear will benefit from the protected corridor and the increase in core area.

The project areas also attract thousands of mallards, teal, pintail, shovelers, gadwall, and wood ducks during the winter. A study conducted by Louisiana State University found that female mallards captured and fitted with transmitters on Upper Ouachita NWR spent the majority of the winter in bottomland hardwood forest habitat (Davis 2008), underscoring the importance of these forests for wintering waterfowl. The bottomland hardwoods are rich in high-energy natural seeds (e.g., acorns) and aquatic invertebrates. These areas are vital to waterfowl for pair bonding, loafing, sanctuary, thermal cover, and feeding.

The Lower Mississippi Valley Joint Venture (LMVJV) considers forest interior songbirds that utilize bottomland hardwood forests a priority resource, particularly the Kentucky, Swainson's, and cerulean warblers. The cerulean warbler is classified as a bird of conservation concern requiring critical recovery and immediate management activities in the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative. The cerulean warbler has experienced dramatic declines over the last 30 years. Estimates from researchers suggest that forest tracts as large as 8,000 hectares (19,700 acres) may be required to ensure sustainable cerulean warbler populations in the Lower Mississippi River Ecosystem (LMVJV HSI Model). Breeding birds have higher reproductive success in large core areas of forest blocks than in small, isolated blocks (Robinson et al. 1995).

Two federal species of concern, the Rafinesque's big-eared bat and southeastern myotis bat, are found in bottomland hardwood forests in the project areas. Known roosts of both species exist on Upper Ouachita NWR. These bats most often use large, hollow water tupelo and blackgum trees as roost sites (Cochran 1999; Hoffman 1999; Gooding and Langford 2004), but they have also been found in baldcypress, magnolia, willow oak, sweetgum, and many other species of hollow trees in mature bottomland hardwood forests. The bottomland hardwoods in the project areas provide important foraging habitat and roost sites for these bats. The protection of cavity trees is critical to their conservation.

Under Alternative 2, the project areas will be protected from development and urbanization. Forest fragmentation, degradation, hydrologic modifications, and loss of habitat will not occur. In addition, incompatible forestry practices will not occur under this alternative. Both of the refuges' forestry management practices will be directed towards meeting wildlife and habitat objectives.

The project areas' fishery resources will be protected under this alternative, because the land will not be developed. Spawning grounds and nursery habitat will be protected, water quality (i.e., temperature, turbidity, and dissolved oxygen levels) will remain high, and primary production will occur.

Based on the nature of the project, the location of the sites, and the current land use, the preferred alternative will not have any significant effects on the quality of the human environment, including public health and safety. Further, because the purpose of the project is to protect, maintain, and where possible, enhance the natural habitat of the lands within the acquisition areas, the project is not expected to have any significant adverse effects on the area's wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Implementation of the preferred alternative will not involve any highly uncertain, unique, unknown, or controversial effects on the human environment. The project will not establish a precedent for future actions with significant effects, nor represent a decision in principle about a future consideration. No cumulatively significant impacts on the environment will be anticipated.

In addition, the project will not significantly affect any unique characteristic of the geographic area, such as historical or cultural resources, wild and scenic rivers, or ecologically critical areas. The project will not significantly affect any site listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources. The areas' cultural resources will be protected under the regulations of the National Historic Preservation Act of 1966, as amended, the Archaeological Resources Protection Act, and the Advisory Council on Historic Preservation (36 CFR 800). The Arkansas and Louisiana state historic preservation offices will be contacted whenever any future management activities have the potential to affect cultural resource sites.

Under this alternative, the project areas will have the same wildlife-dependent recreational uses as those that are available on Felsenthal and Upper Ouachita NWRs. Portions of the two refuges will be open to the public for hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. Hunting and fishing regulations on the refuges are more restrictive than those on private land. Individuals who currently have memberships in private hunting clubs within the project areas will no longer have exclusive access to those lands, and they will have to abide by the more restricted hunting and fishing regulations. However, the project areas will be open to all members of the public at little to no cost, as opposed to private hunting clubs that charge up to $2,000 per year per member. The quota deer and turkey hunts on Felsenthal NWR, by comparison, currently cost less than $15 per year.

All tracts acquired by the Service in fee-title will be removed from local real estate tax rolls, because federal government agencies are not required to pay state or local taxes. However, the Service makes annual payments to local governments in lieu of real estate taxes, as required by the Refuge Revenue Sharing Act (Pub. Law 95-469). Payment for acquired land is computed on whichever of the following formulas is greatest: (1) Three-fourths of 1 percent of the fair market value of the lands acquired in fee-title; (2) 25 percent of the net refuge receipts collected; or (3) 75 cents per acre of the lands acquired in fee-title. The estimated annual revenue-sharing payment that will be made to Morehouse Parish, Louisiana, depending on the amount of acreage acquired in fee-title, will range from $13,556 to $271,125. In Arkansas, the estimated annual revenue-sharing payments, depending on the amount of acreage acquired in fee-title, will range as follows: Union County, from $14,017 to $420,525; and Ashley County, from $6,989 to $139,785.

Finally, under Alternative 2, no actions will be taken that will lead to a violation of federal, state, or local laws imposed for the protection of the environment.

C. ALTERNATIVE 3: PROTECTION AND MANAGEMENT OF UP TO 47,070 ACRES BY THE FISH AND WILDLIFE SERVICE

Under this alternative, the Service will acquire up to 47,070 acres of bottomland hardwood and upland pine forest habitats as part of Upper Ouachita and Felsenthal NWRs. Felsenthal NWR will acquire 29,937 acres and Upper Ouachita NWR will acquire 17,133 acres. The acreage in this alternative includes all of the acreage in Alternative 2, except for the 2,033-acre tract on the northeast side of Felsenthal NWR.

The 2,033-acre tract consists mostly of transitional habitat from bottomland hardwood forest to upland pine, making it botanically diverse. The southern portion of this tract provides needed foraging habitat for the nearby RCW group. Under present ownership, this pine habitat will be clear-cut in the future. The bottomland areas provide habitat for waterfowl and other wetland-dependent species. This tract also will ensure needed access for the public into the Goose Lake area, which is popular with both anglers and hunters.

The potential adverse impacts of this alternative include increased development and urbanization on the 2,033-acre tract. Forest fragmentation, road-associated impacts, degradation, loss of habitat, incompatible public uses, exotic species introduction, hydrologic modifications, and introduced predators are some of the potential human impacts. One of the primary threats to wildlife in this area is destruction of habitat due to residential and commercial development.

Another potential threat to the area is incompatible forestry practices, such as clear-cutting; application of herbicides that decrease plant diversity; development of original forest stands to monocultural stands for even-aged timber management, and bedding of land to convert forests to offsite species. The practice of clear-cutting large acreages causes forest fragmentation, habitat loss, erosion, and decreased water quality. The application of herbicides to kill hardwood or broadleaf plants is a common private industry practice that decreases plant diversity and, in some cases, converts the habitat to a different type. The promotion of the profitable pine plantation has led to monocultural stands devoid of plant diversity, leading to a loss of wildlife diversity. Another common practice on private timber lands is to bed the soil, forever altering the hydrology, to plant offsite species. Locally, this practice is often used to convert a bottomland hardwood forest to a loblolly pine plantation.

Still another potential threat to this area is a decline in the fishery resources as a result of incompatible land management practices. Disturbance to the soil from developing leads to sedimentation in nearby creeks and bayous. This, then, causes a decline in water quality. Water temperatures also increase when forests are cleared, causing less oxygen to be present in the water.

The project areas under this alternative will have the same wildlife-dependent recreation as those that are available on Felsenthal and Upper Ouachita NWRs. Portions of the two refuges will be open to the public for hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation. Hunting and fishing regulations on the refuges are more restrictive than those on private land. Individuals who currently have memberships in private hunting clubs within the project areas will no longer have exclusive access to those lands, and they will have to abide by the more restricted hunting and fishing regulations. However, the project areas will be open to all members of the public at little to no cost, as opposed to private hunting clubs that charge up to $2,000 per year per member. The quota deer and turkey hunts on Felsenthal NWR, by comparison, currently cost less than $15 per year.

D. CUMLATIVE EFFECTS

According to the Council on Environmental Quality's NEPA implementing regulations in 40 CFR 1508.7, "cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

PHYSICAL RESOURCES

Some minimal and minor impacts on physical resources are expected under each of the alternatives, but none of these are anticipated to be cumulatively significant. Cumulative effects on individual physical resource categories are further discussed below.

Land Use

Alternative 1 will be expected to have a minor cumulative effect on land use in the project lands due to continued urbanization over the next decades. Currently, these lands are largely owned by private timber companies, but projected population growth will likely result in the spread of developed areas. State and other land protection efforts will have a difficult time keeping pace with the loss of natural and other open areas. Alternatives 2 and 3, on the other hand, will have positive cumulative effects on land use of the area by helping to protect portions of the landscape from urbanization.

Climate Change

Under Alternative 1, a minimal cumulative impact on climate change is expected as land currently functioning as carbon sinks will likely become net sources of greenhouse gases. Conversely, lands protected under Alternatives 2 and 3 will not have a significant negative cumulative effect on climate change. Under Alternatives 2 and 3, additional lands that are believed to function as net carbon sinks will be protected. Growing vegetation and natural soil formation processes will continue to sequester carbon.

Topography

Alternative 1 will have a minimal negative cumulative effect on the topography of the project lands. Without protection, the raising or hipping of the soil for pine production will continue. Under Alternatives 2 and 3, no adverse cumulative effects are predicted to this resource.

Hydrology and Water Quality

Hydrology and water quality will suffer some minimal cumulative effects under the No Action alternative. Deforestation is a strong possibility, thus affecting water quality. Increased urbanization and associated changes in drainage patterns will adversely affect water quality. Under Alternatives 2 and 3, the project lands will be protected from development and other damaging land practices. Intact forests slow the runoff of water, thereby increasing water quality.

BIOLOGICAL RESOURSES

Alternative 1 will have cumulative adverse impacts to the biological community within the project areas. Habitat loss, degradation, and fragmentation over time will have cumulative negative effects on wildlife resources. RCW populations on private lands are legally allowed to be managed much less intensely than those on Service lands, often causing a decline in populations. Under Alternatives 2 and 3, the habitats of the project areas will be protected from habitat loss, fragmentation, and degradation, thereby increasing the health of forests over the long term. Consequently, the wildlife resources benefit cumulatively due to increased populations.

CULTURAL RESOURCES

There could be some minimal cumulative adverse impacts to cultural resources under Alternative 1. Less land will be protected from development, increasing the risk of disturbance or destruction of cultural resources. Under Alternatives 2 and 3, beneficial effects will occur because of increased land protection. In addition, increased field surveys will likely be conducted on Service-owned lands to identify and protect any sites discovered.

SOCIOECONOMIC ENVIRONMENT

Under Alternative 1, no long-term, significant cumulative change in the local economy will be expected. Current development rates, tax revenues, and business revenues will remain subject to market influences. There could be some loss of economic opportunities associated with wildlife-dependent recreation (e.g., hunting, fishing, wildlife watching). In addition, there could be increased costs to local communities associated with the loss of vegetated areas as urban sprawl continues on unprotected lands. Vegetated areas have been shown to reduce costs of providing clean water and air. Furthermore, vegetated lands help reduce storm-water runoff, providing additional cost savings (e.g., less frequent repairs to water control structures) to nearby communities.

Alternatives 2 and 3 will have some positive effects on socioeconomic resources. Wildlife-dependent recreation will provide additional direct and indirect economic benefits to the region by drawing visitors. Increased opportunities for wildlife-dependent recreational opportunities will further help improve the quality of life in the area, particularly as open space available to the public becomes increasingly scarce over the next decades. Further, no significant negative impacts will be anticipated to neighboring landowners from the implementation of either Alternative 2 or Alternative 3, including from management and public use activities.

UNAVOIDABLE ADVERSE EFFECTS

Unavoidable adverse effects are the effects of those actions that could cause significant harm to the human environment and that cannot be avoided, even with mitigation measures. There will be some minor, localized unavoidable adverse effects under all the alternatives. Alternative 1 will maintain the status quo for development and growth in the area, thus contributing to the unavoidable effects of such development (e.g., increased air emissions, increased impervious surface and storm-water runoff).

Under Alternatives 2 and 3, there will be property tax losses to towns and increased visitation that could be unavoidable effects in those years when revenue-sharing payments are less than local property taxes. However, none of these effects rises to the level of significance. All will be mitigated, so there will in fact be no significant unavoidable adverse impacts under any of the alternatives.

RELATIONSHIP BETWEEN SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Alternative 1 will be expected to diminish the long-term productivity and sustainability of natural resources within the land expansion. In contrast, Alternatives 2 and 3 will strive to maintain or enhance the long-term productivity and sustainability of natural resources on project refuge lands. These alternatives will strive to conserve federal trust species and state-listed species and the habitats they depend on.

POTENTIAL IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Alternative 1 will have no long-term effect on potential irreversible and irretrievable commitments of federal financial resources. The expansion of the refuges, as described under Alternatives 2 and 3, may contribute to irreversible and irretrievable commitments of federal financial resources. Another irreversible commitment of resources impacting local communities is Service land acquisition. As the project lands become part of the two refuges, it is unlikely that they will revert back to private ownership.

ENVIRONMENTAL JUSTICE

Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (February 11, 1994), requires that federal agencies consider as part of their action, any disproportionately high and adverse human health or environmental effects to minority and low income populations. Federal agencies are required to ensure that these potential effects are identified and addressed. The communities surrounding the two refuges are relatively homogenous; minority groups do not represent a substantial portion of the affected community. No differential impacts based on minority status will therefore be anticipated under any of the alternatives.

E. RECOMMENDATION

Alternative 2 is recommended because it better serves the outlined purpose and need, as well as the stated goals, objectives, vision, and purposes of the two refuges. Under Alternative 2, the bottomland hardwood forests along the Ouachita River will be protected; the lands between the two refuges will increase the core habitat for neotropical migratory songbirds, wintering waterfowl, and black bears; and existing and potential habitat for RCWs and the Louisiana black bear will be protected. In addition, the current access point along the northeastern boundary of Felsenthal NWR, which includes the Goose Lake area, will be protected and secured for refuge users.

Alternative 3 will also achieve these objectives; however, one RCW group will not benefit from additional foraging habitat protected by the Service; access to the northeastern portion of Felsenthal NWR, namely the Goose Lake area, will not be obtained; this alternative includes Bradley County, Arkansas, which the many public responses were against; and a botanically rich bottomland-upland transitional forest surrounding the Saline River will not be protected.

V. References

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Appendix A. Compatibility Determinations

The comprehensive conservation plans (CCPs) for Felsenthal (USFWS 2010) and Upper Ouachita (USFWS 2008) NWRs have been completed along with their compatibility determinations. The project lands covered under this Final EA will be brought into the National Wildlife Refuge System and will be managed as current lands of the Felsenthal and Upper Ouachita NWRs.

Lands purchased for Felsenthal NWR have the following uses already found compatible: hunting; fishing; wildlife observation; wildlife photography; environmental education and interpretation; bicycling; boating; swimming; beach use; hiking/backpacking; horseback riding; furbearer trapping; forest management; firewood cutting; dog field trials; commercial fishing; camping; berry picking; all-terrain vehicle use; and power boating.

Lands purchased for Upper Ouachita NWR have the following uses already found compatible: hunting; fishing; wildlife observation; wildlife photography; environmental education; interpretation; boating; all-terrain vehicle use; hiking; jogging; walking; timber harvest; firewood cutting; plant gathering; and dog field trials.

For detailed descriptions of the uses that were found to be compatible, please refer to the CCPs for Felsenthal NWR (USFWS 2010) and Upper Ouachita NWR (USFWS 2008).

Appendix B. Interim Recreation Act Funding

Refuge: Upper Ouachita National Wildlife Refuge

Date established: 1978

Purposes for which the refuge was established: Upper Ouachita NWR was established in 1978 when 20,834 acres were purchased under the authority of the Migratory Bird Conservation Act of 1929, as amended, and the Wetlands Extension Act of 1976. In 1997 and 1998, an additional 16,191 acres were purchased east of the Ouachita River, known as the Mollicy Unit, under the Migratory Bird Conservation Act of 1929. Between 1997 and 2004, the Service acquired 4,939 acres of upland pine from the Nature Conservancy of Louisiana. In 2011, the Service purchased 4,000 acres of bottomlands from The Conservation Fund. Currently, the fee-title lands for Upper Ouachita NWR cover 46,594 acres. The refuge's current acquisition boundary encompasses 62,989 acres and includes the area to the north of the Mollicy Unit, all inholdings, and areas west and south of the refuge on the west side of the Ouachita River.

The refuge was established "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds" (Migratory Bird Conservation Act, 16 U.S.C. 715d) and for "the conservation of the wetlands of the nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions" (16 U.S.C. 3901b).

Recreational uses evaluated for the expansion of the refuge: (1) Hunting; (2) Fishing; (3) Wildlife observation and photography; (4) Environmental education and interpretation; (5) Bicycling, hiking, walking, jogging; (6) Boating; (7) All-terrain vehicle use; (8) Field trials; (9) Plant gathering; and (10) Firewood cutting

Funding required to administer and to manage the recreational uses: Minimal funding in the amount of $100,000 will be made available to implement initial protection, hunt implementation, data collection, and non-consumptive uses.

Based on a review of the refuge budget allocated for recreational use management, I certify that funding is adequate to ensure compatibility and to administer and manage the recreational uses.

Project Leader: 5/16/13
(Signature/Date)

Refuge Supervisor: Richard Bingham 6/5/13
(Signature/Date)

Chief, National Wildlife Refuge System, Southeast Region: 6/6/13
(Signature/Date)

Refuge: Felsenthal National Wildlife Refuge

Date established: 1985

Purposes for which the refuge was established: Felsenthal NWR was authorized by Congress as mitigation for the Ouachita-Black Rivers Navigation Project. Refuge establishment occurred with the fee-title transfer of 65,000 acres from the Corps of Engineers (by direct authority granted in the navigation project legislation) to the Service in 1985.

The refuge was established "for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon" 16 U.S.C. 664 (Fish and Wildlife Coordination Act) and "for incidental fish and wildlife-oriented recreational development; the protection of natural resources; and the conservation of endangered species or threatened species" 16 U.S.C. 460k-1.

Recreational uses evaluated for the expansion of the refuge: (1) Hunting; (2) Fishing; (3) Wildlife observation; (4) Wildlife photography; (5) Environmental education and interpretation; (6) Bicycling; (7) Boating; (8) Swimming; (9) Beach use; (10) Hiking/backpacking; (11) Horseback riding; (12) Furbearer trapping; (13) Firewood cutting; (14) Dog field trials; (15) Commercial fishing; (16) Camping; (17) Berry picking; (18) All-terrain vehicle use; and (19) Power boating.

Funding required to administer and to manage the recreational uses: Minimal funding in the amount of $100,000 will be made available to implement initial protection, hunt implementation, data collection, and non-consumptive uses.

Based on a review of the refuge budget allocated for recreational use management, I certify that funding is adequate to ensure compatibility and to administer and manage the recreational uses.

Project Leader: 5/15/13
(Signature/Date)

Refuge Supervisor: 6/5/13
(Signature/Date)

Chief, National Wildlife Refuge System, Southeast Region: 6/6/13
(Signature/Date)

Appendix C. Section 7 Biological Evaluation

January, 1999

REGION 4
INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

[Note: This form provides the outline of information needed for intra-Service consultation. If additional space is needed, attach additional sheets, or set up this form to accommodate your responses.]

Originating Person: Rick Eastridge

Telephone Number: 870-415-0386 **E-Mail:** Ricky_Eastridge@fws.gov
Date: 5/22/2013

PROJECT NAME (Grant Title/Number): Draft Environmental Assessment and Draft Land Protection Plan for the Proposed Expansion of Upper Ouachita and Felsenthal National Wildlife Refuges

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I. Service Program:

___ Ecological Services
___ Federal Aid
___ Clean Vessel Act
___ Coastal Wetlands
___ Endangered Species Section 6
___ Partners for Fish and Wildlife
___ Sport Fish Restoration
___ Wildlife Restoration
___ Fisheries
_x__ Refuges/Wildlife

II. State/Agency: Arkansas and Louisiana/US Fish & Wildlife Service

III. Station Name: Felsenthal and Upper Ouachita National Wildlife Refuges

IV. Description of Proposed Action (attach additional pages as needed): The Service proposes to acquire, protect, and manage up to 50,459 acres of bottomland hardwood and upland pine forests through fee-title purchases, leases, conservation easements, and/or cooperative agreements from willing sellers. All lands and waters acquired in Arkansas would be managed by the Service as Felsenthal National Wildlife Refuge and all lands and waters acquired in Louisiana would be managed by the Service as Upper Ouachita National Wildlife Refuge. The objectives of the proposed expansion would be to:

1) Protect contiguous bottomland hardwood forest adjacent to the Ouachita River
2) Protect lands between both national wildlife refuges to increase core habitat for neotropical migratory songbirds, wintering waterfowl, and bears
3) Protect existing and potential habitat for the endangered red-cockaded woodpecker

4) Protect existing and potential habitat for the threatened Louisiana black bear
5) Protect potential habitat for the endangered Pondberry
6) Protect potential habitat for native mussels including the endangered Pink mucket and candidate Rabbitsfoot mussel

V. Pertinent Species and Habitat:

A. Include species/habitat occurrence map:

B. Complete the following table:

SPECIES/CRITICAL HABITAT	STATUS[1]
Red-cockaded woodpecker *Picoides borealis*	E
Pink mucket (pearly mussel) *Lampsilis abrupta*	E
Pondberry *Lindera mellisifolia*	E
American alligator *Alligator mississippiensis*	T (similarity of appearance)
Louisiana Black Bear *Ursus americanus Luteolus* (in Louisiana)	T
Rabbitsfoot mussel *Quadrula cylindrica cylindrica*	Candidate for Threatened status

[1]STATUS: E=endangered, T=threatened, PE=proposed endangered, PT=proposed threatened, CH=critical habitat, PCH=proposed critical habitat, C=candidate species

VI. Location (attach map):

A. Ecoregion Number and Name: Number 27, Lower Mississippi River/West Gulf Coastal Plain

B. County and State: Ashley, Bradley, and Union counties, Arkansas and Morehouse Parish, Louisiana

C. Section, township, and range (or latitude and longitude, Quad name):

D. Distance (miles) and direction to nearest town: Between 5-15 miles west of Crossett, Arkansas

E. **Species/habitat occurrence:** The Arkansas portion of the proposed expansion area includes 21 active groups and reside in areas adjacent to Felsenthal NWR. Because of its close proximity to the Louisiana state line, Felsenthal NWR does provide suitable habitat and travel corridors for all black bear species including the Louisiana black bear. The proposed expansion area is within the range of Pondberry, Pink mucket, and the Rabbitsfoot mussel.

VII. Determination of Effects:

A. Explanation of effects of the action on species and critical habitats in item V. B (attach additional pages as needed):

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
Red-cockaded woodpecker *Picoides borealis*	No adverse impacts are expected
Pink mucket (pearly mussel) *Lampsilis abrupta*	No adverse impacts are expected
Pondberry *Lindera melissifolia*	No adverse impacts are expected
American alligator *Alligator mississippensis*	No adverse impacts are expected
Louisiana black bear *Ursus americanus luteolus*	No adverse impacts are expected
Rabbitsfoot mussel *Quadrula cylindrica cylindrica*	No adverse impacts are expected

The proposed project is to expand the refuges to include portions of the Ouachita and Saline rivers, adjacent bottomland hardwood, and upland pine forests. The species listed above can only benefit from the Service acquiring these additional lands. These lands if acquired would be protected from development, fragmentation, and clear-cutting. Red-cockaded woodpeckers would be managed for habitat restoration utilizing prescribed burning, artificial insert installation, translocation, and timber management. Timber management would be directed towards improving habitat for relevant species.

B. Explanation of actions to be implemented to reduce adverse effects:

SPECIES/ CRITICAL HABITAT	ACTIONS TO MITIGATE/MINIMIZE IMPACTS

Not applicable. No adverse impacts are expected.

January, 1999

VIII. Effect Determination and Response Requested:

SPECIES/ CRITICAL HABITAT	DETERMINATION[1]			RESPONSE[1] REQUESTED
	NE	NA	AA	
Red-cockaded woodpecker *Picoides borealis*		X		Concurrence
Pink mucket (pearly mussel) *Lampsilis abrupta*		X		Concurrence
Pondberry *Lindera melissifolia*		X		Concurrence
American alligator *Alligator mississippensis*		X		Concurrence
Louisiana black bear *Ursus americanus luteolus*		X		Concurrence
Rabbitsfoot mussel *Quadrula cylindrica cylindrica*		X		Concurrence

[1]DETERMINATION/RESPONSE REQUESTED:

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.

NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".

AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is "Formal Consultation". Response Requested for proposed or candidate species is "Conference".

Michael Street 5/22/2013

Signature (originating station) **Date**

South Arkansas Refuges Complex Project Leader

Title

IX. Reviewing Ecological Services Office Evaluation:

A. Concurrence X **Nonconcurrence** _____

B. Formal consultation required _____

C. Conference required _____

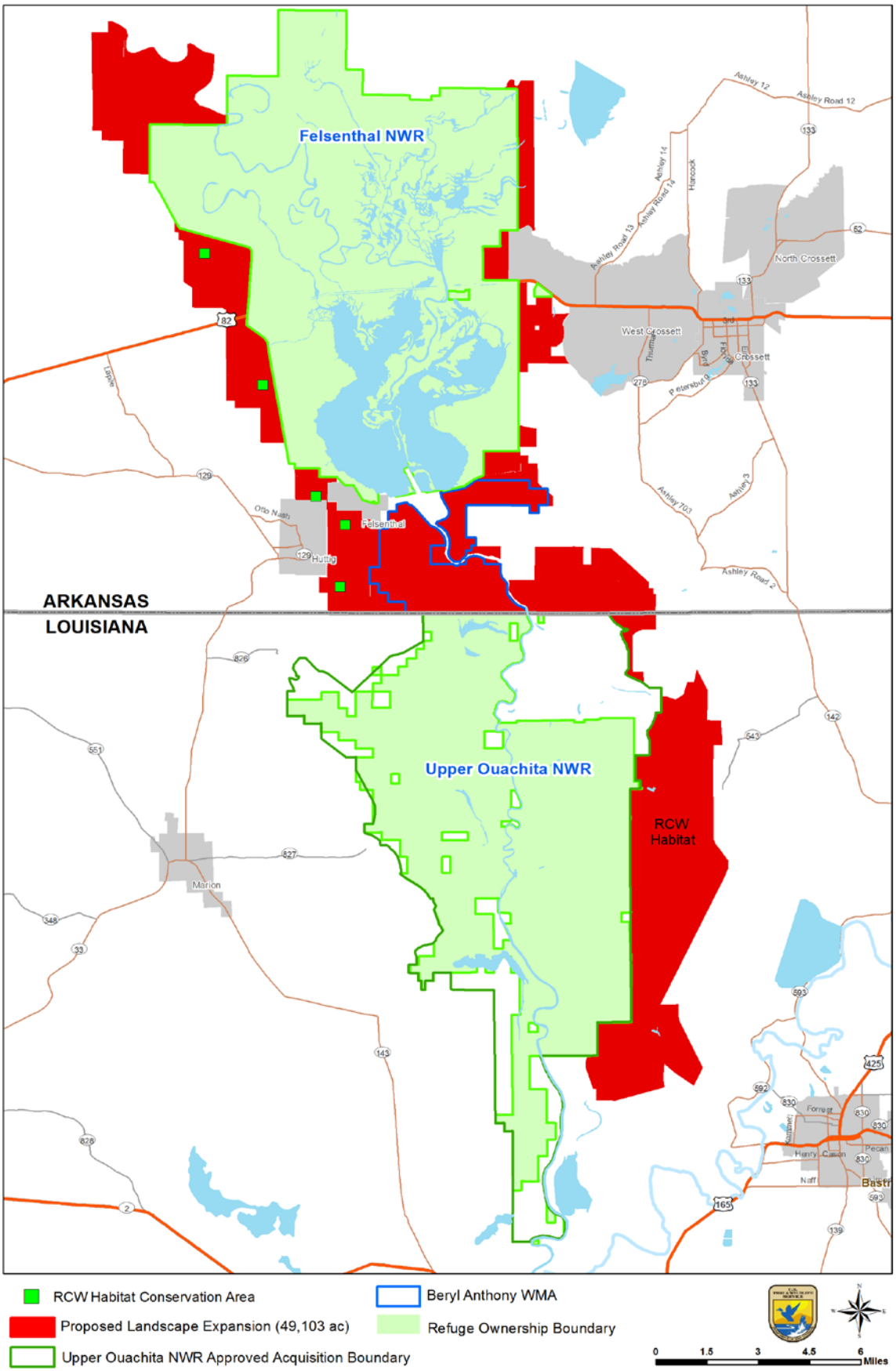
D. Informal conference required _____

January, 1999

E. Remarks (attach additional pages as needed):

Signature	Date 5/22/2013
Title Deputy Field Supervisor	Office Arkansas Field Office

The proposed project is to expand the refuges to include portions of the Ouachita and Saline rivers, adjacent bottomland hardwood, and upland pine forests. The listed species will benefit from the Service acquiring these additional lands. These lands if acquired would be protected from development, fragmentation, and clear-cutting. Red-cockaded woodpeckers would be managed for habitat restoration utilizing prescribed burning, artificial insert installation, translocation, and timber management. Timber management would be directed towards improving habitat for relevant species.


Felsenthal NWR
Upper Ouachita NWR
RCW Habitat
ARKANSAS
LOUISIANA
Felsenthal
Hutting
Otto Nash
Marion
North Crossett
West Crossett
Crossett
Ashley Road 12
Ashley 12
Ashley Road 13
Ashley 14
Ashley Road 14
Hancock
Thurman
Ford
Ashley 703
Ashley 3
Ashley Road 2
Petersburg
Lake
Forrest
Henry Cason
Pecan
Naff
RCW Habitat Conservation Area
Proposed Landscape Expansion (49,103 ac)
Upper Ouachita NWR Approved Acquisition Boundary
Beryl Anthony WMA
Refuge Ownership Boundary
0
1.5
3
4.5
6
Miles

Appendix D. Project Compliance with Interim Guidance on Prioritizing Land Protection Efforts of the National Wildlife Refuge System for the Proposed Expansion of Upper Ouachita and Felsenthal National Wildlife Refuges

The following information is provided to supplement and summarize information in the Land Protection Plan (LPP) to demonstrate compliance with "Interim Guidance on Prioritizing Land Protection Efforts of the National Wildlife Refuge System."

SCIENCE-BASED CRITERIA
The following criteria are listed in the Interim Guidance and addressed here as they pertain to this LPP.

PRIORITY CONSERVATION OBJECTIVES AND SURROGATE SPECIES

Recovery of threatened and endangered species
This proposal would contribute to the recovery of red-cockaded woodpeckers, Louisiana black bear; pink mucket, and rabbitsfoot mussels; and pondberry by producing a total conservation footprint of 177,000 acres and protecting approximately 58 river channel miles within the Upper Ouachita River floodplain providing improved water quality, reducing fragmentation, and increasing habitat connectivity. Fifty red-cockaded woodpecker (RCW) groups would come under federal protection. This landscape expansion would bring 25,277 acres of upland pine and mixed pine-hardwood forest and 23,826 acres of bottomland hardwood forest under Service protection.

Species of Special Concern
Rice (2009) found 34 roost trees of Rafinesque's big-eared bats and 8 roost trees of southeastern myotis bats on Upper Ouachita NWRS in bottomland hardwood forests. The refuge biologist has also found a roost tree of southeastern myotis bats, with well over 500 individuals on Upper Ouachita NWR. It is well known that both species utilize large cavity trees in mature forests for maternity roosts (Gooding and Langford 2004, Stevenson 2008, Rice 2009, Barclay and Kurta 2007).

Implementing the North American Waterfowl Management Plan (NAWMP)
Upper Ouachita and Felsenthal NWR's location in the Mississippi River flyway provides an optimal location to provide quality habitat for wintering waterfowl. The topography and clay soils are conducive to holding water and are highly productive for moist soil plants. The refuges' current objectives are to provide over 8.1 million Duck Energy Days (DEDs) for waterfowl through the moist soil and cooperative farming program. In addition, the numerous water bodies on the refuge provide quality year-round habitat for breeding wood ducks. A diversity of habitats such as flooded baldcypress brakes and bottomland hardwoods, as well as afforestation, moist-soil, and agricultural areas are preferred by migrating waterfowl to meet their life cycle and nutritional needs for molting, pair bonding, migrating, and egg laying. Acquiring additional habitat will facilitate sustained or increasing waterfowl populations and also to meet Lower Mississippi Valley Joint Venture (LMVJV) goals for required DED of habitat and forage for refuges. Also, purchasing additional lands would increase the acreage of protected, restored, and managed wetland habitats for wintering waterfowl.

In addition, wood ducks and hooded mergansers are the primary species of waterfowl that breed on the Felsenthal and Upper Ouachita NWRs. Both are cavity nesters adapted to bottomland hardwood ecosystems. By virtue of the extent of its remaining bottomland hardwood and permanently- and

seasonally inundated wetlands, the Ouachita River Basin is one of the most important breeding areas for wood ducks in Arkansas and Louisiana. Acquisition of additional habitat would enable the refuge to conserve, restore, and manage vital breeding, nesting, and brood-rearing habitats for these important species and increase local populations.

Conserving Migratory Birds in Decline

Among Upper Ouachita and Felsenthal NWRs purposes is the conservation of migratory birds. The LPP provides a list of over 30 migratory birds known to occur on the two refuges and which are listed by Rich et al. (2004) as species of continental importance. Seventeen of these migratory bird species have action categories of "Management" or "Immediate Action" because of recent population declines. Many of these species are sensitive to habitat patch size and require large, contiguous blocks of habitat. Because many of the Refuge's current forested tracts are separated by private timber company land, there is great opportunity to purchase these lands from willing sellers and re-establish contiguous forested tracts (connecting existing public land with newly-acquired and restored properties to create larger forested blocks) by eventually connecting the two refuges. The expansion of the Refuges and management of forested habitats would contribute to the LMVJV goals for the Refuges and the national goals of the Partners in Flight Bird Conservation Plan and the North American Bird Conservation Initiative for the Ouachita River Basin, as well as the Arkansas and Louisiana Comprehensive State Wildlife Action Plans.

Surrogate Species

Surrogate species have not yet been identified for the Lower Mississippi Alluvial Valley (LMAV) by the Gulf Coastal Plain and Ozarks Land Conservation Cooperative. However, the NAWMP has identified the Ouachita River Basin as an area important for mallards in North America. During peak years, 200,000 to 300,000 mallards have been estimated to winter within the current acquisition boundary of Upper Ouachita and Felsenthal NWRS. Certainly with additional acquisitions, all ecological requirements for any GCPO/LMAV surrogate waterfowl/waterbird species would be satisfied through successful implementation of this project. Twedt et al. (1999) suggested the use of three migratory bird species to represent other area-sensitive breeders in the LMAV. These are Swainson's warbler, which represents a suite of birds with recommended habitat patch size of 11,600 acres; Cerulean warbler, which represents a suite of birds with recommended patch sizes of 19,760 acres, and swallow-tailed kite, which represents a suite of birds with patch size requirements up to 98,800 acres. Increasing the forested acreage of Upper Ouachita and Felsenthal NWRs as proposed would increase the refuge systems ability to meet the NAWMP goals and to support viable populations of all three Neotropical migrant surrogates, and by extension, all of the other area-dependent bottomland hardwood breeders in the ecoregion. The major value of the upland pine communities would be to contribute to the conservation and management of the endangered RCW which could also be considered a surrogate species in the interim.

ACHIEVEMENT OF STATED POPULATION OBJECTIVES

Threatened and Endangered Species

The RCW population in the expansion area east of Upper Ouachita NWRS has 29 family groups, the highest density population in northern Louisiana and the largest private land subpopulation in the state. In addition to this large population of woodpeckers, 21 active RCW groups are known to occur on the expansion areas surrounding Felsenthal NWR. Many mature pine stems (60 + years) distributed across this area provide suitable cavity sites as well as much needed foraging habitat. With proper management, these habitats may support additional RCW groups. The upland sites within the expansion boundary are extremely important in that they provide much needed additional foraging habitat for the 14 existing RCW groups on Felsenthal. If these lands are acquired, long-term intensive habitat management would benefit RCWs in both Louisiana and

Arkansas. Habitat restoration in the expansion areas would provide a link between the two larger RCW populations for dispersing birds, thereby increasing their genetic diversity (Will McDearman, RCW Recovery Coordinator, personal comm.).

The Louisiana black bear, a federally threatened species, has increased in numbers on the refuge over the past several years. Large tracts of bottomland hardwood forest communities having high species and age class diversity are important to meet the foraging needs of Louisiana black bear (BBCC 2005). Habitat fragmentation can result in increased mortality as bears are forced to forage on less protected sites, travel farther to forage, or cross barriers such as roads (Pelton 2001). Linking the bottomland hardwood forests of Upper Ouachita and Felsenthal NWRs would be highly beneficial to recovery efforts of the Louisiana black bear. With proper management, bear habitat which is characterized by relatively inaccessible terrain, thick understory vegetation, abundant hard and soft mast foods, and den sites could be promoted. In addition, purchase of additional lands would protect den trees, typically large baldcypress (Weaver and Pelton 1994), water tupelo and overcup oak, leading to higher reproductive success.

Species of Special Concern

Rafinesque's big-eared bat and the southeastern myotis bat occur in forests on the Upper Ouachita and Felsenthal NWRS and surrounding lands. Roost sites consist primarily of hollow, water tupelo and blackgum trees in mature forests. Baldcypress, magnolia, willow oak, and sweetgum are also used. Restoration and enhancement of wetlands and prairie/grassland areas in the expansion area will increase foraging opportunity for bats. The reforestation and enhancement of bottomland and upland hardwoods in the expansion area would increase habitat quality and diversity and provide more opportunities for foraging and roosting.

Many high priority shorebird species move through the Mississippi Alluvial Valley (MAV) during the spring and fall migration periods. Shorebirds are particularly limited by foraging opportunities at mudflats during the fall migration from August to October. The protection and/or enhancement of shallow water impoundments would benefit these species and a number of other shorebird, secretive marshbird, and wading bird species. Future conservation of additional riparian areas in the Ouachita River through subsequent expansion, land acquisition, and associated improvements in hydrologic function, water quantity and quality, and connectivity of aquatic/wetland systems and floodplain forests would increase habitat suitability and increase potential to satisfy life cycle requirements for fish species of concern such as paddlefish and alligator gar, and endangered mussels, in spawning, nursery, and foraging waters.

Waterfowl

As one of the few remaining areas in the lower MAV not drastically altered by channelization and drainage, the Ouachita River Basin contains some of the most intact and least disturbed bottomland hardwood forests in the MAV. The Ouachita River Basin is widely recognized for its importance as wintering habitat for waterfowl and the Upper Ouachita and Felsenthal NWRs were established to protect these significant wetland habitats.

The Refuge provides important foraging and resting (sanctuary) habitats within the lower MAV for waterfowl and serves an integral role in the NAWMP and LMVJV on a national, flyway, and local scale. During peak years, 200,000-300,000 waterfowl have been estimated to winter within the current acquisition boundary of Upper Ouachita and Felsenthal NWRS. The Refuges have strived to increase managed waterfowl habitat to meet the habitat and population goals of the NAWMP as stepped-down through the LMVJV. Acquiring additional habitat will help to meet these goals. Also, purchasing additional lands would increase the acreage of protected, restored, and managed wetland

habitats for wintering waterfowl as well as provide vital breeding, nesting, and brood-rearing habitat for wood ducks and hooded mergansers.

Migratory Birds
Numeric population objectives are given by Rich et al. (2004) for species of continental importance in the Partners in Flight plan. The following species of continental importance require bottomland hardwood habitat for breeding. Successful implementation of this expansion ultimately provide a valuable habitat link of bottomland hardwood forest on Upper Ouachita and Felsenthal NWRs, which would not only push the refuge over the threshold for the area-dependent breeders with the largest patch-size requirements (see surrogate species discussion above), but also would allow the refuge to contribute to the listed continental population objectives for the 6 species that have been given objectives for "increase."

Table 1. Species of Continental Importance as Identified in the North American Landbird Conservation Plan. Species listed utilize bottomland hardwood habitats.

Common Name	Continental Population Objective	Utilize BLH	Upper Ouachita and Felsenthal NWRs Breeding
Swallow-tailed Kite	Increase 100%	X	
Red-headed Woodpecker	Increase 100%	X	X
Acadian Flycatcher	Maintain	X	X
Wood Thrush	Increase 50%	X	
White-eyed Vireo	Maintain	X	X
Yellow-throated Vireo	Maintain	X	X
Yellow-throated Warbler	Maintain	X	X
Cerulean Warbler	Increase 100%	X	X
Prothonotary Warbler	Increase 50%	X	X
Swainson's Warbler	Maintain	X	X
Kentucky Warbler	Increase 50%	X	X
Hooded Warbler	Maintain	X	X

PRIORITY CONSERVATION AREAS
Upper Ouachita and Felsenthal NWRs lie in both the LMAV and West Gulf Coastal Plain, which are arguably the most important corridor for waterfowl and migratory birds in North America. Most of the acreage within the proposed acquisition boundary was rated at moderate priority for restoration to bottomland hardwood forest by Twedt et al. (2006). Currently, Upper Ouachita and Felsenthal NWRs fall into the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative (GCPO LCC). The GCPO LCC has identified priority habitats and species which are also found on Upper Ouachita and

Felsenthal NWRs and proposed expansion areas (Table 2). Priority rankings in this document were derived at the landscape scale and given based on the potential for restoration to reduce habitat fragmentation, increase average forest patch size in the LMAV, restore connectivity of floodplains and habitats, and increase water quality and quantity.

Table 2. Priority habitats and species of the Gulf Coastal Plains and Ozarks LCC found on Upper Ouachita and Felsenthal NWRs and proposed expansion areas.

Bottomland forest
Swainson's warbler
Cerulean Warbler
Hooded warbler
Wood thrush
Prothonotary warbler
American woodcock
Southeastern myotis
Rafinesque's big-eared bat
Mesic Hardwood Forest
Cerulean warbler
Hooded warbler
Worm-eating warbler
Wood thrush
Kentucky warbler
Southeastern myotis
Northern long-eared myotis
Pine forest
Brown-headed nuthatch
Canebrake rattlesnake
Louisiana black bear
Red-cockaded woodpecker
Bachman's sparrow

VULNERABILITY AND RESILIENCY

Climate Change

Refuge priority species have not yet been formally evaluated for vulnerability to climate change. However, the following sections summarize some of the potential consequences of climate change on these refuges.

Changes in Temperature

Increases in temperature, including fewer freezing days, more days over 90 degrees Fahrenheit, and higher mean temperatures overall, may have a profound effect on refuge ecology and associated management. Productivity of the refuge's forested and agricultural systems may decrease as temperatures, although it could also be possible that forests will become more productive with a longer growing season and higher CO_2 concentrations. Subtropical wetland forest systems consistently increase in productivity with higher CO_2 concentrations, but also release more methane (CH_4), which is a more potent greenhouse gas than CO_2 (Bridgham et al. 2006). With increasing sustained temperatures, aquatic systems will be characterized by lower dissolved oxygen (DO), resulting in more frequent fish kills and less productivity (CCSP 2009). Heat stress can directly affect forest ecosystems. For example, in a study on the Savannah River Site in South Carolina, cow oak (*Quercus michauxii*) regeneration in canopy gaps like those prescribed by the LMVJV Forest Resource Conservation Working Group(2007), was affected by heat stress; survival was higher in shaded areas and very low in the centers of gaps. Researchers attributed low survival near the center of the gaps to heat and moisture stress (Collins and Battaglia 2002). Agricultural systems also are likely to be affected; responses of crop plants to heat stress have been well studied.

Changes in Precipitation Amount and Patterns

Precipitation timing, overall quantity, and intensity have already changed over much of the United States, including central Arkansas. Further changes are predicted (CCSP 2009). Specifically, for the area including Upper Ouachita and Felsenthal NWRS, the following changes already have been observed between 1958 and 2007, and similar trends are predicted through 2100: higher fall precipitation, decreased precipitation during spring and summer, increased frequency of summer drought conditions, and increasing intensity of rainfall events. The result would be more drought stress during the growing season coupled with more flooding events caused by more intense rainfall.

Summer drought would decrease tree survival on afforested lands, especially during the first growing season after planting, and may necessitate herbaceous weed control as a method of managing soil moisture in recently reforested areas. Locally, establishment of forested habitat that would be enabled by implementation of this project would buffer temperature extremes compared with open land.

Changes in Phenology and Species Distribution Due to Climate Change

Although the precise effects of climate change on the refuges are unknown, it is highly likely that the increase in temperatures would cause the distributional shift of some species or whole communities as summarized by Fischlin et al. (2007). Many migratory animal species, including birds, move annually in response to weather conditions, and their behavior, including migratory routes and timing, is therefore sensitive to climate. Changes in the timing and geography of migration are of particular concern because of a potential disconnect between migrants and their food resources if the phenology of each advances at different rates (Root et al. 2003). Implementation of this project would ensure habitat refugia for wildlife in the LMAV and Gulf Coastal areas affected by range shifts or contractions.

Effects of increasing patch size and reducing fragmentation on vulnerability to climate change

Implementing the proposed acquisition would reduce vulnerability by increasing habitat connectivity, integrity, and diversity and by reducing non-climate change ecosystem stressors, two important objectives from the Service's strategic plan for responding to accelerating climate change (U.S. Fish and Wildlife Service 2010). Over the long term, established forests would be more resilient to change compared with agricultural habitats because their much greater diversity would confer stability and the capacity to change without suffering catastrophic declines in diversity or productivity. The proposed expansion will allow for greater buffering of the effects of climate change by conserving more habitats and increasing carbon sequestration.

Habitat Fragmentation

The proposed acquisition would directly address aquatic and terrestrial habitat fragmentation in LMAV bottomland hardwoods by allowing enlargement of habitat patches, increasing total acreage in forested habitat, buffering interior forest habitats, and restoring functional habitat corridors. This threat, as well as those from invasive species and hydrologic alterations, is discussed in the LPP.

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Appendix E. Public Involvement, Consultation, Coordination, and List of Preparers

Effective conservation usually begins with effective community involvement. To ensure that our future management considers the issues, concerns, and opportunities expressed by the public, we used a variety of public involvement techniques in our planning process. What follows is the chronology of public outreach activities we conducted while preparing this document.

PUBLIC INVOLVEMENT SUMMARY

We began the Draft LPP process for Felsenthal and Upper Ouachita NWRs expansion in the summer of 2011. During the scoping period, we solicited comments on the major issues that the public and others felt we should address in the Draft LPP. We also held two public meetings during the scoping period.

The Service consulted and coordinated the development of this project with the Arkansas Game and Fish Commission, Louisiana Department of Wildlife and Fisheries, the Public Land Trust, and Plum Creek Timber Company. Letters were sent to inform state, federal, tribal, and local agencies and conservation organizations of the Service's refuge expansion proposal. No negative responses were received from these entities.

The Service held two public scoping meetings, one at the Economic Development Commission in Crossett, Arkansas, on July 6, 2011, and the other at the Visitor Center in Bastrop, Louisiana, on July 7, 2011. There were approximately 35 citizens in attendance at the Arkansas meeting and 15 in attendance at the Louisiana meeting.

The Service received a total of 26 comments on the proposed expansion from the public scoping meetings. Many comments were directed toward wanting to expand the refuges into areas not initially delineated in the planning process. Some questions and concerns were raised by individuals regarding property taxes; where the money to purchase the proposed lands would come from; the more restrictive hunting seasons or regulations on refuges than those on private or state lands; buying up land where individuals have hunting leases; how the Corps of Engineers manages the Ouachita River; whether the acquisition of lands would affect the operation and maintenance of the Ouachita River Navigation Project in Arkansas and Louisiana; whether the Service is coordinating with the Corps of Engineers; whether the appraisal of lands would devalue the property due to RCW management; and concern that the Service would buy or take land from unwilling sellers. Certain areas were requested to be excluded from the proposed acquisition boundary, which the Service removed during the development of the Draft LPP/EA.

The Draft LPP/EA for the proposed expansion was made available to the public on February 22, 2013, for a 30-day comment period ending on March 22, 2013. The comment period was then extended for another 30 days, ending on April 22, 2013. With the release of the Draft LPP/EA, the Service sent out news releases to Arkansas and Louisiana media outlets to help announce the public review and comment period for the proposed expansion of Upper Ouachita and Felsenthal NWRs. Public notices were printed in *The Ashley News Observer*, the *Eagle Democrat*, the *Saline River Chronicle*, and the *Magnolia Reporter*. News releases were also sent to media contacts in El Dorado, Monticello, Ashley and Bradley Counties, *Ouachita Citizen, Ruston Leader*, the *News Star*, *Farmerville Gazette*, *the Bastrop Enterprise*, and numerous radio, television, and online outlets.

Information was also posted on the project's website http://www.fws.gov/southeast/ouachitafelsenthal. Paper and/or CD copies of the Draft LPP/EA were mailed to requesting parties and the mailing list of over 150 individuals and organizations. The documents were also posted on the project's website. During the comment period, the Service held a public open house from 3:00 to 8:00 p.m. on April 4, 2013, at the Felsenthal NWR Visitor Center, 5531 Highway 82 West, Crossett, AR 71635, with approximately 31 attendees. The Service held a public hearing from 5:00 to 8:00 p.m. on April 9, 2013, at the Warren Courthouse, 104 Myrtle Street, Warren, AR, 71671, with approximately 84 attendees.

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Appendix F. Summary of Public Comments and Service Responses on the Draft Land Protection Plan and Environmental Assessment

INTRODUCTION

In February 2013, we completed the Draft Land Protection Plan and Environmental Assessment for the Proposed Expansion of Felsenthal and Upper Ouachita National Wildlife Refuges. That Draft Land Protection Plan and Environmental Assessment (Draft LPP/EA) outlined three alternatives for acquiring lands from willing sellers to be included in the National Wildlife Refuge System, and identified Alternative 2 as the Service's preferred alternative. The Draft LPP/EA was released for a 30-day public review from February 22 to March 22, 2013. In response to public requests, we extended that period another 30 days, which ended April 22, 2013.

We evaluated all the letters or e-mails we received and the oral testimony we recorded in our public hearings during that period. This document summarizes the public comments that raised issues and concerns within the scope of this Final LPP/EA and our responses to them. Based on our analysis in the Draft LPP/EA and our evaluation of those comments, we modified Alternative 2, which remains our preferred alternative in this Final LPP/EA. Our modifications include additions, corrections, or clarifications of our preferred management actions. We determined that none of those modifications warrant our publishing a revised or amended Draft LPP/EA before publishing this Final LPP/EA.

Below are two important changes in the Final LPP/EA.

In response to concerns about impacts to the local economy in Bradley County, Arkansas, our expansion proposal substitutes the lands (1,981 acres) in Bradley County with some potential acquisitions in fee-title from willing sellers in Ashley County, Arkansas, and Morehouse Parish, Louisiana. The overall acreage for this landscape conservation plan remained unchanged. However, this change resulted in an increase in upland pine and hardwood acreage and a decrease in bottomland hardwood acreage. The modification allows the Service to maintain the conservation goals for migratory birds and the endangered red-cockaded woodpecker.

An additional 1,356 acres were also removed from the preferred alternative as the result of an approved minor expansion to Upper Ouachita NWR. The minor expansion is part of the Barrs and Glawson Tract which includes property originally identified in the major expansion for Felsenthal and Upper Ouachita NWRs, however, a portion of the Barrs and Glawson tract was scheduled to be presented to the Migratory Bird Conservation Commission (MBCC) for funding consideration. The MBCC requires all funded properties be within an approved acquisition boundary. In order to meet the MBCC deadline, it was necessary to remove these lands from the project and move forward with a minor expansion to bring the affected tract within the current acquisition boundary.

New maps and language were included to clarify the changes made throughout this document

The Service's Southeast Regional Director will issue a finding of no significant impact (FONSI) after the following occurs:

- The Final LPP/EA is reviewed and approved by the Director of the Fish and Wildlife Service;

- The Regional Director reaffirms that the Final LPP/EA will achieve the purposes for which these refuges were established, will help fulfill the mission of the National Wildlife Refuge System, and will comply with all legal and policy mandates.

Once the Regional Director has signed and dated the FONSI, we will publish the Final LPP/EA on the refuges' websites. That notice will complete the planning phase of the Final LPP/EA process, and we will begin the implementation phase.

SUMMARY OF PUBLIC DRAFT LPP/EA COMMENTS

Approximately 186 respondents submitted comments during the public review period from February 22, 2013, to April 22, 2013. In general of all the comments received, about one-half supported the expansion whereas one-half were against the expansion, mostly into Bradley County, Arkansas. Following the public review and comment period, the Service reviewed all comments submitted to assist in evaluating the proposal to develop the Final LPP/EA. Under NEPA, the Service must respond to substantive comments. For purposes of this Final LPP/EA, a substantive comment is one that was submitted during the public review and comment period which is within the scope of the proposed action (and the other alternatives), is specific to the proposed action, has a direct relationship to the proposed action, and includes reasons for the Service to consider it. The comments submitted during the public review and comment period were evaluated and summarized. Comments on like topics were grouped together. The Service's responses to the comments are provided. The page numbers referenced relate to the original page numbers in the Draft LPP/EA that was released for public review and comment (USFWS 2013).

PUBLIC DRAFT LPP/EA COMMENTS

General Comments

Comment: Congressman Tom Cotton, State Representative Jeff Wardlaw, Mayor of Warren, Hermitage School Board, Bradley County Economic Development Corporation, and others expressed concerns for the local economy with the expansion of the Felsenthal NWR boundary in Bradley County. Many believed the Service should exclude landowners who have already indicated their position as unwilling sellers during the comment period, and also grant permanent, transferrable easements for landowners who might potentially become landlocked by the expansion. Congressman Cotton is concerned about the potential for eminent-domain use.

Service Response: Based on public comments, the Bradley County, AR, lands were removed from the expansion boundary and substituted for potential willing-seller lands in Ashley County, AR, and Morehouse Parish, LA, under Alternative 2 (Service's Preferred Alternative). Landowners within a refuge boundary retain all the rights, privileges, and responsibilities of private land ownership, including access.

Under its willing-seller-only policy, the Service purchases property only from willing sellers at fair market value (i.e., the reviewed, approved, appraised value). Under that policy, private landowners might choose to whom they sell, and are not compelled to sell to the government, nor do we pressure them to do so.

Comment: Multiple respondents, including Arkansas Game and Fish Commission, the Nature Conservancy, the Louisiana Wildlife Federation, the Friends of Felsenthal, Inc, and the Friends of Black Bayou, have expressed support for the expansion of Upper Ouachita and Felsenthal NWRs and believe implementation of the project will provide increased habitat to support wildlife, enhance wildlife-dependent recreational opportunities, be important to the economies of the surrounding towns and counties, and form an extensive wildlife corridor.

Service Response: Comments noted.

Comment: The Louisiana Department of Wildlife and Fisheries (LDWF) supports the expansion as long as the Service continues working with them to maintain and support hunting on Upper Ouachita NWR and any new lands that may be acquired in the expansion area. LDWF also believes that the Service needs to actively manage the lands to ensure sustainability and hopeful enhancement of associated wildlife populations and recreational opportunities versus solely "protecting."

Service Response: Upper Ouachita NWR's hunt plan allows for hunting to be opened on future lands of the refuge. The Service will continue to meet annually with LDWF to coordinate hunting seasons.

Comment: Two respondents who support the project believe the Service should consider connecting D'Arbonne NWR with the Upper Ouachita and Felsenthal NWRs via the Ouachita River. One of the respondents believes that when connected the total acreage of the combined refuges will exceed 200,000 acres and could be the first of its kind as a national hunting preserve or national recreation area administered by the Service. One of the respondents would like to see the Service establish a non-development 1/4- to 1/2-mile wildlife corridor on both sides of the Ouachita River from Bayou Desaird on the east side and Tupawek Bayou on the west bank.

Service Response: Comment noted; however, this Final LPP/EA only includes the boundary expansions of Upper Ouachita and Felsenthal NWRs.

Comment: Multiple respondents support the project and believe the project would allow a more natural water regime, enhance hydrology, enhance timber management, and increase ecological benefits. One respondent believes that although the counties in the expansion are mostly rural, from the point of view of many species of wildlife it is in fact highly developed. This respondent also believes that this expansion is good because compared to other parts of the country, this area has very little public land.

Service Response: Comment noted.

Comment: One respondent pointed out that although the Service does not pay property taxes, the in lieu of taxes that the Service pays has declined over the years. On average, the Service pays about $2.88 per acre per year to Bradley County, whereas the average tax being paid by others in the county is $0.80 to $0.85 an acre. The respondent also noted in the local paper published recently, hundreds of delinquent taxpayers are what are really causing trouble in the Hermitage School District. The respondent noted that the Service pays more than what the taxes have been for the land we own and he as the Justice of Peace in Bradley County has to support the expansion.

Service Response: The Refuge Revenue Sharing Act of June 15, 1935, originally paid local municipalities 25 percent of the receipts the neighboring refuge collected from the sale of various products or privileges. However, if that refuge generated no revenue, the local municipalities received no payment. Congress amended the Act in 1964 to provide a payment of 25 percent of the net receipts, or three-quarters of 1 percent of the adjusted purchase price of refuge land, whichever

was greater. By 1976, refuge receipts were insufficient to make the payments, and Congress reduced them accordingly. It amended the Act again in 1978 to include the following:

1. Congress can appropriate funds to make up any shortfall in the revenue funding.
2. All lands the Service administers qualify for revenue sharing.
3. Local municipalities can use the payments for any purpose (not just for schools and roads).

We reappraise refuge lands at least once every 5 years to ensure that those payments are based on market value. More information on refuge revenue sharing can be found online at www.fws.gov/refuges/realty/RRS.html.

Even at the current percent level of refuge revenue payments, Bradley County will receive more than they would have received in tax revenues under private ownership.

Comment: One respondent supports the project and believes that if the refuges had not been established, much of the wildlife habitat along the Saline and Ouachita Rivers' corridors would have been substantially degraded due to the ever-increasing trends of the private timber industry to move toward "plantation" management. Another respondent believes the Ouachita River is being gradually eroded by development.

Service Response: Comment noted.

Comment: One respondent supports the expansion and believes it will be critical to plants and animal migrations during the current changing climate.

Service Response: Comment noted.

Comment: One respondent noted that after interviewing an entire community on the memories of growing up near the "swamp," believes that although many people might have had reservations about the refuge in the beginning, now realize its benefits.

Service Response: Comment noted.

Comment: Many respondents were completely against the expansion of the Felsenthal NWR into Bradley County, Arkansas. The respondents cited the following reasons for being against the expansion: (1) Loss of tax revenue to county governments; (2) loss of tax revenue to local school districts; (3) did not want the federal government as their neighbors; (4) why does the federal government need more property to manage when the resources, money, and people are not available to properly manage all the currently owned lands; (5) the federal government is 14.3 trillion dollars in debt, why add more land; (6) payment of in lieu of taxes has declined from $70,640 in 2001 to $30,695 in 2012 in Bradley County; and (7) increase of revenue to local business income has not happened in Bradley County as promised due to lack of good management of the Ouachita River and Felsenthal NWR.

Service Response: Comment noted. The lands that were included in Bradley County, Arkansas, were removed from the expansion boundary under Alternative 2 (the Service's Preferred Alternative).

Comment: Many respondents against the expansion into Bradley County, Arkansas, believe closing the gap between Louisiana and Arkansas is a plausible expansion of the refuge. Some of the respondents believe the Ouachita River should be used as the north boundary.

Service Response: Comment noted. Based on public comments, the Bradley County lands were removed from Alternative 2 (the Service's Preferred Alternative).

Comment: One respondent is against any expansion in southern Arkansas and north Louisiana. This respondent believes that having over 9,000 acres enrolled in a conservation easement already maintains the goals set forth in the project.

Service Response: Although conservation easements are powerful tools for achieving some of the goals and objectives, the Service believes the remaining lands are needed to meet the wildlife conservation goals and objectives set forth in this plan.

Comment: One respondent believes that since the federal government is talking about doing away with payment of in lieu of taxes, that Bradley County should be concerned that payments may go away completely.

Service Response: The Service is also concerned. Congress can appropriate funds to make up any shortfall in the revenue funding.

Comment: One respondent notes that if the refuge is expanded into Bradley County it will be the farthest point northwest of the refuge and will be very expensive to manage and access.

Service Response: Comment noted. As stated above, the lands that were included in Bradley County, Arkansas, were removed from the expansion boundary under the Service's Preferred Alternative.

Comment: Multiple respondents note that even though the Service will not use taxpayer money to buy more land, it will take taxpayer monies to manage and operate the refuge. Other respondents noted that federal duck stamp money is a tax. Several respondents believe that if the expansion goes through in Bradley County, ultimately, the general public's taxes will be raised.

Service Response: This Final LPP/EA provides the Service's best estimate of future needs and details program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for the Service's strategic planning and program prioritization purposes. These plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

The Duck Stamp is a revenue generating stamp (tax). However, Federal Duck Stamps are vital tools for wetland conservation. Ninety-eight cents out of every dollar generated by the sale of Federal Duck Stamps go directly to purchase or lease wetland habitat for protection in the National Wildlife Refuge System. Understandably, the Federal Duck Stamp has been called one of the most successful conservation programs ever initiated and is a highly effective way to conserve America's natural resources.

Comment: Several respondents wonder when this project was envisioned, and why most people in Bradley County had not heard of it sooner.

Service Response: The Director of the Fish and Wildlife Service approved the preliminary project proposal (PPP) on December 26, 2010. The Service held two public scoping meetings in July 2011, summarized comments and developed and analyzed alternatives from August 2011 through August 2012. The Director approved an addendum to the PPP on January 10, 2013, which allowed the Service to increase the originally proposed acquisition boundary and development of further detailed

planning. The original news release was sent to more than 1,900 entities throughout Arkansas, including Bradley County outlets. During the scoping process in 2011, comments were submitted from residents of Bradley County to remove the Pine Prairie camps. Based on those comments the Service removed Pine Prairie camps from the Draft LPP/EA.

We believe we have done a good job of informing the public throughout the planning process. On the other hand, we recognize that there is always room for improvement. Local town and county elected officials, our congressional representatives, and the respective governor's offices are on our project mailing list, and received every public notification we sent. During this planning process, many individuals signed up to be included on our mailing list.

Comment: Almost all 84 attendees at the Warren public meeting on April 9, 2013, were against the expansion of the refuge into Bradley County for many of the reasons stated above. Many who were landowners declared they were not willing sellers.

Service Response: Comment noted. The lands that were included in Bradley County, Arkansas, were removed from the expansion boundary under the Service's Preferred Alternative.

Comment: Multiple respondents believe many of the statements listed in the Draft LPP/EA are inaccurate and misleading. Multiple respondents note that the Draft LPP/EA claims that "the primary threat to wildlife in this area is destruction of habitat due to residential and commercial development" yet on page 39, the population table shows all of the affected counties have decreased in population and nearly one-quarter are living in poverty.

Service Response: Expanding the refuge would benefit the local economy both directly, by increasing the expenditures of the refuge for goods and services in the local community, and indirectly, by increasing the number of visitors to the area and a concomitant increase in their expenditures. We feel that expanding the refuge will maintain public access on those lands by protecting them from private development. Even under the descriptions of Alternative 1 (no expansion), the refuge provides a substantial economic benefit for the local community, and plays a role in attracting increasing numbers of visitors to the area.

Comment: Multiple respondents note that the proposal states that "current private landowners are managing the red cockaded woodpecker (RCW) to maintain existing populations, (but) the management philosophy could change if lands are sold to a non-governmental entity (page 7)." The respondents note that these are future events and not a valid reason for expanding the government domain.

Service Response: We respectfully disagree since these lands are subject to development and habitat fragmentation. Conservation of the red-cockaded woodpeckers as a species depends primarily on the conservation of populations on federal lands. Existing legislation, especially the Endangered Species Act (Section 7), requires that federal agencies conserve listed species and maintain diversity within their lands. Within the Endangered Species Act (Section 3), conservation is defined as "the use of all methods and procedures necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this act are no longer necessary." Thus, to the extent that legislation reflects public perception, it is the public's view the recovery of endangered species and conservation of biodiversity is the responsibility of the federal government to be conducted primarily on publicly owned lands under federal control. Private landowners can contribute substantially to conservation, but such contributions above the required protection against direct harm (take) are voluntary (2003 Red-Cockaded Woodpecker Recovery Plan).

Comment: Multiple respondents also note that "the effects of global climate change will gradually increase in north Louisiana and south Arkansas over the next 100 years" (page 7), but the responders can provide numerous scientists who do not support these claims.

Service Response: The Service recognizes there are disagreements within the environmental community. With the weight of scientific data pointing to the changes in the environment due to increasing concentrations of greenhouse gases—called climate change—the Service has begun monitoring and analyzing impacts of climate change on fish and wildlife and working toward solutions to help species adapt to their changing habitats. Representing a compilation of the work of hundreds of the world's top scientists, the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports are important to the Service's understanding about how it can meet this challenge. The IPCC is a scientific organization set up by the World Meteorological Organization and the United Nations Environmental Program. It assesses, analyzes, and reports on the latest science on climate change and its human and environmental impacts. Hundreds of the world's most respected scientists have contributed to the IPCC's Assessment Reports of the state of knowledge on climate change. Many U.S. scientists have contributed to the findings in IPCC Assessment Reports, and these reports are a highly credible source of information on climate change science. In its most recent Assessment Report, the IPCC recounts the best and most current evidence of the effects of warming on natural systems on all continents and most oceans. Of more than 29,000 observational data series around the world that are examined by the IPCC, more than 89 percent are consistent with the direction of change expected in response to global warming. For more information on climate change, visit the Service's climate page site at http://www.fws.gov/home/climatechange.

Comment: One respondent noted that the draft proposals state that there are existing federal, state, and local environmental regulations that protect fish, wildlife habitats, and natural resources of these lands, yet the respondents believe there is no evidence that these laws have not protected the land and further government acquisition is required (page 43).

Service Response: The Service agrees that there are many laws and regulations protecting land such as the Clean Air Act and Clean Water Act. However, none of these laws and regulations prevents the development of this land nor land management that is detrimental to wildlife and their habitats and yet still be legal. The Service seeks to protect and conserve this land for generations to come.

Comment: Multiple respondents note that they are personally aware of objectionable letters sent to the Service since 2011; however the draft proposal claims that no unfavorable responses have been received (page 27).

Service Response: Of the 26 comments received during the public scoping period, most were favorable; however, some respondents noted concerns regarding property taxes; where the money to purchase the proposed lands would come from; the more restrictive hunting seasons or regulations on refuges than those on private or state lands; buying up land where individuals have hunting leases; how the Corps of Engineers manages the Ouachita River; whether the acquisition of lands would affect the operation and maintenance of the Ouachita River Navigation Project in Arkansas and Louisiana; whether the Service is coordinating with the Corps of Engineers; whether the appraisal of lands would devalue the property due to RCW management; and concern that the Service would buy or take land from unwilling sellers. Certain areas were requested to be excluded from the proposed acquisition boundary of which the Service removed during the development of the Draft LPP/EA.

Comment: Multiple respondents acknowledge that the lands will be acquired through non-tax based funding sources like the LWCF and federal Duck Stamp sales; however, are concerned about the increased cost of managing and keeping up the thousands more acres of land in the expansion.

Service Response: The annual operating costs to maintain the refuge are tax based and budgeted within the federal budget annually. However, refuge lands demand very little in the way of expensive services or infrastructure from local governments and they generate tourism dollars. This Final LPP/EA provides the Service's best estimate of future needs and details program planning levels that are sometimes substantially above current budget allocations and, as such, are primarily for the Service's strategic planning and program prioritization purposes. These plans do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

As stated previously, expanding the refuge will benefit the local economy both directly, by increasing the expenditures of the refuge for goods and services in the local community, and indirectly, by increasing the number of visitors to the area and a concomitant increase in their expenditures. We feel that expanding the refuge will maintain public access on those lands by protecting them from private development. Even under the descriptions of Alternative 1 (no expansion), the refuge provides a substantial economic benefit for the local community, and plays a role in attracting increasing numbers of visitors to the area.

Comment: Multiple respondents do not support the expansion because they believe the Service will use eminent domain to force landowners out of their land. One respondent believed that it is discrimination for the Service to offer a willing seller owner policy now when land was taken by eminent domain in the 1970s. Other responders believe the Service should take better care of the land it owns instead of trying to get more. Several respondents noted that not one government employee can guarantee that the Service will not use eminent domain.

Service Response: Land interests are acquired from willing sellers only. Any landowner that is within an approved acquisition boundary, even though the surrounding parcels may have been purchased by the Service, retains all the rights, privileges, and responsibilities of private land ownership. This includes, but is not limited to, the right to access, hunting, vehicle use, control of trespass; the right to sell the property to any other party; and the responsibility to pay local real estate or property taxes. It is the Service's policy to work with willing sellers to acquire fee-title interest or less-than-fee-title interest in property.

Comment: Multiple respondents would like to know where the money is coming from to buy the land.

Service Response: The main funding sources the Service can draw from for land acquisition are the Migratory Bird Conservation Fund and the Land and Water Conservation Fund (LWCF). Upper Ouachita and Felsenthal NWRs will most likely draw funds through the LWCF, which is mainly derived from the sale of offshore oil leases and is intended for land conservation. Other sources of funding also are possible, including donations. From time to time, Congress also chooses to directly fund land acquisition.

Comment: Multiple respondents believe the expansion will negatively affect the leases that they have on lands that are owned by others. Many believe they have invested a lot of resources on the land and are worried the Service will just take the land away.

Service Response: Leases are subject to the rights, conditions, and privileges allowed by the landowner. Lease agreements are normally terminated once the Service acquires the land from willing sellers.

Comment: Multiple respondents are concerned that if they own land surrounded by the Service they will not have access or access as they are accustomed to in order to get to their land.

Service Response: As stated previously, landowners within a refuge boundary retain all the rights, privileges, and responsibilities of private land ownership, including access.

Comment: One respondent is concerned that the federal government does not negotiate on the price of the land and believes this is not fair. Another respondent also noted that recreational land would be worth substantially more than the federal government is willing to pay for it.

Service Response: Our appraisals must satisfy the requirements of the Uniform Standards of Professional Appraisal Practice and the Uniform Appraisal Standards for Federal Land Acquisition. In addition, a government-approved review appraiser must review our appraisals to ensure that they meet those standards. That system allows several stages of review to ensure that the appraisal of each property accurately represents its market value. The Service can only acquire land at fair market value. The commenter is correct that recreational land can add significant value to land. The recreational value is considered in the appraisal process.

Fish and Wildlife Population Management

Comment: One respondent noted that the Service incorrectly listed on Page 9 Kiamichi and Rich Mountain salamanders and the Rich Mountain Silt-mouthed snail as occurring on the refuges; however, the respondent notes that these species are only found on the Ouachita National Forest in Oklahoma and the Rich Mountain portion in Arkansas.

Service Response: Felsenthal and Upper Ouachita NWRs are within West Gulf Coastal Plain physiographic region. Table 1 on page 9 lists priority habitats and priority species within the broad area of the West Gulf Coastal Plain. It is correct that the Kiamichi and Rich Mountain salamanders, as well as the Rich Mountain slit-mouthed snail do not occur on Felsenthal or Upper Ouachita NWRs and, therefore, have been removed from Table 1.

Comment: One respondent was concerned the Service criticized young plantation management which he believes provides habitat for the Bachman's sparrow. The respondent also noted that birds mentioned in the plan were common and do not need more land for them.

Service Response: Bachman's sparrow populations have experienced steady and rapid declines during the last several decades. Therefore the Bachman's sparrow is considered a species of concern at the federal level and is listed as threatened or endangered in many states. Good woodland Bachman's sparrow habitat is characterized by stands of mature pine with an open overstory and a savanna-like understory of grasses and forbs that is maintained by frequent fire. Young pine plantations can provide suitable habitat for Bachman's sparrow for a few years during early-successional stages, but become unsuitable within 4 to 7 years after planting. Typical commercial pine plantation management involves timber harvest under a 30- to 40-year rotation (or less), therefore, few of these areas provide long-term and consistent Bachman's sparrow habitat.

The conservation status of most bird species listed in this plan range from endangered to locally common, but experiencing regional or continental decline. Many of these bird species require large areas of unfragmented habitat or specific habitat needs that will be facilitated under Alternative 2, the Service's Preferred Alternative.

Habitat Management

Comment: One respondent believes that instead of expanding the refuge, the Service set up programs to encourage ways for taxpaying landowners to better manage/protect wildlife and the habitats they need, including forest management. This respondent believes tax breaks or better pricing on supplemental feed and materials should be offered to encourage better stewardship of privately owned lands.

Service: We agree more can and should be done to assist private landowners in protecting wildlife on their lands. The Service's Partners for Wildlife Program is just one program which provides technical and financial assistance to private landowners that are restoring and enhancing fish and wildlife habitat. Program emphasis is on restoration of historic vegetation and hydrology. Seventy percent of the project area must reflect the historic vegetation and hydrology, while 30 percent may consist of wildlife enhancement activities. Landowners must sign a minimum 10-year agreement for some projects and a 25-year agreement for restoration projects. As always, this program along with many others is subject to available funding.

Comment: One respondent wanted to know why it took a year and a half to write a management plan. The respondent and others believed the Service should be ashamed in taking so long to write this type of document.

Service Response: Comment noted.

Visitor Services

Comment: LDWF has a few concerns about the hunting program at Upper Ouachita NWR and on the proposed expansion lands if acquired. The LDWF outlined the following concerns: it believes the Service should open up the administratively closed hunt areas in order to better meet the demand for hunting on the refuge; it is concerned that restricting use of easily accessible areas to hunting for the limited non-hunting use is counterproductive; continued diversion of funding from refuges to support new initiatives of the Service are counterproductive to implementing management of habitat and wildlife for hunting and other uses on the refuge; and it encourages the Service to review the needs of the Refuge System so not to impede conservation actions on the refuge.

Service Response: Upper Ouachita NWR does not currently have administratively closed hunt areas. The only areas closed to hunting are for waterfowl sanctuary purposes. Upper Ouachita NWR's hunt plan allows for hunting to be opened on future lands of the refuge. The Service will continue to meet annually with LDWF to coordinate hunting seasons.

Comment: Multiple respondents were concerned about the limitations of access to hunting areas on Felsenthal NWR, especially for use of ATVs and access for mobility impaired individuals. Respondents believe that access to places on the refuge is getting smaller and smaller. One respondent believes the Service is limiting hundreds of people that have been hunting this area since they were kicked out in the 1970s. The respondents believe that access will continue to decrease if the refuge is expanded.

Service Response: We respectfully disagree. All-terrain vehicle (ATV) trail closings in the past three years have been an attempt to provide more area of undisturbed habitat for both wildlife and refuge users. The Service believes that adequate access is provided to the public, keeping all users in mind. Currently, Felsenthal NWR contains approximately 20 miles of roads open to vehicles as well as extensive boat access. In conjunction with vehicle and boat access, approximately 60 miles of

ATV trails exist. All ATV trails are open to mobility impaired individuals. Mobility impaired individuals also reserve special privileges above normal regulations which include extended use of ATVs up to 100 yards from designated trails, as well as the use of ATVs to retrieve downed game. ATV use was found compatible through the compatibility determination process in the 2010 Comprehensive Conservation Plan.

Comment: Multiple respondents believe there are too many people using the Felsenthal NWR as it is and the expansion will just add to that. This respondent believes the refuge and the expansion is anything but a quiet sanctuary for wildlife.

Service Response: We respectfully disagree. We believe these refuges have tremendous potential for growth in the various programs we offer. Our policies and regulations attempt to minimize conflicts from the various user groups. Through the compatibility determination process, we analyze uses and development stipulations to ensure that the use is compatible with the purpose for which the refuge was established.

Comment: Multiple respondents believe the compatibility determinations for public use on Felsenthal NWR are grossly overstated such as there seems to be no wildlife photography, bicycling, firewood cutting, dog field trials, or berry picking even occurring on the refuge.

Service Response: We purchased the land for the refuge for specific reasons, under certain authorities. The Refuge Improvement Act of 1997 not only defines priority public uses (hunting, fishing, wildlife observation, wildlife photography, and environmental education and interpretation), but also establishes a process for determining whether they are appropriate and compatible with the purposes for which a refuge was established. All uses are considered closed until we open them through that process. We considered public input during the 2010 Felsenthal NWR Comprehensive Conservation planning process. We have considered uses identified during that planning process and established compatibility determinations. The Comprehensive Conservation Plan allows those listed uses above to continue, with some stipulations. If you would like a copy of the CCP contact our office or visit http://www.fws.gov/southeast/planning/CCPFinalRefugesDocuments.html

COMMENTS CONSIDERED OUTSIDE THE OF SCOPE OF THE LAND PROTECTION PLAN

Comments:

Multiple respondents believe that black bear, alligators, and or huge rats are over-abundant on Felsenthal NWR and cause damage to private personal property and lands. This respondent would also like to know how much of the taxpayers' money the Service has used in studying black bear.

One respondent is concerned because the Service control-burned an area where turkeys were already nesting

Multiple respondents note that although timber management practices used at times may not be conducive to management of bear populations, white-tailed deer thrive in this habitat.

Multiple respondents believe the Service leaves fully mature trees to fall over and rot from old age or flood damage instead of harvesting them and utilizing the benefits of these older trees.

One respondent who loves to fish cannot get to their favorite places due to moss and lily pads being too abundant.

Multiple respondents believe they were promised the largest greentree reservoir in the world for duck hunting and that Felsenthal NWR is not upholding that promise.

One respondent would like to know how many dollars of timber have been harvested on Felsenthal NWR over the past 10 years and believes the Service cuts timber as much as the timber companies.

One responder would like to know why we need more pine plantations.

Multiple respondents are concerned with the management of the Ouachita River pool levels and believe they have been detrimental to waterfowl. They believe duck hunting has greatly declined due to low numbers of ducks. The respondents noted that they were promised the Service was going to raise the water level to 37,500 acres every year during the winter and habitat time for ducks; however, that is not happening anymore. Multiple respondents brought up how they were promised the locks and dams would be open 24 hours a day, seven days a week, and now they have to go back through before 5:00 p.m., or can't go.

Service Response: None of these comments relate to land protection planning and, therefore, are outside the scope of this document. Felsenthal NWR has begun the habitat management planning process. Many of these comments would be more appropriately addressed during the public review periods during that process.

Appendix G. Finding of No Significant Impact

INTRODUCTION

The Fish and Wildlife Service (Service) plans to protect and manage certain fish and wildlife resources up to an additional 49,103 acres in Union and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana. A Final Environmental Assessment (Final EA) was prepared to inform the public of the possible environmental consequences of implementing the Final Land Protection Plan (Final LPP) for the expansion of the Upper Ouachita and Felsenthal NWRs (USFWS 2013a). A description of the alternatives, the rationale for selecting the preferred alternative, the environmental effects of the preferred alternative, the potential adverse effects of the action, and a declaration concerning the factors determining the significance of effects, in compliance with the National Environmental Policy Act of 1969, are outlined below. The supporting information can be found in the Final EA for the expansion of Upper Ouachita and Felsenthal NWRs.

ALTERNATIVES

In developing the Final LPP for Upper Ouachita and Felsenthal NWRs' Acquisition Boundaries' Expansion, the Service evaluated three alternatives with different approaches to conservation within the Ouachita River Basin landscape:

Alternative 1 – No Boundary Expansion (No Action Alternative);
Alternative 2 – Protection and Management of 49,103 Acres by the Fish and Wildlife Service (Preferred Alternative); and
Alternative 3 – Protection and Management of up to 47,070 Acres by the Fish and Wildlife Service

The Service adopted Alternative 2, the Preferred Alternative, except the expansion into Bradley County, Arkansas, as detailed in the Final LPP and the supporting documents, to guide expansion, acquisition, and management of the Upper Ouachita and Felsenthal NWRs. Management of the refuges would continue as outlined under the Upper Ouachita and Felsenthal NWRs' Comprehensive Conservation Plans and accompanying compatibility determinations and/or step-down management plan(s) (e.g., Hunt Plan) (USFWS 2008 and 2010, respectively). The overriding goals for the expansion of the refuges are: a functional conservation landscape; habitat for wildlife and management; enhanced water quality, quantity, and storage; and increased opportunities for wildlife-dependent recreation and education.

ALTERNATIVE 1: NO ACTION

This is the "status quo" alternative. Under this alternative, the Service will not acquire any of the lands proposed for the expansion of the refuge. The proposed project lands will remain in private ownership and current land uses will continue. Protection of the fish and wildlife habitats and natural resource values of these lands will be contingent upon the enforcement of existing federal, state, and local environmental regulations (the Clean Water Act, state water quality and pollution laws, etc.), and the discretion of the private landowners.

ALTERNATIVE 2: PROTECTION AND MANAGEMENT OF 49,103 ACRES BY THE FISH AND WILDLIFE SERVICE (PREFERRED ALTERNATIVE)

Under this alternative, the Service will acquire up to 49,103 acres of bottomland hardwood and upland pine habitat for their protection and management as part of the Felsenthal and Upper Ouachita NWRs. These areas will be included in the approved acquisition boundary for both refuges. This alternative provides the maximum potential to manage for RCWs, Louisiana black bears, wintering waterfowl, and neotropical migratory songbirds.

ALTERNATIVE 3: PROTECTION AND MANAGEMENT OF UP TO 47,070 ACRES BY THE FISH AND WILDLIFE SERVICE

Under this alternative, the Service will acquire up to 47,070 acres of bottomland hardwood and upland pine habitats for protection and management as part of Felsenthal and Upper Ouachita NWRs. The Service will acquire sufficient interest in the identified lands to prevent conflicting land uses and to manage the areas for their wildlife values.

SELECTION RATIONALE

In February 2013, we completed the Draft LPP/EA for the Proposed Expansion of Felsenthal and Upper Ouachita NWRs. That Draft LPP/EA outlined three alternatives for acquiring lands from willing sellers to be included in the National Wildlife Refuge System, and identified Alternative 2 as our proposed alternative. We released the Draft LPP/EA for 30 days of public review from February 22 to March 22, 2013. In response to public requests, we extended that period another 30 days, to April 22, 2013.

We evaluated all the letters or e-mails we received and the oral testimony we recorded in our public hearings during that period. This Final LPP/EA summarizes the public comments that raised issues and concerns and summarizes our responses to them. Based on our analysis in the Draft LPP/EA and our evaluation of those comments, we have modified Alternative 2, which is our preferred alternative in the Final LPP/EA. Our modifications include additions, corrections, or clarifications of our preferred management actions. We have also determined that none of those modifications warrant our publishing a revised or amended Draft LPP/EA before publishing the Final LPP/EA.

Below are two important changes in the Final LPP/EA.

In response to concerns about impacts to the local economy in Bradley County, Arkansas, our expansion proposal substitutes the lands (1,981 acres) in Bradley County with some potential acquisitions in fee-title from willing sellers in Ashley County, Arkansas, and Morehouse Parish, Louisiana. The overall acreage for this landscape conservation plan remained unchanged. However, this change resulted in an increase in upland pine and hardwood acreage and a decrease in bottomland hardwood acreage. The modification allows the Service to maintain the conservation goals for migratory birds and the endangered red-cockaded woodpecker.

An additional 1,356 acres were also removed from the preferred alternative as the result of an approved minor expansion to Upper Ouachita NWR. The minor expansion is part of the Barrs and Glawson Tract which includes property originally identified in the major expansion for Felsenthal and Upper Ouachita NWRs, however, a portion of the Barrs and Glawson tract was scheduled to be presented to the Migratory Bird Conservation Commission (MBCC) for funding consideration. The MBCC requires all funded properties be within an approved acquisition boundary. In order to meet

the MBCC deadline, it was necessary to remove these lands from the project and move forward with a minor expansion to bring the affected tract within the current acquisition boundary.

New maps and language were included to clarify the changes made throughout this document

Alternative 2 is selected for implementation because it directs the development of programs in coordination and consultation with our partners and the public to best achieve the vision, purposes, and goals, which are outlined in the Final EA and detailed in the Final LPP. At the same time, these management actions provide balanced levels of compatible public use opportunities consistent with existing laws, Service policies, and sound biological principles. They provide the best mix of program elements and coordination across the landscape to achieve desired long-term conditions in the Ouachita River Basin.

Under Alternative 2, all lands under the management and direction of the refuges will be protected, maintained, and enhanced to best achieve national, ecosystem, and refuge-specific goals and objectives within anticipated funding and staffing levels. In addition, these actions positively address priority issues and concerns expressed by the public.

ENVIRONMENTAL EFFECTS

Through the expansion of Upper Ouachita and Felsenthal NWRs, as described in Alternative 2, the Service will be able to: (1) Restore key ecological processes that drive and sustain the unique, but declining Ouachita River floodplain ecosystem; (2) improve ecosystem services and associated public benefits; (3) strategically restore altered geophysical features and original connectivity of water flow within and between the two refuges; (4) improve hydrologic function of these streams and their floodplains and enhance wetland and aquatic ecosystems for the benefit of trust species; (5) incorporate protection and enhancement of a diversity of critical habitats on which trust species depend to better represent the full spectrum of habitats that was historically present; (6) restore forested habitat and other natural plant communities to improve overall watershed health and stability, promote carbon sequestration, bolster ecological integrity, and increase habitat patch size to accomplish goals set forth in refuge, state, Lower Mississippi Valley Joint Venture, regional and national plans for migratory birds, forest breeding birds, endangered species, and resident wildlife and fish species; (7) protect, restore, and enhance fragmented and degraded floodplain forests and create large contiguous forest and riparian buffers adjacent to the Ouachita River to improve water quality, provide fish and wildlife movement corridors, and enlarge habitat patch sizes for trust wildlife species; (8) protect lands between Upper Ouachita and Felsenthal NWRs, state wildlife management area, and private conservation lands, to enlarge conservation benefits within the Ouachita River watershed; (9) increase and facilitate access and wildlife-dependent recreation on public lands; and (10) any cultural resources found within the project lands will be afforded protection by the Service. Although the anticipated environmental effects of implementation of the preferred alternative are mostly beneficial, there may be minor negative impacts to soils, water quality, air quality, cultural resources, and habitats due to necessary refuge operations and public use activities. However, these negative impacts are anticipated to be minor, discrete in location and/or time, and not significant.

COORDINATION

The management action has been coordinated with interested and/or affected parties. Parties contacted include the following:

Congressional representatives
Arkansas Governor's Office
Arkansas Game and Fish Commission
Arkansas Natural Heritage Commission
Arkansas Natural Resources Commission
Louisiana Governor’s Office
Louisiana Department of Wildlife and Fisheries
Louisiana Natural Heritage Commission
Natural Resources Conservation Service
Fish and Wildlife Service
National Park Service
Farm Service Agency
U. S. Army Corps of Engineers
The Nature Conservancy
The Conservation Fund
National Wildlife Refuge Association
Ducks Unlimited
Audubon Arkansas
Arkansas Wildlife Federation
Louisiana Wildlife Federation
County Judges in Union, Bradley, and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana
Chitimacha Tribe of Louisiana
Tunica-Biloxi Indian Tribe of Louisiana
Coushatta Tribe of Louisiana
Jena Band of Choctaw Indians
Mississippi Band of Choctaw Indians
Area farmers and landowners
Interested citizens and local businesses
Conservation organizations
Statewide media

FINDINGS

It is my determination that the management action does not constitute a major federal action significantly affecting the quality of the human environment under the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required. This determination is based on the listed factors (40 CFR 1508.27), as addressed in the Final Environmental Assessment of the Final Land Protection Plan (USFWS 2013a and b) for the expansion of Upper Ouachita and Felsenthal National Wildlife Refuges.

1. Both beneficial and adverse effects have been considered and this action will not have a significant effect on the human environment (Final EA, Chapter IV, Environmental Consequences).
2. The actions will not have a significant effect on public health and safety (Final EA, Chapter IV, Environmental Consequences).
3. The project will not significantly affect any unique characteristics of the geographic area such as proximity to historical or cultural resources, wild and scenic rivers, or ecologically critical areas (Final EA, Chapter IV, Environmental Consequences).
4. The effects on the quality of the human environment are not likely to be highly controversial (Final EA, Chapter IV, Environmental Consequences).
5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment (Final EA, Chapter IV, Environmental Consequences).
6. The actions will not establish a precedent for future actions with significant effects nor do they represent a decision in principle about a future consideration (Final EA, Chapter IV, Environmental Consequences).
7. There will be no cumulatively significant impacts on the environment. Cumulative impacts have been analyzed with consideration of other similar activities on adjacent lands, in past actions, and in foreseeable future actions (Final EA, Chapter IV, Environmental Consequences, Cumulative Effects).
8. The actions will not significantly affect any site listed in, or eligible for listing in, the National Register of Historic Places, nor will they cause loss or destruction of significant scientific, cultural, or historic resources (Final EA, Chapter IV, Environmental Consequences).
9. The actions are not likely to adversely affect threatened or endangered species, or their habitats (Final EA, Chapter IV, Environmental Consequences).
10. The actions will not lead to a violation of federal, state, or local laws imposed for the protection of the environment (Final EA, Chapter IV, Environmental Consequences).

DOCUMENT AVAILABILITY

The Draft LPP/EA for the expansion of the Upper Ouachita and Felsenthal NWRs was developed from information gathered during public scoping from July 2011 through August 2012, and was made available for public review and comment from February 22 to April 22, 2013. The Final LPP/EA was revised based on input received during public review and comment. Additional copies of the Final LPP/EA are available by writing: Project Leader, Felsenthal National Wildlife Refuge, 5531 Highway 82 West, Crossett, AR 71635.

Cynthia K. Dohner
Regional Director

Date 8/14/13

SUPPORTING REFERENCES

U.S. Fish and Wildlife Service. 2013a. Draft Land Protection Plan and Environmental Assessment for the Proposed Expansion of Upper Ouachita and Felsenthal National Wildlife Refuges, Union, Bradley, and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2013b. Land Protection Plan and Final Environmental Assessment for the Proposed Expansion of Upper Ouachita and Felsenthal National Wildlife Refuges, Union, Bradley, and Ashley Counties, Arkansas, and Morehouse Parish, Louisiana.. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2008. Upper Ouachita and Handy Brake National Wildlife Refuges and the Louisiana Wetlands Management District Comprehensive Conservation Plan, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2008. Upper Ouachita and Handy Brake National Wildlife Refuges and the Louisiana Wetlands Management District Draft Comprehensive Conservation Plan and Environmental Assessment, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2010. Felsenthal and Overflow National Wildlife Refuges Comprehensive Conservation Plan, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

U.S. Fish and Wildlife Service. 2010. Felsenthal and Overflow National Wildlife Refuges Draft Comprehensive Conservation Plan and Environmental Assessment, Louisiana. U.S. Department of the Interior, Fish and Wildlife Service, Southeast Region. Atlanta, GA.

Final Land Protection Plan and Environmental Assessment
for the Expansion of

Felsenthal and Upper Ouachita
National Wildlife Refuges

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