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## DRAFT LAND PROTECTION PLAN

### *I. Introduction and Purpose*

The Paint Rock River watershed is nationally recognized for its aquatic biodiversity. Although the area contains several conservation lands, including state wildlife management areas, wetland easements, non-governmental conservation areas, and privately held conservation properties, the watershed remains largely unprotected. Approximately 7 percent of the watershed is currently dedicated to conservation. The proposed Paint Rock River National Wildlife Refuge (NWR, refuge) would play an important role in protecting riparian areas and large tracts of deciduous forest, helping connect existing conservation lands, further safeguarding the watershed, enhancing the ecological functioning of the area, and providing opportunities for compatible outdoor recreation and conservation education.

As part of the planning process, coordination and collaboration between the various management entities within the watershed was undertaken to develop a landscape-level land protection plan that aims to fill some of the conservation gaps in the watershed. Key conservation agencies and organizations have a long tradition of working in the Paint Rock River watershed, including the Alabama Department of Environmental Management (ADCNR), Alabama Division of Wildlife and Freshwater Fisheries (ADWFF), Natural Resources Conservation Service (NRCS), Tennessee Wildlife Resources Agency (TWRA), non-governmental conservation organizations, and private landowners. The Fish and Wildlife Service (Service) also works with Native American tribes to ensure timely and effective cooperation and collaboration. During this planning process, the Service contacted the following Native American tribes with interest in this landscape:

- Eastern Band of Cherokee Indians
- Muscogee (Creek) Nation
- Poarch Band of Creek Indians
- Seminole Tribe of Florida

Recognizing the generations of responsible stewardship within this working rural landscape, this proposal seeks to work with willing landowners to secure a legacy of conservation lands for future generations to enjoy. This proposal aims to protect and restore one of the most biologically diverse and unaltered river systems in eastern North America. Further, the proposal aims to address threats from habitat fragmentation and urban development, altered ecological processes, and impacts from climate change. Key species and habitats of conservation concern for this area include Alabama lampmussel, fine-rayed pigtoe, pale lilliput, pink mucket, rough pigtoe, shiny pigtoe, slabside pearlymussel, Anthony's riversnail, palezone shiner, snail darter, gray bat, Indiana bat, American Hart's tongue fern, Morefield's leather flower, Price's potato bean, and Hine's emerald dragonfly, cerulean warbler and other neotropical migratory birds, bottomland hardwoods, canebrake, and cave and karst systems.

Working with the key partners, as well as with other state and local governments, Native American tribes, businesses, non-governmental organizations, and the public, the Service examined the needs for wildlife habitat protection within the biologically important Paint Rock River watershed of Alabama and Tennessee (Figure 1). During the planning process, this area was further refined to encompass several smaller conservation partnership areas, wherein the Service proposes to acquire fee-title (or

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less-than-fee-title) interest in up to 24,508 acres. It is critical to note that the Service's policy is to work with willing landowners.

This Draft Land Protection Plan and Environmental Assessment (Draft LPP/EA) identifies the proposed establishment of Paint Rock River NWR, as outlined in the Service's Proposed Action (Alternative B). The purposes of this Draft LPP/EA are to:

- Announce the Service's intent to establish the proposed refuge;
- Inform landowners about the Service's long-standing policy of acquiring land only from willing sellers (it is the Service's policy to work with willing sellers to acquire fee-title or less-than-fee-title interest in property);
- Provide landowners and the public with an outline of Service policies, priorities, and protection methods for property in the project area; and
- Assist landowners in determining whether their properties are located within the proposed project.

This Draft LPP/EA presents the methods the Service, conservation partners, and interested landowners could use to accomplish wildlife and habitat goals and objectives for the proposed refuge.

The table and maps at the end of this Draft LPP/EA identify the land parcels contained within the proposed Conservation Partnership Area (CPA). A CPA is a specified area within which the Service would have the authority to acquire property from willing landowners for a proposed refuge, but where the Service would be limited to an acquisition cap smaller than the CPA itself. The Service would be limited to acquiring property within the CPA, but would have the ability to adjust specific parcel acquisition to respond to changing landowner interest, conditions, and opportunities. In the CPA, the Service would seek to acquire up to 25,120 acres in fee-title interest or less-than-fee-title interest (Figures 2a, 2b, and 2c). A corresponding table (Table 3) groups parcels together by landowner and lists each parcel, each parcel identification number, estimated acres, type of ownership, preferred method of acquisition, overall priority ranking for a single or group of parcels under one landowner, acres by parcel and landowner in the tiers I, II, and III; and the figure number where each parcel or group of parcels can be found.

One of the objectives of establishment of a refuge is to contribute to a more connected and functional conservation landscape that will provide effective habitat connections between existing and future conservation areas. Identification of land parcels in this Draft LPP/EA does not preclude the acquisition of those parcels by other agencies, organizations, or individuals in their efforts to develop connections between existing or future conservation areas.

The scope of this Draft LPP/EA is limited to the proposed acquisition of lands, in fee-title and less-than-fee-title, within the CPA. The Draft LPP/EA is not intended to cover the development and/or implementation of detailed, specific programs for the administration and management of those lands. A conceptual management plan and interim compatibility determinations would guide management and public use on newly established refuge lands and conservation easements until a comprehensive conservation plan (CCP) and compatibility determinations are developed (Appendices A and B).

## **PROJECT DESCRIPTION**

The proposed establishment of Paint Rock River NWR defines a CPA encompassing approximately 40,505 acres as depicted in Figure 1. For this project, the CPA consists of the upper portion of the Paint Rock River watershed (Tennessee), and provides an area within which

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the Service would have the authority to acquire up to 25,120 acres, in fee-title or less-than-fee-title (e.g., easements) from willing sellers. All lands acquired, up to 25,120 acres, would be contained within the boundary of the proposed refuge.

It is envisioned that the proposed refuge would:

- Protect and restore habitat for at least 15 federally listed species and three candidate species;
- Protect and maintain habitat for a diversity of fish, wildlife, and plant species, including more than 40 state listed species;
- Protect some of the last remaining large tracts of eastern deciduous forests;
- Provide habitat for migratory birds, including neotropical migratory birds and other species of conservation concern;
- Provide opportunities for a variety of wildlife-dependent recreation, including hunting, fishing, wildlife observation and photography, and environmental education and interpretation;

## **REFUGE PURPOSE(S)**

Emphasizing listed species, while protecting the important fish and wildlife resources of this landscape, the following purposes have been developed for the establishment of the proposed refuge:

*“conservation, management, and ... restoration of the fish, wildlife, and plant resources and their habitats ... for the benefit of present and future generations of Americans” 16 U.S.C. 668dd(a)(2) (National Wildlife Refuge System Administration Act), as amended by amended by Pub. Law 105-57(The National Wildlife Refuge System Improvement Act of 1997);*

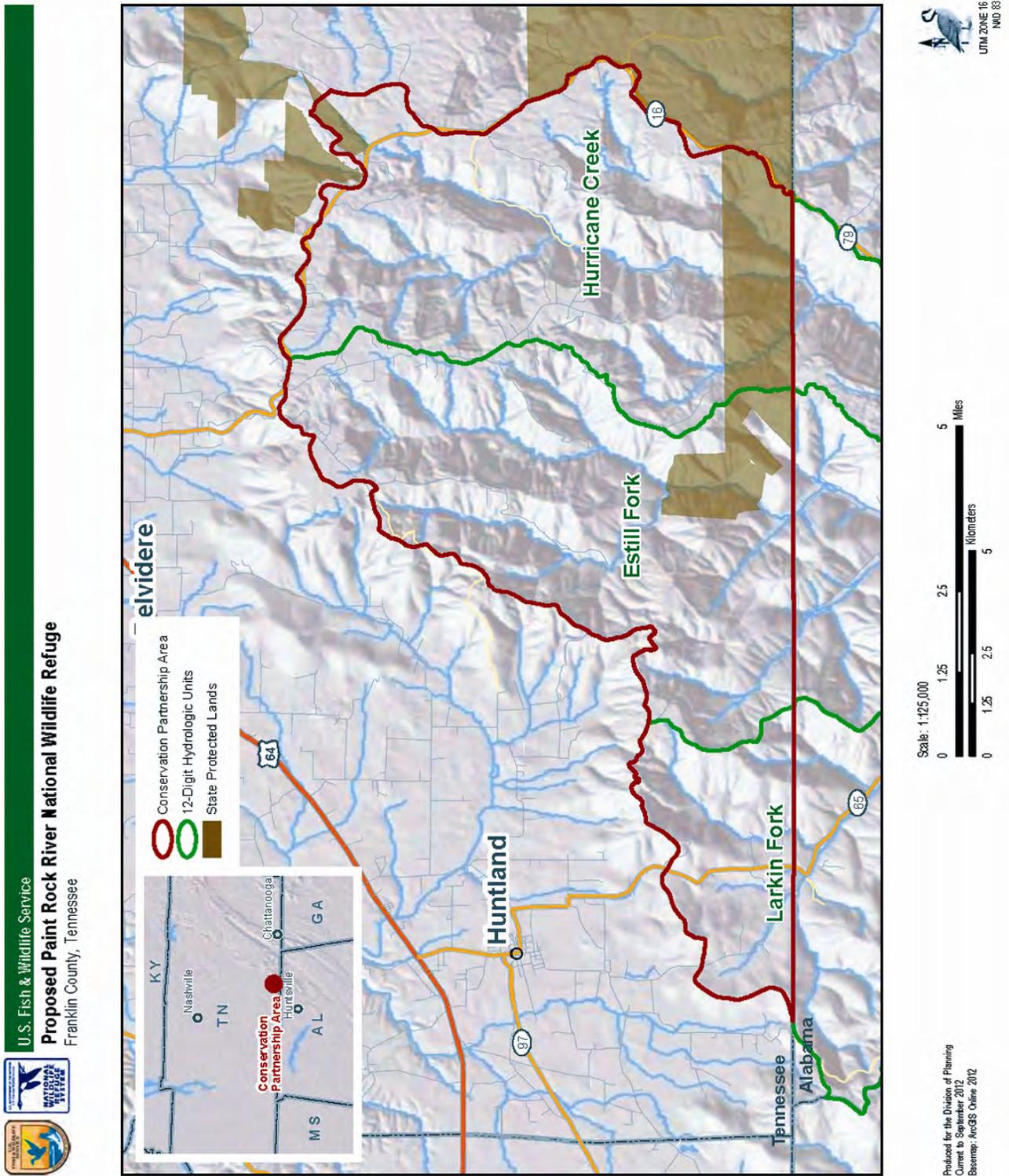
*“to conserve (A) fish or wildlife which are listed as endangered species or threatened species...or (B) plants” 16 U.S.C. 1534 (Endangered Species Act of 1973);*

*“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. 3901(b), 100 Stat. 3583 (Emergency Wetlands Resources Act of 1986);*

*“for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” 16 U.S.C. 715d (Migratory Bird Conservation Act);*

*“for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude” 16 U.S.C. 742f(b)(1) “for the development, advancement, management, conservation, and protection of fish and wildlife resources” 16 U.S.C. 742f(a)(4)(Secretarial powers to implement laws related to fish and wildlife) (Fish and Wildlife Act of 1956);*

Figure 1. Location of CPA



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*“suitable for (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species” 16 U.S.C. 460k-1 “the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors” 16 U.S.C. 460k-2 [Refuge Recreation Act (16 U.S.C. 460k-460k-4), as amended]*

The vision for the Paint Rock River NWR, if established, is as follows:

The Paint Rock River National Wildlife Refuge will protect important wildlife and habitats of the Paint Rock River watershed, a unique ecosystem that supports a high diversity of aquatic, terrestrial, and karst habitats. Together with partners, the Fish and Wildlife Service will help protect and improve the water quality, water quantity, and hydrology of the Paint Rock River, benefitting numerous imperiled freshwater species and human communities utilizing the area’s water resources. The refuge will conserve, protect, and manage one of the largest contiguous tracts of hardwoods remaining in eastern North America for current and future generations. As part of a system of public and private conservation lands, the refuge will expand outdoor recreational opportunities, helping maintain a way of life and supporting local economies.

Refuge goals are intentionally broad, descriptive statements of the desired future conditions. They embrace the proposed refuge purposes and vision statement. Four overarching goals were developed for the proposed refuge:

**Goal 1. Functional Conservation Landscape**

The Paint Rock River NWR, as part of the Appalachian Landscape Conservation Cooperative (LCC), would contribute to a more connected and functional conservation landscape that would provide effective habitat connections between existing conservation areas, reducing fragmentation, and protecting and restoring large tracts of contiguous hardwood forests.

**Goal 2. Habitat for Fish and Wildlife**

The refuge would provide a wide range of quality Cumberland Plateau habitats to support native wildlife and plant diversity, including migratory birds, federal and state listed species, and other imperiled species.

**Goal 3. Enhanced Water Quality, Water Quantity, and Improved Hydrology**

The refuge would contribute to water quality, water quantity, and hydrology of the Paint Rock River watershed to benefit the area’s high aquatic diversity and help protect the water supply for residents downstream.

**Goal 4. Wildlife-dependent Recreation and Education**

Refuge visitors of all abilities would enjoy opportunities for compatible hunting, fishing, wildlife observation and photography, and environmental education and interpretation, while increasing knowledge of and support for conservation of the important landscape of the Paint Rock River watershed.



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## II. Resources

### RESOURCES TO BE PROTECTED

#### HABITAT AND WILDLIFE RESOURCES

##### Habitat

The proposed refuge lies in the Paint Rock River watershed of the Cumberland Plateau, a largely rural area that has a long history of agriculture, forestry, hunting, and fishing. The Paint Rock River watershed drains into the Tennessee River. As further detailed in the Affected Environment chapter of this Draft LPP/EA, important habitat types in the conservation partnership area consist of in-stream habitats, bottomland hardwoods, canebrake, upland hardwoods, and cave/karst systems.

##### Wildlife

The variety of habitats found in the area supports a range of wildlife, including various amphibians and reptiles that tend to stay in localized areas to wide-ranging species such as an occasional black bear. Numerous bird species, both resident and migratory, utilize project area habitats for foraging, resting, and nesting. Common species include white-tailed deer and a host of other mammals, including raccoons, opossums, various rodents, and bats. Project area waters provide habitat for a number of fish species, most of which are found along the Cumberland Plateau and Tennessee River.

##### Threatened and Endangered Species

As is further detailed in the “Affected Environment” chapter of this Draft LPP/EA, the refuge provides habitat for at least 15 federally listed (threatened and endangered) and three candidate species. In addition, this Draft LPP/EA discusses habitat needs of several listed species and factors contributing to population declines. Listed species include most major taxonomic groups. However, mussels, fishes, and plants represent a large component of the imperiled species (Table 1). The watershed also supports more than 50 Tennessee listed species.

**Table 1. Federally listed species likely to occur in the Paint Rock River watershed and Franklin County, Tennessee**

Common Name	Scientific Name	Status
<b>Mammals</b>		
Gray Bat	<i>Myotis grisescens</i>	E
Indiana Bat	<i>Myotis sodalis</i>	E
<b>Fish</b>		
Palezone Shiner	<i>Notropis albizonatus</i>	E
Snail Darter	<i>Percina tanasi</i>	T

Common Name	Scientific Name	Status
<b><i>Invertebrates</i></b>		
Alabama Lampmussel	<i>Lampsilis virescens</i>	E
Fine-rayed Pigtoe	<i>Fusconaia cuneolus</i>	E
Pale Lilliput	<i>Toxolasma cylindrellus</i>	E
Pink Mucket	<i>Lampsilis abrupta</i>	E
Rough Pigtoe	<i>Pleurobema plenum</i>	E
Shiny Pigtoe	<i>Fusconaia cor</i>	E
Slabside Pearlymussel	<i>Pleuronaia dolabelloides</i>	C
Anthony's Riversnail	<i>Athearnia anthonyi</i>	E
<b><i>Plants</i></b>		
American Hart's-tongue Fern	<i>Phyllitis scolopendrium</i> var. <i>americana</i>	T
Morefield's Leather-flower	<i>Clematis morefieldii</i>	E
Price's Potato-bean	<i>Apios priceana</i>	T
White Fringeless Orchid	<i>Platanthera intergrilabia</i>	C

Key: C=Candidate (for Federal listing), E=Endangered, T=,Threatened

Source: USFWS Endangered Species Program 2012

## THREATS

A variety of factors have been implicated in the decline of habitats and wildlife species in the CPA. In addition to habitat loss, the alteration of the area's hydrology and decline in water quality are of particular concern, as many of the species in the Paint Rock River and its tributaries are adapted to a predictable supply of clean water. Most of the threats summarized below are likely to adversely affect the hydrology and water quality of the watershed, with negative consequences to a range of species.

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### **Residential Development/Urban Sprawl**

Although still largely rural, the CPA lies near Huntsville, a city that has experienced substantial growth during the last decade. Development within the watershed would have direct negative effects on its natural resources, impacting the system's hydrologic regime, water quality, and water quantity.

### **Commercial Timber Operations**

More than 90 percent of the area is forested with commercial timber production occurring at some level across the region. Commercial timber operations have the potential to adversely affect aquatic species by increasing erosion. Once cleared of vegetative cover, lands adjacent to streams and rivers can become sources of sediment-laden runoff, which can smother mussels and increase turbidity.

### **Mining Operations**

Although there have been only limited mining operations in the past, there has been at least one oil and gas exploration effort in the watershed since 2000. Limited limestone rock mining is ongoing, and because coal and limestone rock resources are present in the watershed, it is likely they would be exploited in the future under favorable economic conditions, ultimately resulting in landscape changes. Mining operations have the potential to impact the area's hydrology and water quality.

### **Invasive Species**

While there are numerous exotic or nonnative invasive species within the proposed project area, serious environmental harm is usually associated with a select few. Chapter II in this Draft EA lists some of the more ecologically harmful exotic plants and animals that are found within the proposed project area. When possible or feasible, eradication or control would concentrate on these species. Additional species, particularly invasive plants, are found within the proposed project area and may also require control efforts in the future to meet restoration goals.

### **Climate Change**

While the effects of climate change are predicted to vary regionally, it would generally hold that already wet areas would become wetter, while dry areas would become dryer. Many regions would also find rainfall patterns tending more towards the extreme, torrential downpours interspersed with prolonged dry spells, in other words rain storms would become more intense, but less frequent. There would be major implications for stream flows and availability of water for wildlife, fish, and people (Karl and Melillo 2009). From a hydrologic standpoint, stream flows are expected to be more sporadic with greater fluctuation between high and low flows on a seasonal basis. The effects of such a scenario can be presumed to be stressful to many species and habitats, particularly those adapted to more stable environments. Mussels and smaller fish species with narrow habitat preferences may suffer disproportionately. Excessive nutrient loading and sedimentation are also possible consequences to greater stream-flow fluctuation. Other declines in water quality and thermal changes to streams could possibly affect habitat conditions and the reproductive capacity of aquatic species.

## **RELATIONSHIP OF PROJECT TO LANDSCAPE CONSERVATION GOALS AND OBJECTIVES**

The proposed Paint Rock River NWR, within the Appalachian LCC (USFWS 2011) would contribute to a more connected and functional conservation landscape by helping minimize habitat fragmentation, protecting and restoring riparian habitats, and protecting large tracts of forest. Several government agencies, non-governmental organizations, and landowners are working in this landscape to protect and restore its water resources, through forest and wetland easements, stream protection/restoration projects, etc. This proposed refuge would further protect and enhance water quality and quantity within the watershed, benefiting both humans and wildlife.

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The proposed refuge would contribute to many landscape conservation goals and objectives, as well as partner efforts, including the Appalachian LCC (USFWS 2011); conservation and mitigation banks; and international, national, and regional conservation plans and initiatives. Several of these are as listed:

*International:*

- Partners-in-Flight (PIF) North American Landbird Bird Conservation Plan (Rich et al. 2004)

*National:*

- America's Great Outdoors (AGO) Initiative (AGO 2011)
- Forest Stewardship Program (USFS 2011)
- Partners for Fish and Wildlife (USFWS 2012)
- Strategic Plan for Responding to Accelerating Climate Change (USFWS 2009a)
- Wetlands Reserve Program (WRP) of the Natural Resources Conservation Service (NRCS 2011)

*Regional:*

- Appalachian Landscape Conservation Cooperative (USFWS 2011)
- Appalachian Mountains Bird Conservation Initiative Concept Plan (Appalachian Mountains Joint Venture 2005)
- Cumberland Voices: A Conservation Vision for the South Cumberland Region (Land Trust for Tennessee and Sewanee Environmental Institute 2011)
- Threatened and Endangered Species Recovery Plans (USFWS 2012)
- Southeast Aquatic Habitat Plan (Southeast Aquatic Resources Partnership 2008)

*State:*

- Climate Change and Potential Impacts to Wildlife in Tennessee (TWRA 2009)
- Conserving Alabama's Wildlife: A Comprehensive Strategy. (ADWFF 2005)
- The Forever Wild Land Trust Report (ADCNR 2009)
- Tennessee's Comprehensive Wildlife Conservation Strategy (TWRA 2005)
- Statewide Storm Water Management Plan (Tennessee Department of Transportation 2012)

## **PARTNERSHIP EFFORTS/RELATED RESOURCES**

Partnerships are integral to the conservation of this landscape. The protection and conservation of wildlife habitats and working landscapes are issues of concern in the region. During public scoping and conversations with landowners and other conservation partners for this proposal, the Service recognized that all interested parties would have an enhanced ability to protect and manage wildlife and habitats in the Paint Rock River watershed. Partners often assist with activities including environmental education and interpretive programs, land acquisition, public relations, habitat evaluations, species inventories, nest site and wildlife monitoring, and habitat restoration. For that reason, the Service recognizes the need to collaborate with other conservation organizations in the region.

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Through this initiative, the Service would work to combine conservation efforts with those of many partners, including partners yet to be identified. Several federal and state agencies serve as key partners in this landscape, including Alabama Department of Environmental Management, Alabama Division of Wildlife and Freshwater Fisheries, USDA Natural Resources Conservation Service, Tennessee Division of Natural Areas, Tennessee Valley Authority, and Tennessee Wildlife Resources Agency. In addition, there are several non-governmental conservation partners active in the watershed. Figure 1 depicts current conservation lands and waters within the area. Many of our partners already own or have future plans to protect lands in the project area through conservation easements. Still others have completed on-the-ground habitat restoration projects throughout the watershed. It is the combined efforts of the Service and its partners that would provide substantial and long-term protection of federal and state listed threatened and endangered species, rare habitats, and recreational areas that have been identified through the scoping process as being important to the long-term ecological health, economy, and way of life of the region.



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### *III. Land Protection Strategy*

#### **ACTION AND OBJECTIVES**

##### *AUTHORITIES FOR ESTABLISHING THE REFUGE*

We anticipate that the Service would continue to acquire lands under the same authorities that have been used to acquire lands in the past. Based on the refuge purposes, lands could be acquired under several statutory authorities, including, but not limited to:

- National Wildlife Refuge System Administration Act of 1966; (16 U.S.C. 668dd(b))
- Endangered Species Act of 1973 (16 U.S.C. 1534)
- Emergency Wetlands Resources Act of 1986 (16 U.S.C. 3921-3923)
- Migratory Bird Conservation Act of 1929 (16 U.S.C. 715)
- Fish and Wildlife Act of 1956 (16 U.S.C. 742a)
- Refuge Recreation Act (16 U.S.C. 460k-1)

##### *CONSERVATION PARTNERSHIP AREA*

A CPA approach was used to provide a more flexible tool for acquiring or otherwise protecting land. The CPA includes lands with conservation value, within which the Service would work with other conservation partners and willing landowners to protect resources. For this project, the CPA boundary was delimited by three sub-watersheds within the Tennessee portion of the Paint Rock River watershed. These three sub-watersheds (12 digit hydrologic units) were Estill Fork, Hurricane Creek, and Larkin Fork. The Land Protection Priorities' section below further describes the process by which these three sub-watersheds were targeted for conservation.

##### *LAND USE*

For the purposes of this Draft LPP/EA, the National Land Cover Dataset (NLCD) was used to portray land use. The majority of the lands in the CPA are considered to be in "open" or undeveloped land use and most parcels are in private ownership (Fry et al. 2011). Deciduous forest is the dominant land cover type, comprising more than 90 percent of the total acreage, followed by pasture/hay. All other land use classes each contributed less than 5 percent of the total cover. More details, including a table and map of land use, can be found in Chapter II of this Draft EA.

#### **LAND PROTECTION PRIORITIES**

The Service's proposed action (Alternative B) would result in the acquisition of up to 25,120 acres of wildlife habitat with the establishment of Paint Rock River NWR, 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 the proposed area.

The prioritization process for this proposed project was applied at two scales; the sub-watershed (12 digit hydrologic unit), followed by a parcel-level value assignment.

## SELECTION OF PRIORITY SUB-WATERSHEDS

The Paint Rock River watershed contains eleven sub-watersheds. In order to select the sub-watersheds that have the highest conservation value, the Service applied a ranking system to each sub-watershed, based on the following criteria, listed in order of relative importance:

- Number of federally listed species per hydrologic unit
- Percent forest cover
- Number of known caves per hydrologic unit

Based on this methodology, the following four hydrologic units ranked as the “highest” priority for conservation: Cole Spring Branch (located in Alabama only), Estill Fork, Hurricane Creek, and Larkin Fork. Guess Creek, Tremble Creek, and Williams Cove-Paint Rock River were scored as “medium” priority hydrologic units. The remaining sub-watersheds, Lick Fork, Little Dry Creek-Clear Creek, Little Paint Creek, and Williams Creek-Dry Creek were ranked as “low” priority.

## PARCEL-LEVEL PRIORITIZATION

Following raking at the sub-watershed (hydrologic unit) scale, parcels that have the majority of their extent located within one or more of the three priority sub-watersheds, Estill Fork, Hurricane Creek, and Larkin Fork, were ranked in terms of their conservation value, using the criteria and weighted scale shown in Table 2.

**Table 2. Paint Rock River parcel-level conservation priority ranking criteria**

Criteria	Weighted Scale (multiplier)	Ranking Value		
		Low (1)	Medium (2)	High (3)
River Frontage <sup>1</sup>	5	absent		present
Distance to River	4	≥ 0.75 miles	≥ 0.5 miles < 0.75 miles	≤ 0.5 miles
Percent Forest Cover <sup>2</sup>	3	<80%		≥80%
Proximity to State Lands <sup>3</sup>	2	>1 mile	>0.1 mile and ≤1 mile	≤ 0.1 mile
Size <sup>4</sup>	1	<17 acres	≥17 acres and <800 acres	≥ 800 acres

*1 = Shared boundaries or containment of named streams and creeks in the watershed*

*2 = 2009 Land Cover (Landscape Analysis Lab, University of the South) Category 1 (Native Hardwood Forest)*

*3 = State Lands (Bear Hollow Mountain WMA, Walls of Jericho SNA)*

*4 = Parcel size categories were based on average territories or home ranges of forest interior birds*

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Using the ranking criteria, each parcel was assigned a value, and was placed in one of three priority categories (I, II, and III) as follows:

- 36 – 45 points = Priority I
- 26 – 35 points = Priority II
- 15 – 25 points = Priority III

A “non-priority” category was developed, in which small (<17 acres) parcels with structures were placed. In addition, parcels with low scores (<25 points) located within municipal boundaries were also placed in this category. Chapter III shows the parcel-level priority maps as generated during the development of this document.

The parcel-level maps are a “snap-shot in time,” and identify where the relative priorities were during the development of this Draft LPP/EA. Resource values change over time, and acquiring lands for protection would take years, depending on willingness of sellers, funding, and other factors. For instance, some parcels may be sub-divided in the future, resulting in a change in their cumulative scores. A heavily forested parcel may be logged, reducing the cumulative number of points. Therefore, these rankings could serve as a decision support tool, to be used by future refuge management and Service realty staff, were this project to be approved. Hence, for the purposes of this Draft LPP/EA, all “non-priority” parcels were assigned a priority I, II, and III simultaneously (Table 3).

## **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 use for recreational and educational purposes. These lands include national wildlife refuges, national fish hatcheries, research stations, and other areas.

If approved, we would use the following options to implement the 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. Our proposal includes a combination of Options 1, 2, and 3 above. We believe 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*

Several lands adjacent to or in the vicinity of the proposed project are already owned by our partners or otherwise conserved through easements. It should also be emphasized that the protection of this area fits well into a landscape-scale network of conservation lands that is being pieced together in the area. This proposed project would serve as an important keystone in this conservation effort.

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The following conservation partners own lands or otherwise protect (e.g., through easements) tracts in the watershed:

- Alabama Division of Wildlife and Freshwater Fisheries
- Alabama State Parks
- USDA Natural Resources Conservation Service
- Tennessee Division of Natural Areas
- Tennessee Valley Authority
- Tennessee Wildlife Resources Agency
- The Nature Conservancy

Within the watershed, the Service manages Fern Cave NWR. This 199-acre refuge is part of the Wheeler National Wildlife Refuge Complex, and lies just east of the Paint Rock River, off of Highway 72. It has the Nation's largest colony of overwintering gray bats.

#### *OPTION 2: LESS-THAN-FEE-TITLE ACQUISITION BY THE SERVICE*

Under Option 2, we would protect and manage land by purchasing only a partial interest from willing sellers, typically in the form of a conservation easement. This option leaves the parcel in private ownership, while allowing us management authority over the land use in a way that enables us to meet our goals for the parcel or that provides adequate protection for important adjoining parcels and habitats. The structure of such easements would 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 would also allow for public use where appropriate. We would determine, on a case-by-case basis, and negotiate with each landowner, the extent of the rights we would be interested in buying. Those 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 would 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 would continue 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 on easement rights. Where we identify conservation easements, we would 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;
- Only a portion of the parcel contains lands of interest to the Service.

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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 further describes the conditions and structure of easements.

### *OPTION 3: FEE-TITLE ACQUISITION BY THE SERVICE*

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

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

In some cases, it may become appropriate 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 we have acquired an easement. We would evaluate that need on a case-by-case basis.

## **LAND PROTECTION METHODS**

We could use several methods of acquiring either a full or a partial interest in the parcels identified for Service land protection: (1) Purchase (e.g., complete title, or a partial interest such as a conservation easement); (2) leases and cooperative agreements; and (3) donations.

### *PURCHASE*

For most of the tracts in the boundary, the proposed method is listed as *Fee* or *Easement*; however, the method we would ultimately use depends partly on the 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 would retain ownership of the land, but would sell certain rights identified and agreed upon by both parties. The objectives and conditions of our proposed conservation

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easements would recognize lands for their importance to wildlife 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 (i.e., 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;
- Alteration of the natural water regime;

### *LEASES AND COOPERATIVE AGREEMENTS*

Potentially, the Service could 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 could be used to protect or manage habitat until more secure land protection could be negotiated.

### *DONATIONS*

We encourage donations in fee title or conservation easement in the approved areas. We are not aware currently of any formal opportunities to accept donations of parcels within the proposed CPA boundary.

### **SERVICE LAND ACQUISITION POLICY**

Once a CPA boundary has been approved, we contact landowners within the boundary to determine whether any are interested in selling. If a landowner expresses an interest and gives us permission, a real estate appraiser will appraise the property to determine its market value. Once an appraisal has been approved, we can present an offer for the landowner's consideration.

Appraisals conducted by 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 market value, which is typically based on comparable sales of similar types of properties.

We based the proposed CPA boundaries on the biological importance of key habitats. The establishment of this boundary gives the Service the approval to negotiate with landowners that 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. Our long-established policy is to work with willing sellers only as funds become available; we continue to operate under this policy. Lands within this CPA boundary would not become part of the proposed refuge unless their owners willingly sell or donate them to the Service.

### **FUNDING**

The source of appropriated dollars for the purpose of land acquisition is the Land and Water Conservation Fund (LWCF). The primary source of income to this fund is fees paid by companies drilling offshore for oil and gas, as well as oil and gas lease revenues from federal lands. Additional sources of income include the sale of surplus federal real estate and taxes on motorboat fuel. The

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Service would seek appropriations from the LWCF for acquisition of fee-title and conservation easements once the project is approved. Establishment of a Service presence in this ecosystem, with a national wildlife refuge base, would enable the Service to implement a landscape-level conservation program centered on protecting imperiled resources of the Paint Rock River watershed.

#### *OWNERSHIP, ACQUISITION METHOD AND ACQUISITION COSTS*

During planning for this proposed refuge, the Service identified a 40,505-acre CPA in Franklin County, Tennessee. Of these 40,505 acres, the Service would seek authority to acquire, from willing sellers, up to 25,120 acres by fee title, conservation easement, lease, cooperative agreement, or donation. Because the method of acquisition would be determined on a case-by-case basis, for each landowner, it would be impossible to predetermine how many acres would be acquired in fee title and how many would be in a conservation easement, so we have provided a range of values. Generally, Service easements are about 75 percent of the cost of fee-title acquisition. Hence, the lower estimate would be based on all 25,120 acres being easements, while the higher estimate would reflect acquisition of all 25,120 acres in full fee title. Based on 2010 sales data, the average cost per acre in the watershed was about \$1,900. Therefore, the estimated cost to protect the entire 25,120 acres ranges between \$34,923,900 (all easement) and \$46,565,200 (all fee title).

It is important to note that these costs are only provided as an approximation based on recent market value. Donations, mitigation and conservation banks, and land value fluctuations over time are among several factors that would likely influence the costs associated with the establishment of the proposed Paint Rock River NWR.

#### *ANNUAL OPERATING AND MAINTENANCE COSTS*

Once acquired, there would be costs associated with various short-term and on-going projects and maintenance associated with operating and managing a refuge, as further detailed below.

Our plan assumes the Service would acquire some structures, most of which would not support the refuge or Service mission and be slated for demolition. Structures we would likely obtain include single-family homes and farm buildings. Some buildings that are in excellent condition could be used for refuge quarters, equipment storage, or potentially a future visitor contact facility. A detailed facilities survey was not conducted for this Draft LPP/EA, and we would address parcels we obtain on a case-by-case basis. The most cost-effective way to remove a structure is usually for the staff or a contractor to demolish it, although other methods would be used, where available and appropriate (i.e., local fire department burning for training). There would also be costs associated with posting signs for boundaries and repairing/maintaining refuge roads and other infrastructure.

Acquiring new lands for a refuge would also result in additional public use opportunities and costs incurred by the Service. These could include providing fishing access points, building some trails and observation areas, and opening lands for hunting. The exact number and location of these public use improvements and opportunities are currently unknown. These details would be further defined and announced to the public as new lands were acquired.

Funds would also be needed for habitat restoration, including riparian reforestation, stream restoration, barrier removal, prescribed burning, removal of exotic plants, etc.

Most of the work described above would be conducted by temporary or permanent Service staff, although we actively recruit volunteers and work with other partners, where possible, to reduce costs. Furthermore, the Service often shares staff between refuges for specific projects (e.g.,

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prescribed burning) as a means of reducing long-term costs. Based on the Service's National Staffing Model, a fully realized refuge of 25,120 acres would require approximately ten staff members. In the Service's Southeast Region, refuges of this size generally have an annual staffing and management budget of \$1.5 million.

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## IV. Coordination

### FEDERAL/STATE/LOCAL GOVERNMENTS

During the summer of 2012, meetings with representatives of the TWRA and the Department of Environment and Conservation were held to brief them on the Service's intentions.

### CONGRESSIONAL CONTACTS

Contact was first made with congressional staffs through e-mails and letters, providing an overview of the project and offering an opportunity to brief the staff in person. On January 16, 2013, in a meeting held in Chattanooga, Tennessee, the Region 4 Chief of Refuges and other Service staff briefed staffers of Senators' Lamar Alexander and Bob Corker on the proposal. On January 23, 2013, in Winchester, Tennessee, the field representative for Congressman Scott DesJarlais (4<sup>th</sup> District, Tennessee) was briefed by Service staff on the proposal.

### PUBLIC OUTREACH

Methods of outreach to private landowners, state and federal elected officials, other state and federal natural resource agencies, natural resource non-governmental organizations, and the general public included direct mailings, e-mails, digital media (i.e., a dedicated project website), and press releases to local media.

One open house, lasting four hours, provided the public with an opportunity to interact individually with Service experts in fish and wildlife management, recreational opportunities, real estate, aquatic biology, private land stewardship, and refuge creation. The open house was announced in a press release about the project, as well as in letters and e-mails sent to CPA landowners, state and local elected officials, and other state and federal natural resource agencies. The open house was held on February 5, 2013, at the Franklin County Library in Winchester, Tennessee. It is estimated that 80 people attended the open house. A public meeting was held at the request of the Keith Springs community and other interested individuals. The meeting was held on February 19, 2013, at the Winchester National Guard Amory, with approximately 150 people in attendance.

The purpose of public scoping was to seek input regarding the establishment of Paint Rock River NWR and to identify the issues that needed to be addressed in the planning process. More than 200 comments were received during the period January 17 through February 28, 2013. These issues/comments are documented in Appendix E.

**Table 3. Proposed Paint Rock River NWR parcel list**

Parcel #	Parcel ID	Acres	Priority
1	145 002.00	134	I, II, III
2	145 007.00	114	I, II, III
3	155 004.00	57	I, II, III
4	155 006.00	114	I, II, III

<b>Parcel #</b>	<b>Parcel ID</b>	<b>Acres</b>	<b>Priority</b>
5a	155 006.02	20	I, II, III
5b	155 006.01	47	I, II, III
6	118 001.00	207	I, II, III
7	135 005.00	149	I, II, III
8	135 008.00	128	I, II, III
9a	135 004.01	30	I, II, III
9b	117 002.00	418	I, II, III
9c	138 001.01	1,705	I, II, III
9d	127 001.00	12,276	I, II, III
10	118 001.02	280	I, II, III
11	135 006.00	80	I, II, III
12	137 003.00	47	I, II, III
13	155 003.00	94	I, II, III
14	128 001.00	29	I, II, III
15	155 001.00	119	I, II, III
16	146 001.01	22	I, II, III
17	135 007.00	153	I, II, III
18	136 013.01	161	I, II, III
19	125 008.00	861	I, II, III
20a	136 001.00	28	I, II, III
20b	125 002.00	1,301	I, II, III
20c	126 001.00	2,449	I, II, III
20d	154 004.00	2,968	I, II, III
21	136 006.00	113	I, II, III
22	135 004.00	233	I, II, III
23	156 001.00	151	I, II, III
24	155 002.00	458	I, II, III
25	126 003.00	68	I, II, III
26	147 001.00	4	I, II, III
27	147 002.00	102	I, II, III
<b>Total</b>		<b>25,120</b>	

Figure 2a. Proposed Paint Rock River NWR parcel map



Figure 2b. Proposed Paint Rock River NWR parcel map

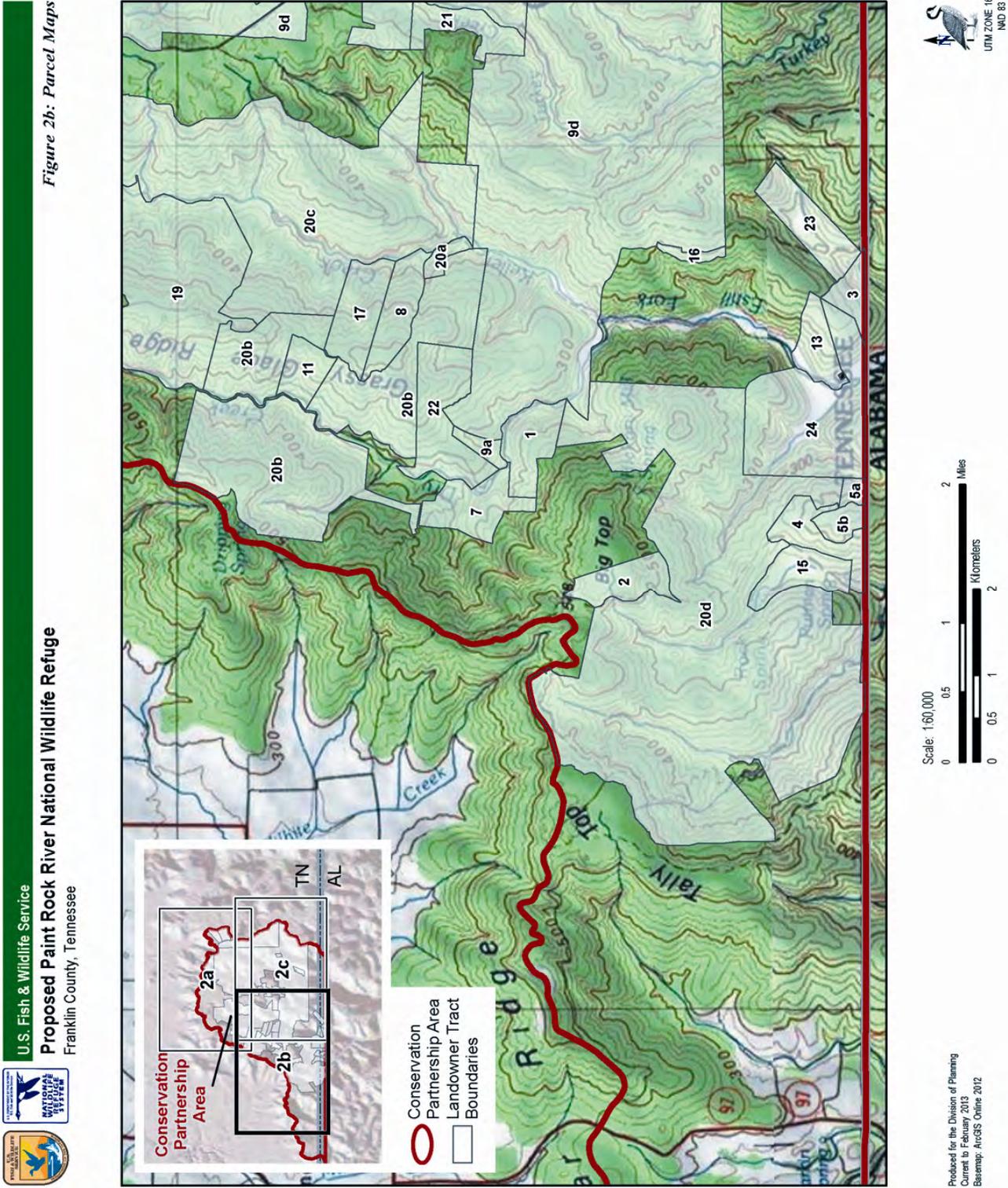


Figure 2c. Proposed Paint Rock River NWR parcel map

