

# **All-Terrain Vehicle Use**

## **Draft Compatibility Determination**

### **Title**

Draft Compatibility Determination for All-Terrain Vehicle Use, Tensas River National Wildlife Refuge.

### **Refuge Use Category**

Other Uses

### **Refuge Use Type**

All-Terrain Vehicles

### **Refuge**

Tensas River National Wildlife Refuge (NWR, refuge)

### **Refuge Purposes and Establishing and Acquisition Authorities**

In an effort to conserve the largest privately owned tract of bottomland hardwoods remaining in the Mississippi Delta, Congress authorized the Secretary of the Interior to establish the Tensas River NWR by Public Law 96-285 on June 28, 1980. Tensas River NWR was established for various purposes:

“For the preservation and development of the environmental resources ... to conserve the diversity of fish and wildlife and their habitat ... for the conservation and development of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretative education,” and “to give special consideration to management of the timber on the refuge to insure [ensure] continued commercial production and harvest compatible with the purposes for which the refuge is established and the needs of fish and wildlife which depend upon the dynamic and diversified hardwood forest” (94 Stat. 595, dated June 28, 1980);

“For the development, advancement, management, conservation, and protection of fish and wildlife resources” [16 U.S.C. 742f(a)(4)] “for the benefit of the United States Fish and Wildlife Service (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) (Fish and Wildlife Act of 1956)];

“For conservation purposes” [7 U.S.C. 2002 (Consolidated Farm and Rural Development Act)]; and

“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)].

## **National Wildlife Refuge System Mission**

The mission of the National Wildlife Refuge System, otherwise known as 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 (Pub. L. 105-57; 111 Stat. 1252).

## **Description of Use**

Is this an existing use?

Yes. This Compatibility Determination (CD) reviews and replaces the 2009 CD for All-Terrain Vehicle (ATV) Use.

What is the use?

Tensas River NWR proposes to continue allowing off-road or ATVs, which is the use of any motorized vehicle (except snowmobiles, airboats, hovercraft, or personal watercraft) designed for or capable of travel over land, water or other natural terrain off designated routes of travel. ATVs are generally defined as three- or four-wheeled vehicles having a seat designed to be straddled by the operator and equipped with low-pressure tires designed for off-road use. The use of ATVs is primarily in support of the priority public uses of hunting and fishing, but other uses including wildlife observation and photography are supported as well. The refuge has a very limited system of roads and has historically used ATVs for access to remote areas for wildlife-dependent activities. This use has resulted in a limited system of trails distributed to most areas of the refuge. Considering the topography of the area and its remoteness, the need for limited use of ATVs by certain refuge users is apparent. In order to develop an effective public use program that provides optimum visitor use opportunities, the refuge is allowing the use of ATVs. Timber harvest has historically occurred in the area and logging roads were frequently converted to ATV trails upon conclusion of the timber harvest. Use of ATVs is common on the refuge, but weight, dimensions and timing of use restrictions apply. While ATV use is not a priority public use of the Refuge System under the Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the National Wildlife Refuge System Improvement Act of 1997, it directly supports wildlife-dependent recreation and was previously deemed compatible in the Tensas River NWR Comprehensive Conservation

Plan {(CCP), USFWS 2009a)} and associated Environmental Assessment {(EA), USFWS 2009b)}.

Is the use a priority public use?

No

Where would the use be conducted?

ATV use would be allowed on designated ATV trails throughout the refuge. The use of ATVs is restricted to wildlife-dependent recreation only. Both ATV and Mobility Impaired ATV trails are designated on the refuge brochure map in the Hunting and Fishing Regulation Brochure (USFWS 2021b). Currently there are approximately 54 miles of ATV trails throughout the refuge. These trails are widely distributed and facilitate access to remote areas of the refuge. Fee title acres within the acquisition boundary have increased from 74,622 acres when the CCP was approved in 2009 to 77,868 acres today. To access the additional acres acquired, approximately 3.36 additional miles of ATV trails were designated on existing roads to facilitate access to these new areas.

When would the use be conducted?

Seasonal ATV use may occur during time periods identified in the Refuge Hunting and Fishing Regulations Brochure (USFWS 2021b). This time period generally occurs from October 1st until the last day in February. Peak ATV use occurs from mid-November until mid-January in conjunction with optimal deer hunting time periods. The trails are closed during the remainder of the year to perform maintenance activities, minimize wildlife disturbance and minimize environmental damage associated with continuous ATV traffic. The soils on the refuge consist of poorly drained, high clay soils. ATV traffic causes rutting during wet conditions. To properly maintain the ATV trails, use must be suspended and drying must occur. In areas of heavy rutting, the trails must be disked and then a bulldozer or motor grader must be used to “crown” them where water will not pool in the road. For this process to occur, ATV traffic must be suspended seasonally. The lack of ATV traffic during the summer reduces human disturbance to wildlife. Due to the length of ATV trails (approximately 54 miles) and only one full-time equivalent (FTE) wage grade employee, the ATV trails cannot be adequately maintained year-round to provide quality wildlife viewing and photography opportunities to the public.

During hunting season, no individual may enter the refuge earlier than 4 am and must exit the refuge no later than 2 hours after legal sunset, except during the night raccoon season. ATV use is not allowed during the night time raccoon season or turkey season.

## How would the use be conducted?

ATV use is allowed for access during time frames specified in the Refuge Hunting and Fishing Regulations Brochure. Seasonal ATV use is permitted for hunting, fishing, wildlife observation and photography. Annual Public Use Permits (USFWS 2021b), instead of a separate ATV permit as in previous years, are now required to operate an ATV. Approximately 4,000 Annual Public Use Permits are sold annually; therefore, an estimated 2,000-3,000 visitors may operate ATVs on the refuge in any given year. ATVs are not permitted off designated trails for any reason, including to retrieve game. Hunters with disabilities must have a Physically Challenged Hunter Program Permit issued by the Louisiana Department of Wildlife and Fisheries or be 60 years of age or older to operate an ATV on one of the Mobility Impaired ATV trails. The use of utility terrain vehicles (UTVs) (side-by-sides) is prohibited due to their weight and rutting of the ATV trails that would occur due to the high clay soil component of the refuge. The lightest UTVs weigh over 1,000 pounds, which exceeds the current 750-pound limit for ATVs on the refuge. Maintaining ATV trails with the current staffing model and present amount of public use is not practical with heavier vehicles. The speed limit on all refuge roads and ATV trails is 25 mph unless otherwise posted. ATVs are usually trailered to trailheads and parking areas and operated on ATV trails to access remote areas within the refuge prior to walking to hunting or fishing areas.

## Why is this use being proposed or reevaluated?

ATV use is being reevaluated pursuant to Service policy and the National Wildlife Refuge System Improvement Act of 1997 (603 FW 2.11 H, USFWS 2000). Seasonal ATV use facilitates public access in support of wildlife-dependent activities, including hunting, fishing, wildlife observation and photography. These goals are identified in the completed CCP for Tensas River NWR (USFWS 2009a). Tensas River NWR is a popular destination with over 10,000 visits per year for white-tailed deer and squirrel hunting and many users also enjoy fishing, wildlife observation and photography. ATV use facilitates access to large portions of the refuge that would otherwise be inaccessible to these priority uses. Although this use may have some negative, temporary habitat impacts in a localized area such as an ATV trail, the positive effects of increased access for multiple uses outweigh the negative effects.

## **Availability of Resources**

The analysis of cost for administering and managing each use will only include the incremental increase above general operational costs that we can show as being directly caused by the proposed use. Adequate refuge resources do not exist to properly develop, operate, and maintain the use in a way that provides a quality experience to the public. Complex staff and seasonal/part time employees are needed in addition to FTE station employees to maintain trail conditions suitable for public use.

**One-time costs:**

- **Facilities:** The initial cost of constructing approximately 54 miles of ATV trails is \$1,080,000.

**Annual/recurring expenses:**

- **Administration and Management** - Resources involved in the administration and management of ATV use includes personnel time associated with issuing Annual Public Use Permits. The FTE refuge manager, FTE park ranger and FTE budget technician spend approximately 720 hours cumulatively (\$24,000) to assist with administration of Annual Public Use Permits for ATV trail use over a 4 month period.
- **Maintenance** - An FTE wage grade employee spends approximately 640 hours a year (\$28,300) mowing, disking and pulling up ATV trails with a bulldozer. Seasonal FTE wage grade employees, FTE wildlife biologists and tractor-certified biological science technicians spend approximately 320 hours cumulatively per year (\$6,800) to prepare the ATV trails for use. Existing refuge FTEs are unable to complete ATV maintenance without assistance from other stations or seasonal employees. The installation of culverts to improve ATV access costs approximately \$12,000 annually.
- **Monitoring** - Two FTE law enforcement officers spend approximately 1050 hours per year cumulatively (\$54,100) monitoring trail use and ATV specifications.
- **Special Equipment** - A hydraulic roller is used to compact ATV trails after maintenance is performed.
- **Improvements to Support the Use** - Installing culverts and crowning ATV trails to improve access will support the use.

**Offsetting Revenue:**

- The Annual Public Use Permit (USFWS 2021a) costs 20 dollars and provides recreation fee funding, which is used to maintain ATV trails. This permit generates approximately \$80,000-100,000 annually and approximately \$25,000 is utilized annually for trail maintenance.

**Anticipated Impacts of the Use**

Potential impacts of a proposed use on the refuge's purposes and the Refuge System mission

This use was previously approved in the refuge CCP and associated EA (USFWS 2009a, 2009b). Furthermore, the Intra-Service Section 7 for the CCP supports the CCP's Finding of No Significant Impact (USFWS 2009a). This use supports the wildlife

dependent recreational uses of the refuge and does not negatively impact the refuge's purposes or the Refuge System mission.

### Short-term impacts

ATV use can safely facilitate existing wildlife-dependent, priority public uses such as hunting and fishing. Potential impacts of off-highway travel on wildlife include direct mortality (Berry et al. 1996), habitat fragmentation (Ouren et al. 2007) and reductions in habitat patch size, increases in the edge and interior habitat ratio (reductions in animal populations at the edge of forest habitats, referred to as the "edge effect"), and alteration of animal behavior (Berry et al. 1996).

Although direct mortality of ungulates, such as white-tailed deer (*Odocoileus virginianus*) resulting from collisions with ATVs is low, mortality of several species of reptiles have been documented due to off-highway travel (Berry et al. 1996). Forest-interior songbirds and wading birds appear to be the avian groups most affected by roads and off-road vehicle activities. Populations of both are decreasing, and the influences of roads and trails are contributing to these losses (Wilcove 1985; Robbins et al. 1989; Sauer and Droege 1992; Peterjohn et al. 1995). A variety of wetland loss and degradation processes are contributing to the decline of wading birds such as the wood stork (*Mycteria americana*), snowy egret (*Egretta thula*), American white ibis (*Eudocimus albus*) and little blue heron (*Egretta caerulea*). These are species for which the NWRs were established to protect.

Forest-interior bird species have often been the focus of forest fragmentation issues. Within fragmented forest habitats, forest birds are subjected to increased competition with other species (Kerpez and Smith 1990), increased parasitism from brown-headed cowbirds (*Molothrus ater*, Robinson and Wilcove 1994), increased likelihood of predation (Andren and Angelstram 1988; Marzluff and Restani 1999), greater disturbance from human activities (Knight and Gutzwiller 1995), and increased isolation and inhibition of dispersal (Doak et al. 1992; Matthyssen and Currie 1996). Forest interior migratory bird species tend to be vulnerable to predation and parasitism because they often have open-cup nest structures, poorly developed defense mechanisms, nest close to the ground and typically only produce a single, relatively small clutch each breeding season (Dobkin 1992; Rich et al. 1994). Reduced nest success due to nest predation and/or brood parasitism can ultimately result in widespread reproductive failure and have subsequent impacts at the population level for numerous bird species.

Road and trail corridors are relatively permanent features on the landscape and can result in forest fragmentation by creating permanent openings in the forest canopy. Because road and trail corridors remain in the same location for many years, they can become learned features used by multiple generations of predatory and/or parasitic species (Askins 1994). Brown-headed cowbirds show a distinct preference for edge habitats due to the combination of breeding and foraging opportunities available

along or near edges. Other common nest predators include blue jay (*Cyanocitta cristata*), American crow (*Corvus brachyrhynchos*), common grackle (*Quiscalus quiscula*), squirrels, raccoon and rat snakes. It appears that corridor width can influence bird species composition and associated nest predation and parasitism rates along roadways and trails. Studies that specifically addressed the fragmentation impacts of road corridors on bird species (Rich et al. 1994; Askins 1994) generally reported that narrow (26-33 ft) road corridors had few notable impacts on nesting bird species, whereas wider corridors, particularly where shoulders were maintained with mowing, had more notable effects associated with nest predation and brood parasitism. Several high traffic ATV trails including Sharkey and Crystal are wider than 33 feet, while the remainder of the ATV trails are less than 33 feet. Mowing of roadsides is delayed until June to minimize nest predation and brood parasitism.

Numerous studies of the relationship between ecosystem integrity and road density have concluded that a road density of 1 mile per square mile is an ecologically acceptable road density standard (Forman and Hersperger 1996). Road and trail densities at or below 1 mile per square mile can help curtail negative effects such as habitat fragmentation, wildlife disturbance, soil loss and hydrological concerns. The current number of ATV trails on the refuge is less than 1 mile per square mile. The refuge limits ATV use to designated trails, prohibits ATV use during peak breeding bird nesting seasons and prohibits UTV use to minimize adverse impacts. Mowing of ATV trails is delayed until after peak turkey nesting season to minimize negative impacts.

### Long-term impacts

ATV use can have negative effects on the physical environment and to wildlife in a variety of ways. ATV use affects soil and hydrologic function primarily through rutting, soil compaction, soil erosion, removal of the forest litter layer, vegetation damage and increased stream sediment deposition (Meadows et al. 2008; Ouren et al. 2007). Soil compaction and the removal of the forest litter layer can reduce vegetation growth and is a primary factor in accelerated erosion rates (Megahan 1990). ATVs affect vegetation both directly and indirectly. The direct impacts are easy to understand; when motorized vehicles go off-trail they do serious damage to flora in their path (Karasin 2003). Changes in plant species composition can occur as a result of invasive species being propagated by ATV trails that act as conduits for human-caused invasion by exotic species (Greenberg et al. 1997). In contrast, one of the cornerstones of conservation ecology is the fundamental belief that roadless habitats serve as refuges for native species diversity (Soule' and Terborgh 1999). Dispersed use can change the resources provided for some sensitive species, with trampling leading to altered vegetative structure, reduced leaf litter, and increased soil erosion (Liddle 1997, Miller et. al 2020). The extent of these effects depends on the intensity and season of dispersed activity. It is widely accepted that leaf litter and vegetation can be altered by a low level of use (Monz et al. 2013). To mitigate these

impacts, the Service restricts ATV access to designated trails only and prohibits retrieving game using an ATV off designated trails.

Karasin (2003) stated noise can cause wildlife to be stressed, and it can affect their balance of energy expenditures, cause an increase in animals' heart rates, and affect behavior patterns such as nesting and reproduction or feeding and foraging. These impacts may or may not be devastating to an animal depending on the season, its energy budget, and the extent of the disturbance. One study of disturbance by ATVs involved mule deer; the researcher disturbed a mule deer population and tracked its feeding and travel patterns. The disturbed group altered its behavior and had a lower reproductive rate the following season than the control group. (1995) Another study looked at birds' travel patterns and found that birds traveled away from areas where ORVs were in use to areas where there was little or no ORV activity (Wildlands Center for Preventing Roads 2001).

A good deal of research has also been done on the impact of trails and roads on the behavior patterns of wildlife, demonstrating that many wildlife species shift their home ranges or movement patterns in response to the presence of roads or trails, whether to avoid humans or to take advantage of travel corridors (Bennett 1991; Formann and Alexander 1998). These shifts have consequences for population dynamics and predator-prey relationships (Karasin 2003).

Hydraulic conductivity is a measure of potential water flow through the soil profile and has implications for erosion potential. Declining hydraulic conductivity equates to less infiltration and more runoff. Compaction resulting from ATV travel was proven to reduce hydraulic conductivity 8% at a Montana study site, 59% on a Louisiana study site, and 51% at a Washington study site (Meadows et al. 2008). Sediment delivery to streams through increased erosion can result from ATV travel (Misak et al. 2002). Increased sediment loading decreases water quality, fish habitat quantity and quality, and fish reproductive success (Newcombe and MacDonald 1991). The increase in runoff and sediment transport can be substantial. Meadows et al. (2008) compared the effects of ATV traffic across seven sites on diverse landscapes, including the Wenatchee National Forest in Washington State and Land between the Lakes in Kentucky and Tennessee. Sediment loads resulting from ATV trails increased by 56% and 625%, respectively, when compared to adjacent undisturbed sites. Ricker et al. (2008) reported increases in suspended stream sediments resulting from ATV trail surface runoff in a paired watershed study in Stafford County, Virginia. None of the ATV trails on Tensas River NWR traverse actively flowing streams; therefore sediment transport should not occur on a wide scale.

Incremental increases in activities by people engaged in the variety of allowed uses on the refuge could cumulatively result in negative consequences to wildlife and habitats. The noise from ATVs could negatively impact wildlife observation and photography activities on the refuge but these uses are primarily conducted in different geographic areas. The Wildlife Drive is the highest use area for photography

and wildlife observation and ATV use is not allowed in this area. During periods of heavy ATV use such as firearm white-tailed deer hunts, all other public use is prohibited to minimize user conflict. ATV use is only allowed from October 1<sup>st</sup> until the end of February; therefore, ATV use is prohibited for 7 months out of the year. This helps to minimize disturbance to wildlife and reduce conflicts with other user groups. Refuge staff will monitor effects of ATV use to ensure wildlife and other refuge resources are not impacted in a detrimental manner. The Service acknowledges these negative impacts in an effort to continually meet the needs of the public while maintaining the biological integrity, diversity, and environmental health of the refuge.

Beneficially, facilitating wildlife-dependent public use allows the refuge an opportunity to foster a public appreciation and stewardship of the refuge, the Refuge System, and our natural resources as a whole.

### **Public Review and Comment**

The draft CD will be available for public review and comment for 14 calendar days from May 3, 2022 to May 17, 2022. The public will be made aware of this comment opportunity through the refuge website ([https://www.fws.gov/refuge/tensas\\_river/](https://www.fws.gov/refuge/tensas_river/)) and Tensas River Refuge Association Facebook page (<https://www.facebook.com/trrapage/>). A hard copy of this document will be posted at the Refuge Headquarters and Visitor Center (2312 Quebec Rd., Tallulah, LA 71282). It will be made available electronically on the refuge website. Please let us know if you need the documents in an alternative format. Concerns expressed during the public comment period will be addressed in the final CD.

### **Determination**

Is the use compatible?

Yes

### **Stipulations Necessary to Ensure Compatibility**

- All persons must have an Annual Public Use Permit in order to use an ATV on the refuge.
- ATV use is permitted only during specified hours and dates.
- ATV use is allowed from October 1<sup>st</sup> until the last day in February.
- Harassment of wildlife is prohibited as well as the taking of any plant, animal or artifact from the refuge.

- If any adverse impacts occur from any aspect of the public access, then further restrictions may be imposed to protect the plant and animal resources of the refuge.
- All ATVs used on the refuge must have tires no larger than 26” by 12,” with a maximum tire lug height of 1 inch and maximum allowable tire pressure of 12 psi.
- ATVs will not exceed the following specifications: weight 750lbs, length 85” and width 48”..
- No off-trail use of ATVs is permitted.

The Service is not responsible for any mishaps or injuries that may occur during this activity.

### **Justification**

Hunting, fishing, wildlife observation and photography are among those uses identified in the 1997 Refuge System Improvement Act as priority wildlife-dependent recreational activities that should be promoted and expanded on refuges. ATV use is a popular and historic activity on the refuge that facilitates public access in support of these priority activities. While this use creates negative impacts to the physical environment and to wildlife, the Service can strike a balance between the desire to support wildlife-dependent recreation and the mission to conserve wildlife and their habitats through mitigation measures. An important mitigation measure will be to reduce and/or seasonally close the overall number and mileage of ATV trails on the refuge if monitoring results indicate significant negative or potentially negative impacts associated with this use. This measure will considerably reduce all potential negative impacts to the physical environment and to wildlife. ATV use is only allowed on designated trails during 4 months of the year, thereby reducing the overall impact of off-road vehicle use. Finally, ATV use will be restricted to wildlife-dependent activities; year-round, recreational riding will not be allowed.

Provided ATV use adheres to the refuge regulations, this activity is compatible with objectives set forth in the refuge CCP (USFWS 2009a). At the current and proposed levels, providing opportunities for ATV use does not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the refuge. Based on available science and best professional judgement, the Service has determined that providing opportunities for ATV use at Tensas River NWR as outlined in the refuges CCP, Habitat Management Plan and this CD, in accordance with the stipulations provided here, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge.

The proposed use can be categorically excluded from further National Environmental Policy Act (NEPA) analysis under 40 CFR 1508.4 (definition of categorical exclusion) and

516 DM 8.5 B (7): Minor changes in the amounts or types of public use on Service or state-managed lands, in accordance with existing regulations, management plans, and procedures.

Further, this action does not trigger an extraordinary circumstance as outlined under 43CFR§46.215. ATV use has been found to be appropriate and compatible on Tensas River NWR and is consistent with the 2009 EA and final CCP for Tensas River NWR (USFWS 2009a, 2009b). The environmental conditions and use have not changed substantially since the previous NEPA analysis and decision in 2009. This CD updates and replaces the previous 2009 CD.

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## **Signature of Determination**

Refuge Manager Signature and Date

## **Signature of Concurrence**

Assistant Regional Director Signature and Date

## **Mandatory Reevaluation Date**