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E-bike Use on the Womble and Syllamo Mountain Bike Trails

Environmental Assessment including Decision Notice and Finding of No Significant Impact

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Project Information

PALS Tracking #: 62170

Project Webpage: https://www.fs.usda.gov/project/?project=62170

General Location: Womble and Syllamo Mountain Bike Trails, Arkansas

Applicable Ouachita National Forest Revised Land and Resource Management Plan Management Areas: Management Area (MA) 14—*Ouachita Mountains-Habitat Diversity Emphasis;* MA 16—*Lands Surrounding Lake Ouachita and Broken Bow Lake*; MA 20—*Wild and Scenic River Corridors and Eligible Wild and Scenic River Corridors*; MA 21—*Old Growth Restoration*

Applicable Ozark-St. Francis National Forests Revised Land and Resource Management Plan Management Areas: MA 1.C—*Designated Wild and Scenic Rivers*; MA 1.E—*Experimental Forests;* MA 1.H—*Scenic Byway Corridors;* MA 2.C—*Developed Recreation Areas;* MA 3.C—*Mixed Forest;* MA 3.J—*Pastures and Large Wildlife Openings*

Introduction

In response to increased use of electric bikes (E-bikes) by the public, on March 31, 2022, the U.S. Forest Service (USFS) issued new travel management directives that provide guidance on how E-bikes are to be managed on national forest lands and Forest Service Manual 7700 Travel Management (USFS 2022a) was updated to include this guidance. By implementing these directives, the USFS adopted a standard E-bike definition that aligns with that of other federal agencies. The E-bike definition states that an E-bike is a type of motor vehicle with two or three wheels, fully operable pedals, and an electric motor of not more than 750 watts that meets the requirements of one of the following three classes:

1. **Class 1 E-Bike**. An E-bike equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the E-bike reaches the speed of 20 miles per hour.
2. **Class 2 E-Bike**. An E-bike equipped with a motor that may be used exclusively to propel the E-bike and that ceases to provide assistance when the E-bike reaches the speed of 20 miles per hour.
3. **Class 3 E-Bike**. An E-bike equipped with a motor that provides assistance only when the rider is pedaling and that ceases to provide assistance when the E-bike reaches the speed of 28 miles per hour.

The updated travel management directives also established new criteria for designating trails for E-bike use that are not currently designated for motor vehicle use. When designating trails for E-bike use, the USFS must consider and document the following:

- Whether and the extent to which the trails are managed for bicycle use or bicycle use is allowed under the applicable trail management objectives.
- For trails that are managed for bicycle use or where bicycle use is allowed, the extent to which effects from E-bike use are comparable to effects from existing bicycle use, accounting for, as appropriate, differences in speed; potential effects from increased or concentrated use; and any site-specific considerations.
- Consider designating a class or classes of E-bike use, as appropriate, on trails managed for bicycle use or where bicycle use is allowed, where effects from E-bike use would be comparable to effects from bicycle use.

In addition, any change in designation to the trails considered in this analysis need to comply with the Travel Management Rule (TMR) at 36 CFR Part 212. The TMR requires that trail designations consider the effects of, and attempt to minimize damage to soil, watershed, vegetation, and other forest resources; harassment of wildlife and significant disruption of wildlife habitats; conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; and conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands. The responsible official shall also consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors (36 CFR § 212.55(b).

This Environmental Assessment (EA) evaluates potential effects associated with allowing E-bikes on the Womble Trail located on the Ouachita National Forest and the Syllamo Mountain Bike Trail located on the Ozark-St. Francis National Forests (Figure 1). These two existing non-motorized trails within the project area are currently managed for bicycle use. This EA also serves as an example framework for the USFS to use to complete additional site-specific analysis to assess effects when considering E-bike use on other existing trails that are managed for, or allow bicycle use. TMR screening criteria performed for the trails considered are provided in Appendices A, B, and C.

Analysis Focus: Differences Between Traditional Mountain Bikes and E-Bikes

This analysis focuses on determining the differences between impacts under existing trail management practices for traditional mountain bike use to the impacts anticipated if E-bikes are allowed on these same trails. There are many similarities and differences between traditional, non-motorized mountain bikes and E-bikes. To accurately compare potential effects from E-bike use to effects from existing bicycle use, it is important to understand their respective components and capabilities.

Equipment and Components

Traditional mountain bikes are powered entirely by the rider as they pedal, but E-bikes provide additional power via an electric motor with up to 750 watts of power. This motor is usually located on the front or rear wheel hub or integrated into the frame, near the pedals. Most E-bikes are “pedal-assist”, meaning that the motor operates by amplifying the power input by the rider. If the rider does not pedal, the motor does not activate.

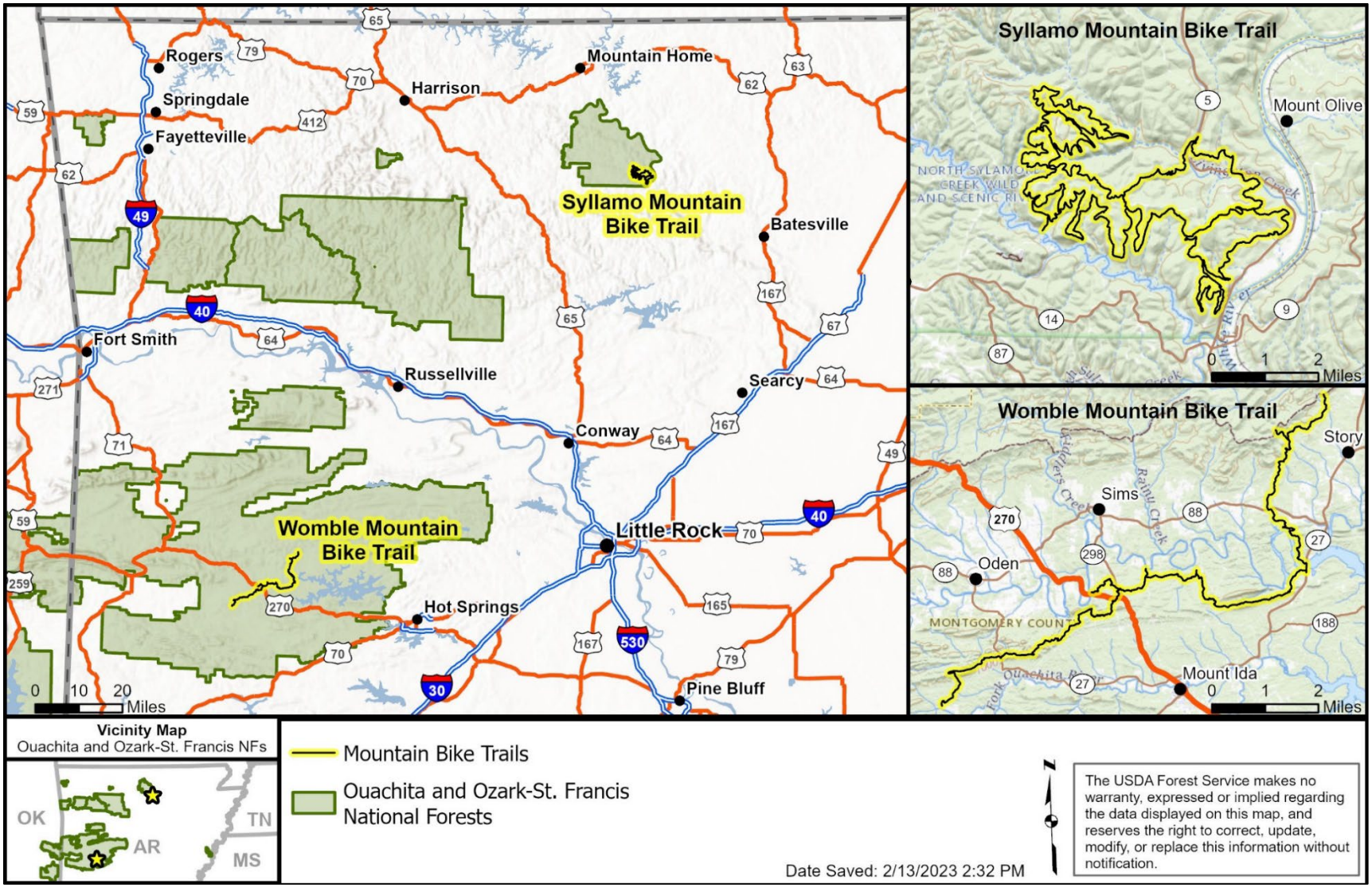

Figure 1. Trail Locations within the Project Area

Though not as common as pedal assistance, some E-bikes (Class 2) feature hand throttles. The throttle allows the bike to be operated without the rider pedaling. These Class 2 E-bikes are designed such that the throttle cannot drive the bike to speeds more than 20 miles per hour (mph) and will also not provide any assistance to the rider when travelling above this speed.

Unlike traditional mountain bikes, E-bikes feature battery packs to power the motor and electronic accessories. Batteries may be “fixed” within the frame or detachable for ease of charging. Detachable batteries are most common and usually attach to a specialized receiver within the frame or over the rear tire. Because of their efficiency, power, and light weight, most E-bikes use lithium-ion batteries; however, exceptions include lithium iron phosphate batteries and conventional lead-acid batteries (Aurora Electrico 2022). Safety information provided by the National Fire Protection Association suggests that, under extremely rare circumstances, fires have been caused by improper charging or storage of these types of batteries (National Fire Protection Association 2022). There is only one documented occurrence of E-bike-caused wildfire—a small bush fire in Australia caused by a homemade E-bike (Forbes 2019).

The frames of E-bikes and conventional mountain bikes provide the same basic function of connecting and supporting the various components, although E-bike frames often feature larger tubing to accommodate the battery pack and associated electronics. E-bikes also weigh more than traditional bikes because of the battery and additional optional features offered, such as display screens. An average full suspension mountain bike weighs about 30 pounds and E-bikes typically weigh between 40 and 70 pounds depending on the model (Cunningham 2021). This difference in weight is not considerable given the difference in weight amongst riders.

E-bikes and traditional mountain bikes feature similar tires, with tires commonly ranging in width from approximately 2 to 5 inches and averaging between 2 and 3 inches. The tread patterns of tires for both bikes range from moderate to aggressive to provide traction on a wide variety of surfaces. Tires found on E-bikes, however, are often designed for greater durability and puncture resistance to counteract the added weight of electrical components (EBikesHQ.com 2022).

Both traditional mountain bikes and E-bikes can be outfitted with lights for safe riding in low-light conditions and around other riders and motorists. The lights of each are powered by batteries, the only difference being that traditional bike lights are powered by single-purpose batteries whereas E-bike lights are often powered by the same lithium-ion battery which supplies the electric motor.

Operational Characteristics

E-bikes and traditional mountain bikes are both capable of high speeds, depending on rider ability and trail characteristics. Depending on class, E-bike motors assist riders to a maximum of 20 mph or 28 mph, at which point electric assistance turns off automatically (Table 1) (Bland 2022). To sustain and exceed these speeds, the rider must pedal the bike entirely under their own power. The ways in which mountain bikers maintain speed over distance are complex and dictated by many variables, including, but not limited to, rider ability, terrain, and gearing. A whitepaper review of E-bike studies found that E-bikes have a speed advantage over traditional mountain bikes when climbing hills, which depends largely on rider exertion (Cherry and MacArthur 2019). This speed advantage decreases and even disappears when applied to downhill sections of trail where riders are no longer required to pedal for forward movement. Speed differences are further discussed in the Use Characteristics section, below.

Table 1. Speed Comparison Between Traditional Mountain Bikes and E-bikes

	Traditional Mountain Bike	E-bike Class 1	E-bike Class 2	E-bike Class 3
Pedal Required for Operation	Yes	Yes	No	Yes
Throttle	No	No	Yes	No
Top Assisted Speed	No assistance	20 mph	20 mph	28 mph
Maximum Speed	Greater than 28 mph	Greater than 28 mph	Greater than 28 mph	Greater than 28 mph

The acceleration characteristics of both E-bikes and traditional mountain bikes depend on a variety of factors including rider ability, gearing, weight, and traction (Dukulis, Berjoza, and Jesko 2013). Additional variables influencing the acceleration of E-bikes include motor power and whether the rider chooses to pedal (applicable only to throttle-controlled Class 2 E-bikes).

Average travel distance for traditional mountain bikes and E-bikes also depends greatly on common variables such as rider fitness, difficulty of terrain, and trail access. While E-bikes may enable riders to travel farther than they otherwise could on a traditional mountain bike, the electric assistance of E-bikes is limited by battery capacity, which is greatly influenced by many factors including terrain, temperature, gearing, amount of battery utilization, motor type, and tire pressures. Generally, most E-bikes have a range of approximately 25-45 miles. Once the battery is drained, the rider may continue to use the E-bike as a traditional mountain bike; however, the additional weight of electrical components then requires greater rider effort than a traditional mountain bike (Aventon 2022).

All mountain bikes make noise when operating. This noise spans a wide range of frequencies, some of which are imperceptible to the human ear but are perceived readily by other species. Bike noise perceived by humans is caused by gears and chains, brakes, ground contact (“road” noise) and, in the case of E-bikes, electric motors. The noise levels associated with these sources are similar between traditional bikes and E-bikes. Decibel levels associated with electric motors vary across E-bike models and depend on maintenance, but the noise levels generated are comparable to the previously mentioned sources of operational noise. Though not focused on E-bike noise, studies have shown that trail users are often unaware of having shared trails with E-bikes, suggesting that any additional noise goes largely unnoticed by the human ear (Nielsen, Palmetier, and Proffitt 2019). However, preliminary studies show that E-bikes equipped with electric motors emit more high-frequency noise, which is perceptible to some wildlife such as bats (H.T. Harvey & Associates 2021).

Use Characteristics

A study of E-bike use on public lands was conducted by Colorado Mesa University to inform policy and management of E-bikes in Colorado. The study found that recreationists owning both forms of mountain bikes use E-bikes differently than traditional mountain bikes. Specifically, most respondents stated that they use E-bikes to reduce riding fatigue (80%), travel farther (78%), ride steeper trails (55%), and travel between home and trailhead (59%). Most respondents, however, also specified that they use E-bikes to ride trails of the same technical difficulty as traditional

bikes (55%) (Perry and Casey 2021). Extended riding distance was found to be increasingly important to riders in older age groups.

Data from the Colorado Mesa University study suggests that E-bike owners are older in general and older than the traditional mountain biking population. The study indicates, based on information provided by survey respondents, that traditional mountain bike riders are interested in extending their riding ability as they age and intend on using their E-bikes in a similar way as they used their mountain bikes, with the differences being that the E-bike allows them to maintain their distance and keep up with other riders. The study concluded that as age increases, riders use E-bikes for distance and steep trails, while younger riders use E-bikes for injury rehabilitation and commuting, and all age groups use their E-bike for relief from fatigue (Perry and Casey 2021).

Limited data is available for comparing the speeds of traditional mountain bikes and E-bikes in non-paved trail settings. On a paved course with varying grades, E-bikes were shown to increase rider speeds compared to traditional bikes on uphill, flat, and downhill sections of the course while maintaining similar levels of energy expenditure. The average uphill speed for E-bike riders was 8.3 mph while traditional bike riders had an average speed of 6.5 mph on the same segment. On flat ground, the average E-bike rider speed was 11.7 mph and traditional bike riders had an average speed of 10.8 mph. On downhill segments, the average speed of E-bike riders was 10.8 mph, and the average speed of traditional bike riders was 9.9 mph (Langford et al. 2017). The trend of differing speeds between traditional bikes and E-bikes has also been observed on gravel paths in Acadia National Park (Williams et al. 2020) and Boulder County, Colorado (Nielsen, Palmetier, and Proffitt 2019), though E-bikes were observed in the latter study to be nominally slower than traditional bikes on downhill trail segments. Another comparative study showed E-bikes traveled 12.9 mph on average, which was 4.1 mph faster than conventional mountain bikes (Hall et al. 2019). The small sample sizes of these studies, however, limit the statistical power of these observations.

These study results provide a good indication of the scale of speed differences between traditional bikes and E-bikes. The power benefits of E-bikes tend to be neutralized on downhill and some flat sections of mountain bike trails as top speeds are often limited by the technical nature (i.e., loose or rough trail surfaces, obstacles, narrow trail width, and tight turns) of such trails, but little scientific evidence exists on this subject. In addition, speeds vary greatly among users of all bike types, and while average speeds in these studies show trends, there is significant overlap between bike types when considering the full range of user speeds. In summary, average E-bike speeds would likely be faster than traditional mountain bike speeds on uphill and flat terrain, and comparable (within about one mile per hour) on downhill sections; however, speed differences between E-bikes and traditional mountain bikes are unlikely to be considerable, and overall top speeds are expected to be comparable.

Purpose and Need: Why do we need to act?

The USFS has approved new travel management directives to guide the management of E-bikes on non-motorized trails. At present, E-bikes are only authorized on motorized trails and roads on the Ouachita and Ozark-St. Francis National Forests. There is a need to apply the national travel management directives to determine opportunities on these Forests for E-bike use. There is also a need to develop a consistent trail evaluation framework that establishes criteria for site specific assessment of trails that are currently managed for traditional bike use.

Proposed Action: What are we proposing to do?

The USFS proposes to designate two existing non-motorized trails for use by E-bikes on the Ouachita and Ozark-St. Francis National Forests. The two trails in the project area, Womble and Syllamo Mountain Bike Trails, are currently open to and managed for traditional (non-motorized) mountain biking and are well-established trails (Figure 2 and Figure 3). No new trail construction

would occur and there would not be an increase in trail lengths. Routine trail maintenance and Forest Plan monitoring would continue with no substantial changes anticipated.

The Womble Trail is a point-to-point trail in western Arkansas on the Ouachita National Forest that extends from McGill Mountain on the northeast end to North Fork Lake on the southwest end. Trail elevations range from about 600 to 1,200 feet in elevation. The total trail mileage currently managed for mountain biking and proposed for E-bike use under this action is about 38 miles. Some stretches of this trail intersect roads that are already managed for motorized use. The trail overlaps with a variety of management areas, as defined in the Ouachita National Forest Revised LRMP, none of which prohibit motorized use (USFS 2005a).

The Syllamo Mountain Bike Trail is a network of interconnected loops and spurs on the Ozark-St. Francis National Forests north of the town of Mountain View, Arkansas that range from about 300 to 1,000 feet in elevation. Trail grades are generally at or below 10 percent. The total trail mileage in this area currently managed for mountain biking and proposed for E-bike use under this action is about 51 miles. This includes several short stretches that overlap with existing roads that are already classified for motorized use. The trail system overlaps with a variety of management areas, as defined in the Ozark-St. Francis National Forests Revised Land and Resource Management Plan (LRMP), none of which prohibit motorized use (USFS 2005b).

Alternatives Dismissed from Analysis

The proposed action, as initially conceived, included a third trail for E-bike use consideration. The Upper Buffalo Trail on the Ozark-St. Francis National Forests was later dismissed from consideration as a result of the initial TMR compliance screening process and public input. Two primary issues were identified during the screening process that resulted in the decision to dismiss this trail from consideration: (1) the trail crosses through 8.2 miles of the Buffalo National Wild and Scenic River corridor (Scenic classification), which has a recreation opportunity spectrum (ROS) classification of semi-primitive, non-motorized in the LRMP; and (2) most of the project area outside of the river corridor is in Management Area 2.D, Upper Buffalo Dispersed Recreation Area, which the LRMP also specifies is to be managed for non-motorized recreation. These issues are discussed in more detail in Appendix C: Upper Buffalo Trail.

Consideration of No Action

Under the USFS's National Environmental Policy Act (NEPA) implementation regulations at 36 CFR 220.7(b)(2)(i), the EA need only analyze the proposed action and may proceed without consideration of additional alternatives. This includes a separate "no action" alternative as long as the analysis of the proposed action clearly contrasts the impacts of the proposed action with the current condition and expected future condition if the proposed action were not implemented (36 CFR 220.7(b)(2)(ii)).

Under the no action alternative, no new actions would be implemented and the two trails under consideration would continue to be managed for non-motorized bicycle use. Routine trail maintenance and LRMP monitoring would continue to occur under this alternative. These actions include regular trail maintenance performed by volunteer organizations and regular trail inspections performed by USFS personnel.

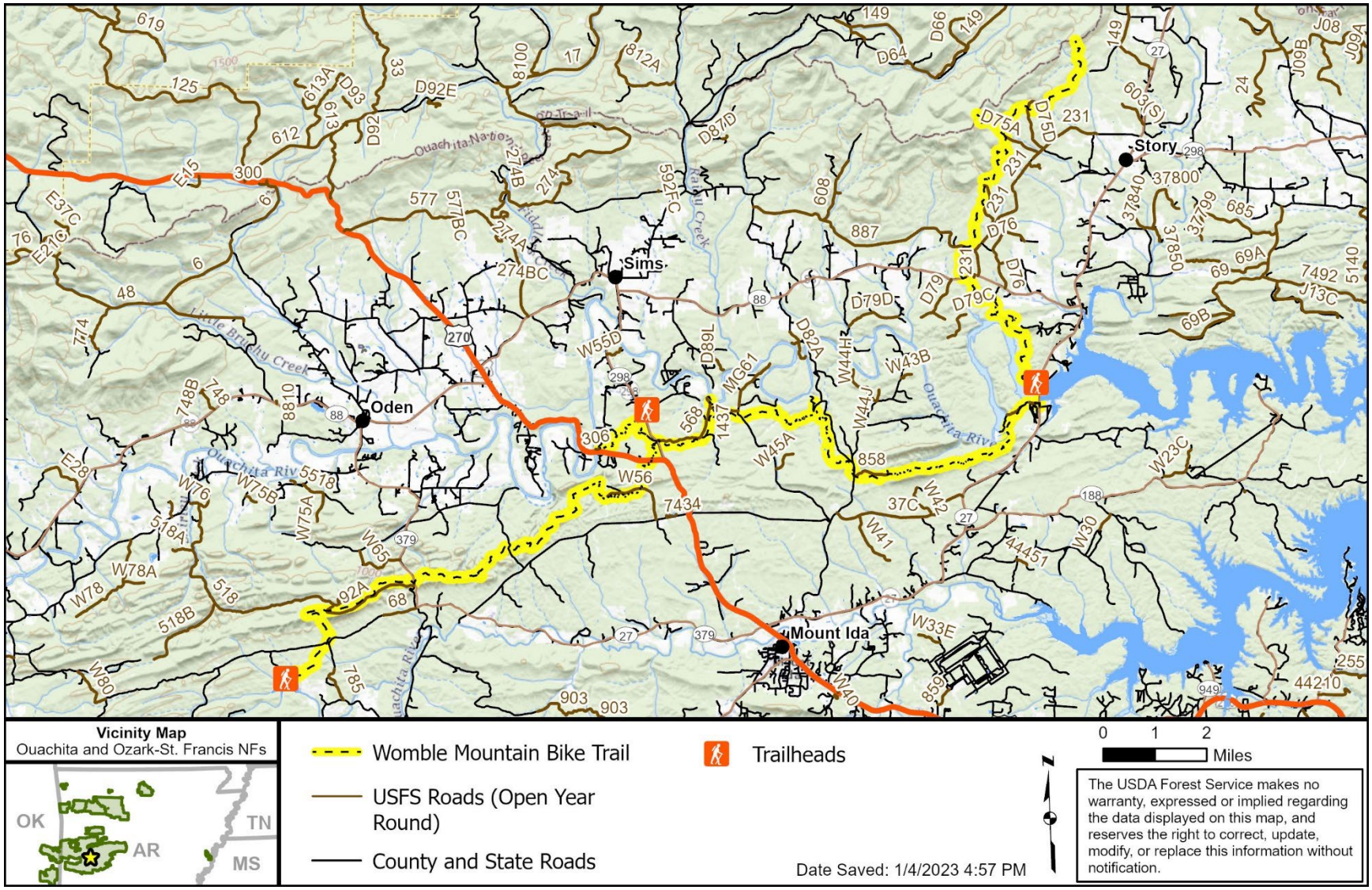

Figure 2. Womble Trail and Access Map

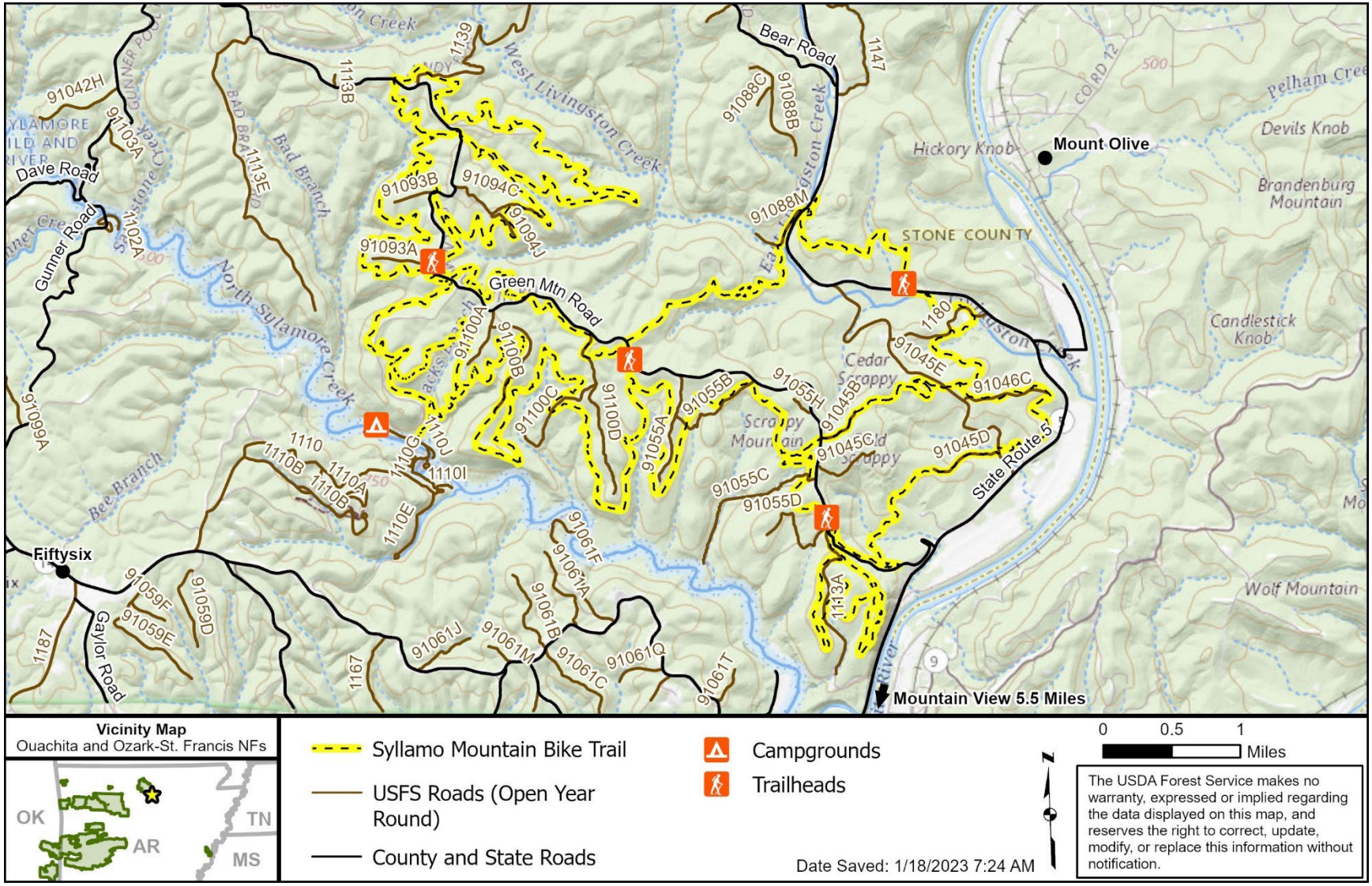

Figure 3. Syllamo Mountain Bike Trail and Access Map

Project Screening

Legal and Regulatory Considerations

Given the nature of the project, the responsible official has considered the following legal and regulatory considerations in addition to NEPA:

☒ Travel Management Rule (36 CFR 212)

☒ NFMA/Land Management Plan

☒ Endangered Species Act (ESA)

☒ Sensitive Species (FSM 2670)

☒ Migratory Bird Treaty Act (MBTA)

☒ Bald and Golden Eagle Protection Act (BGEPA)

☒ National Historic Preservation Act (NHPA)

☒ Tribal Consultation

☒ Clean Air Act (CAA)

☒ Clean Water Act (CWA)

☒ Pertinent Executive Orders

Special Management Areas:

☒ Wilderness

☒ Roadless

☒ Wild & Scenic River Corridor

☒ Recommended Wilderness

☒ Research Natural Areas

☒ National Scenic & Historic Trails

☒ National Recreation Areas

Environmental Impacts: How would our management actions affect the environment?

The following sections describe how the project complies with the relevant laws, regulations, policies, and the land management plans, which provide the basis for thresholds for significance. Consistency with relevant laws, regulations, policies, and land management plan standards ensures that the proposed action does not exceed thresholds for significance.

Issues Considered for Analysis

The USFS conducted a scoping process similar to that required for environmental impact statements in the NEPA regulations to determine the scope of analysis. These regulations require the lead agency to "determine the scope and the significant issues to be analyzed in depth" (40 CFR 1501.9(e)), and "[i]dentify and eliminate from detailed study the issues that are not significant or have been covered by prior environmental review(s)..., narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere" (40 CFR 1501.9(f)(1)).

Along with internal scoping, the USFS used public input provided during a virtual collaborative workshop and the official public scoping comment period to help identify key issues to be considered in this EA. Public comments received outside of the official public scoping comment period were also considered. Some issues identified by the public were dismissed from further analysis because they were beyond the scope of the project. For example, additional clarification was necessary to explain that the proposed action would not include new trail construction and associated ground disturbance. Resource areas dismissed from detailed analysis because no new trail construction or disturbance would occur under the proposed action include cultural and heritage resources, botanical resources, and invasive species. Issue identification also contributed to the dismissal of the Upper Buffalo Trail located on the Ozark-St. Francis National Forests from the proposed action.

Key issues identified during the scoping process that were not dismissed, and therefore analyzed in detail, are included as issue statements at the beginning of each analysis section below. None of the identified issues resulted in the need to consider additional project alternatives.

Potentially Affected Environment

The project area includes 51 miles of trail in the approximately 5,500-acre Syllamo Mountain Bike Area on the Ozark-St. Francis National Forests and a 38-mile corridor along the Womble Trail on the Ouachita National Forest. Both trails are managed on USFS-administered land. The affected environment captures past and related recreation actions that have led to the current management of the two trails. Foreseeable actions include the approval of E-bike use on other federally and state managed trails within the region.

The analysis area, defined as the area potentially impacted, varies by each resource and these specific spatial extents are identified in each resource's analysis section. The sections below summarize anticipated environmental impacts based on resource-specific, in-depth analyses; followed by descriptions of how the project complies with relevant laws, regulations, and policies.

Analysis

The analysis focuses on the differences between traditional mountain bikes and E-bikes and the potential impacts caused by these differences on two existing trails currently managed for bike use. For each resource, the impact causing elements and potential impacts are discussed in detail.

Insufficient data exists to accurately quantify existing trail use levels for various recreational user groups (e.g., hikers, runners, mountain bikers, etc.) by season and year, but overall use is understood to be moderate and generally dominated by mountain bikers for both trails considered in this analysis.

Assumptions made regarding recreational use levels and characteristics under the proposed action are included in the resource specific analysis sections that follow.

Recreation

Issue Statements

- How would the allowance of E-bikes change the experience of existing trail users?
- Would the proposed action have an impact on the quantity of trail opportunities for other user groups?
- Will the allowance of E-bikes result in an increase in trail usage? If so, would this additional usage result in a need for new supporting infrastructure (e.g., parking areas and bathrooms)?

Affected Environment and Impacts

The affected recreational environment for the project centers on existing recreational opportunities and management strategies of the Womble Trail and Syllamo Mountain Bike Trail. Additionally, it is contextualized by historic trends in forest visitation, popularity of mountain biking in Arkansas, and existing research on E-bike usage. Together these provide a backdrop against which to analyze impacts of the proposed action.

According to the Arkansas Department of Parks, Heritage, and Tourism, the state of Arkansas supports a thriving mountain biking community. Near the Womble Trail, the city of Hot Springs has been designated as a Ride Center by the International Mountain Bicycling Association (IMBA), a title that recognizes the city as one of the foremost mountain biking communities in the nation. Furthermore, both the Womble and Syllamo Mountain Bike Trails have received the IMBA Epic Ride designation, which highlights outstanding mountain bike trails. Combined with local communities catering to mountain bike tourism, Arkansas has become a popular destination for mountain bikers from around the world (Arkansas Department of Parks Heritage and Tourism 2022).

Every five years, the National Visitor Use Monitoring (NVUM) Program collects data on national forest visitation, satisfaction, use characteristics, and more. NVUM data from 2005 to 2010 shows substantial increases in forest visitation. Over this time period, Ouachita National Forest visitation increased by 25 percent and Ozark-St. Francis National Forests visitation increased by 102 percent (Natural Resource Manager 2020). Data collected in 2020 shows sharp decreases in forest visitation, with visitor numbers near or below 2005 levels. This sudden departure from the trend of increasing visitation, however, is likely explained by travel restrictions, closure of public facilities, and user risk-aversion caused by the COVID-19 pandemic (Landry et al. 2021). With public services back in operation and many Americans resuming their normal travel plans, it is likely that forest visitation for both Ozark-St. Francis and Ouachita National Forests will rebound and continue to increase into the future. Hiking, mountain biking, and equestrian uses are only allowed on non-motorized trails specifically designated for each use. Historically, this management strategy of not designing multi-use trails has served to reduce user conflict and limit impacts associated with mountain bikes. A very small subset of non-motorized trails are managed with the sole focus of mountain biking. As a result, hikers and equestrians have abundant opportunities to avoid biking activity if desired.

As a specially designated trail, the Syllamo Mountain Bike Trail was designed to provide mountain biking opportunities and is managed with a sole emphasis on mountain biking. Additionally, portions of the trail system overlap with roads. Open year-round to all uses, recreationists share these limited trail segments with motor vehicles. Given the management focus, signage, popularity of the trails among bikers, IMBA Epic Ride designation, and overlap with roads, other users know to expect heavy bike traffic, with many of these users typically opting to use trails that exclude mountain bikes and motor vehicles instead. The Womble Trail is also designated as an IMBA Epic Ride and is popular with mountain bikers. Much like the

Syllamo Mountain Bike Trail, other users are aware of the high-speed recreation occurring on the Womble trail and are able to choose other trails as an alternative to the Womble trail.

The Ozark-St. Francis and Ouachita National Forests feature 476 and 761 miles of non-motorized trail, respectively, representing a majority of the total trail mileage for both forests. The proposed action would allow the operation of E-bikes on the Womble and Syllamo Mountain Bike Trails, which are 38 and 51 miles in length, respectively. These trails represent a subset of the total trail miles available to mountain bikers. Under the proposed action, 95 percent of the non-motorized trail miles in the Ouachita National Forest would continue to prohibit E-bikes. In the Ozark-St. Francis National Forests, approximately 89 percent of the non-motorized trail miles would continue to prohibit E-bikes. Users wishing to recreate without the presence of E-bikes could still choose from hundreds of miles of trail that exclude E-bikes (Table 2). These users would experience no substantial impacts as a result of the proposed action.

Table 2. Effect of Proposed Action on Non-motorized Trail Mileage

	Ouachita National Forest	Ozark-St. Francis National Forests
Total Non-motorized Trail Mileage	761	476
Miles Proposed for E-bike Allowance	38 (5% of total)	51 (11% of total)
Miles Not Proposed for E-bike Allowance	723 (95% of total)	425 (89% of total)

In terms of likelihood for user conflict, there is little difference between traditional mountain bikes and E-bikes. Though these bike types may allow bikers to ride at slightly different average speeds, these biking speeds depend largely upon trail character and rider ability, with substantial overlap between typical speeds on flat and downhill trail segments. Considering this, the speed differential between traditional mountain bikers and E-bikers is insufficient to impact user conflict rates and is unlikely to be noticed by trail users.

Additionally, most E-bike riders are transitioning from traditional bikes due to age or the desire to ride longer, ride to and from trailheads, and/or reduce riding fatigue (Perry and Casey 2021). While it is impossible to quantify the number of new users that will be added as a result of the proposed action, this research suggests that most E-bike usage on the Womble and Syllamo Mountain Bike Trails will come in the form of existing users transitioning to E-bikes. Even if these riders choose to ride further or more frequently after transitioning to E-bikes, it is unlikely that the proposed action would considerably increase trail usage compared to forest-wide trends of increasing visitation. As such, the proposed action would not result in a need for new or additional infrastructure.

As a result of existing trail capacity and management, E-bike use characteristics, and the lack of impacts on user conflict rates, the proposed action would have no appreciable negative impact on the user experience of either trail. Rather, positive user experience impacts are anticipated for users who currently wish to utilize E-bikes but are prohibited from doing so.

Public Safety

Issue Statements

- Assuming implementation of the proposed action would result in more users and higher speed users, what are the anticipated safety impacts of the proposed action?

- Will E-bikes facilitate less physically able people going further into the backcountry, and what are the anticipated impacts on local search and rescue operations?

Affected Environment and Impacts

The Womble Trail runs 38 miles from the southwestern terminus at North Fork Lake to the northeastern terminus, where it joins with the Ouachita National Recreation Trail near Story, Arkansas. The trail is served directly by three trailheads and indirectly by a trailhead for the Ouachita National Recreation Trail. Furthermore, the Womble Trail features numerous road crossings, including US Route 270, which provide emergency responders with abundant access to the trail (Figure 2). Though valued by riders for the natural character of the trail corridor, there are few segments extending more than 1–2 miles from the nearest access point. In the case of an accident, the nearest hospitals are located approximately 30–60 minutes away in the towns of Mena and Hot Springs. As a point-to-point trail, the Womble Trail extends for many miles, with many riders using adjoining USFS roads to make loops or shuttle vehicles to allow for point-to-point travel.

The Syllamo Mountain Bike Trail consists of a series of loops totaling 51 miles of trail. The trail system is served directly by three trailheads, with additional trailheads nearby. Like the Womble Trail, the Syllamo Trail features numerous road crossings along its length, including two crossings of AR-5, a busy paved road bordering the eastern edge of the trail system (Figure 3). Existing signage and line of sight has been adequate for minimizing conflicts at these road crossings. Because of the loop character of the trail system, riders are rarely more than a half mile from nearby roads or access points. The nearest hospitals are located in the towns of Mountain View and Calico Rock, each representing approximately 15-30 minutes of drive time depending on the location of an accident. Managed primarily for mountain biking this trail system features segments of varying difficulty for riders of varying skill levels. Colored blazes signify trail difficulty so users can make informed decisions based on their riding abilities (USFS 2022b). Historically, this system has been effective for reducing management-related accident rates and providing the public with a safe user experience.

Existing recreation activities on the Womble and Syllamo Mountain Bike Trails do not utilize large lithium-ion batteries such as those found in E-bikes. However, it is likely that many recreationalists utilize smaller lithium-ion batteries to recharge electronics and power bicycle lights while riding the trails. Resource managers have not identified any issues related to the use of these small electronics in these recreation areas.

Occasional user conflict is inevitable, however, with both trails being managed primarily for mountain biking, users know to expect abundant, high-speed bike traffic and conflict is no more common than on other similar trails. Furthermore, although research shows that E-bikes provide slight speed advantages over traditional bikes on paved surfaces in an urban environment (Langford et al. 2017), little research exists comparing speeds on specialized trails such as the Womble and Syllamo Mountain Bike Trails. Mountain biking speeds are unique in that they depend largely upon trail character and rider ability and there is substantial overlap between the typical speeds of traditional bikers and E-bikers.

Assuming most mountain biking injuries occur on downhill trail segments where travel speeds are highest, the addition of E-bike users to these trails would not substantially impact injury rates. E-bikes and traditional bikes achieve similar top speeds when traveling downhill (Langford et al. 2017), with top mountain bike speeds depending more upon rider ability and trail character than presence of an electric motor. Although average uphill speeds are faster for E-bikes than traditional mountain bikes, these speeds are, again, limited by terrain (e.g., obstacles and tight turns) and speeds are much lower overall for both bike types. Additionally, given that these are popular trails with management emphases on mountain biking, trail users know to expect high speed traffic and act accordingly. Considering this, it is unlikely that the slight speed advantage offered by E-bikes would cause any appreciable impact to injury rates on either trail. Despite research showing that mountain bikers often travel further when riding E-bikes than traditional bikes (Perry and Casey 2021), a lack of remoteness prevents users from accessing backcountry locations, regardless of bike type. Given the frequency of trailheads, road crossings, and access points, first responders would have little difficulty accessing the Womble and Syllamo trails to provide emergency services.

Existing management practices have been sufficient for ensuring public safety on the Womble and Syllamo trail systems. Overall, E-bikes do not pose any new risks to public safety that are not already inherent to traditional mountain biking. There will be no appreciable impacts to public safety as a result of the proposed action.

Soils and Water Quality

Issue Statement

- How do E-bikes differ from traditional mountain bikes in terms of trail degradation and soil erosion, particularly with respect to the soil types present along the proposed trails?

Affected Environment and Impacts

The analysis area for soils and water quality includes existing soil conditions on the Womble and Syllamo Mountain Bike Trails and at associated stream crossings, and the water quality of adjacent and intersecting streams. Furthermore, it is characterized by relevant management policies and existing data on the erosive potential of traditional mountain bikes and E-bikes.

Managed primarily to provide mountain bikers with recreational opportunities, the Womble and Syllamo Mountain Bike Trails feature heavily compacted soils throughout their lengths. Varying in type, these compacted soils are the result of trail construction specifications intended to minimize soil erosion and moderate trail use over long periods of time. The Womble Trail analysis area includes twenty-five streams, four of which are perennial (Figure 4). The Syllamo Mountain Bike Trail analysis area includes ten streams, two of which are perennial (Figure 5). These stream crossings feature varied construction including elevated bridges and simple low water crossings, with crossing type depending on factors such as approach angle and channel form.

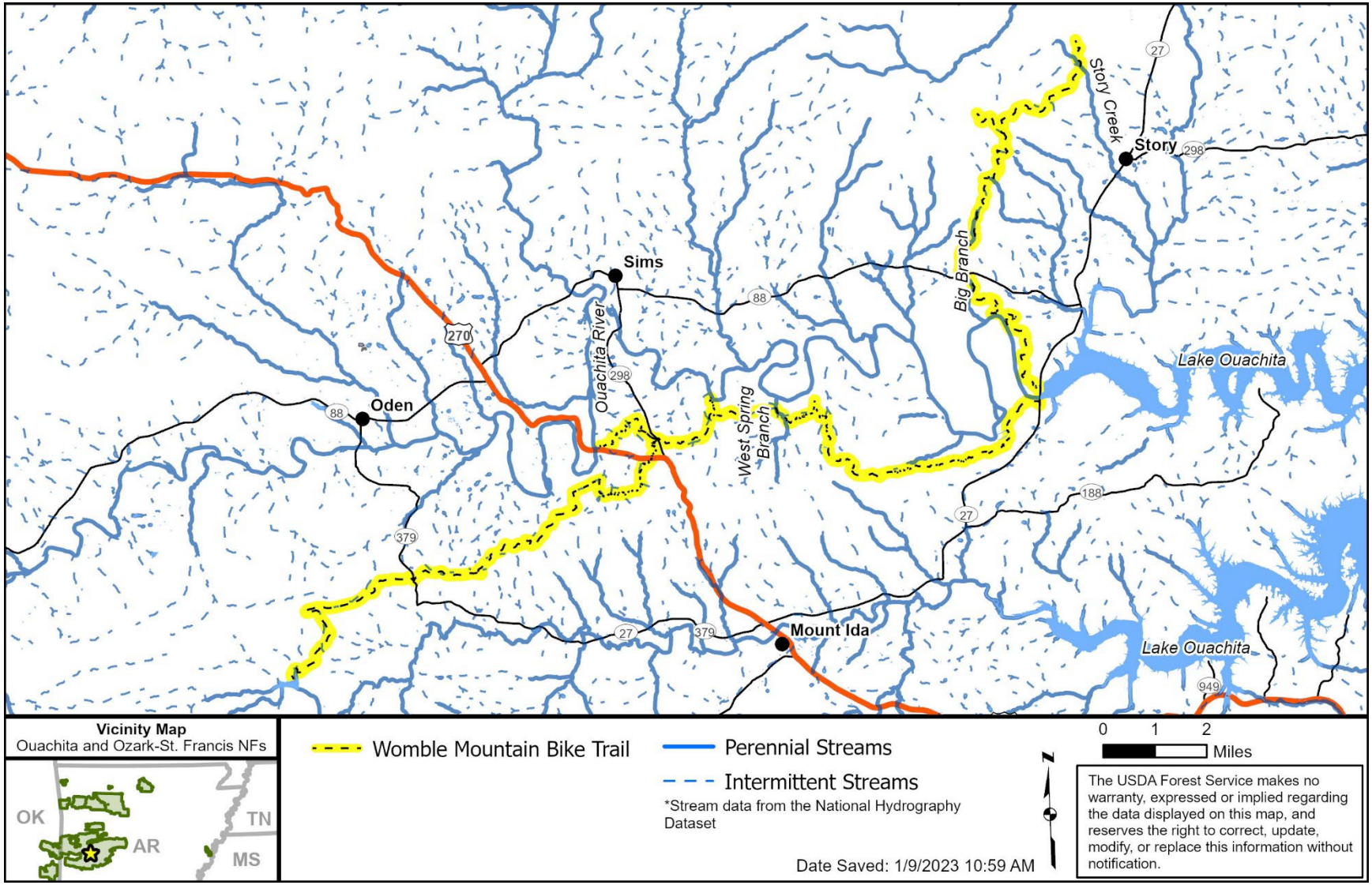

Figure 4. Womble Trail Stream Crossings

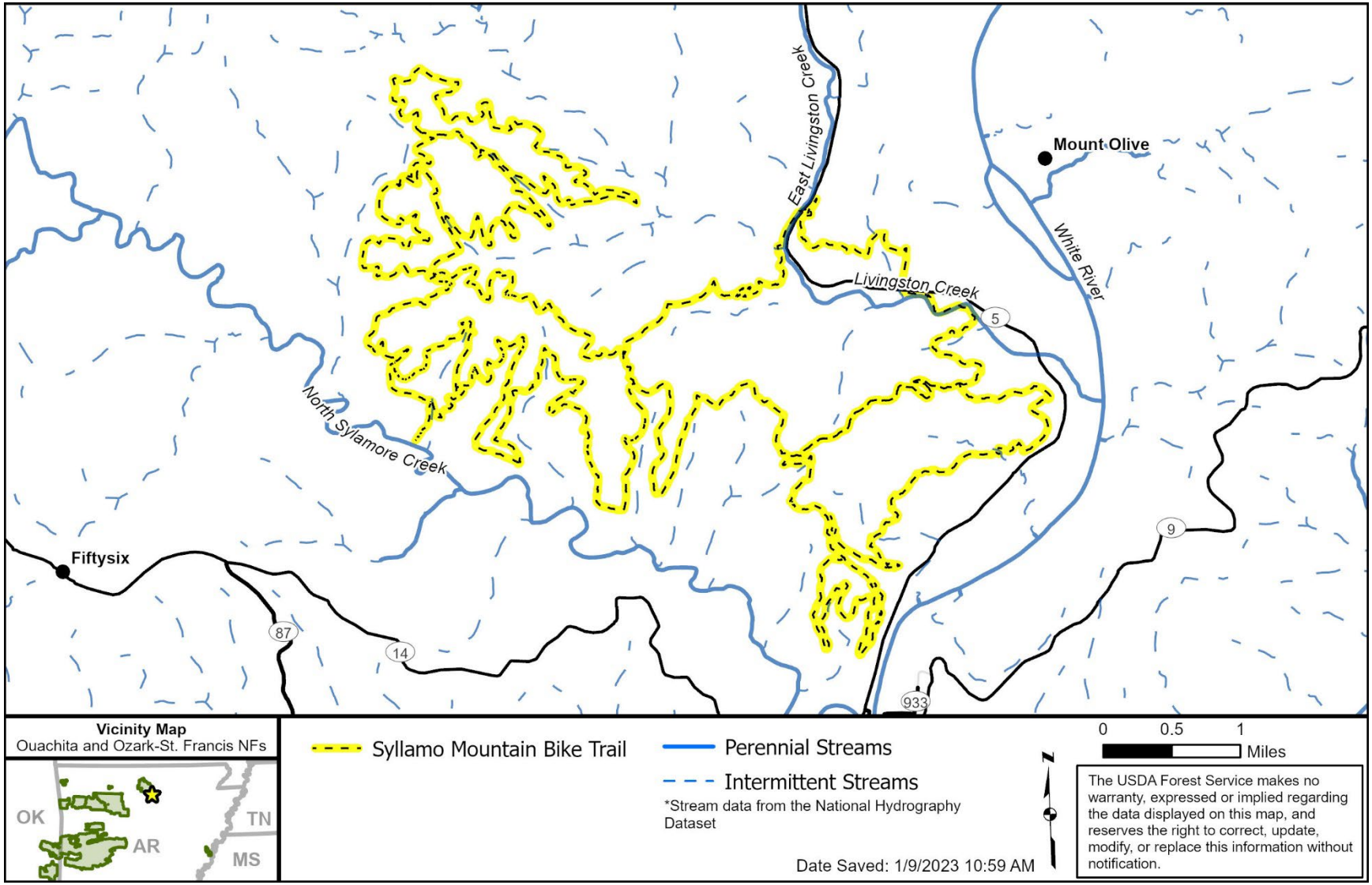

Figure 5. Syllamo Mountain Bike Trail Stream Crossings

To protect water quality and watershed health, Land Management Plans for Ouachita and Ozark-St. Francis National Forests identify a variety of standards, and monitoring elements to reduce potential adverse impacts resulting from management actions. Both National Forests prioritize adherence to federal and state water quality standards and specify design standards for minimizing soil erosion from features such as roads, trails, and stream crossings. By monitoring and evaluating watershed condition class every five years, Ouachita National Forest tracks progress of watersheds in the Womble Trail vicinity towards desired conditions by assessing the condition of twelve watershed characteristics, including water quality, soil condition, road and trail condition, and more. This includes the Cedar Creek-Ouachita River (HUC: 80401010302) and Middle South Fork Ouachita River (HUC: 80401010402) watersheds which are currently listed as Functioning At Risk, meaning that these watersheds are in “fair” overall condition and are at risk for further degradation (USFS 2022c). Though all watersheds within the vicinity of the Syllamo Mountain Bike Trail are listed as Functioning Properly, Ozark-St. Francis National Forest has identified maintenance of functional watershed condition as a top priority for soils and water resources. Additionally, USFS personnel perform Forest Plan and best management practice monitoring to identify impairments and inform management decisions.

Data comparing the erosional characteristics of E-bikes to traditional mountain bikes is limited. A field study conducted in western Oregon found no statistically significant difference in soil displacement between a Class 1 pedal assist E-bike and a traditional mountain bike. However, though not statistically significant, this study did observe slight increases to soil disturbance at the entrance of banked turns associated with E-bikes (in all tests, soil disturbance was far less severe than that of motorized dirt bikes). This disturbance may result from slightly increased approach speed and increased vehicle weight. As part of the same study, a smaller “mini test” was performed which suggested that throttle assisted (Class 2) E-bikes may cause considerably more total soil disturbance than either Class 1 pedal assist E-bikes or traditional mountain bikes on steep uphill segments of 40–45% slope (International Mountain Bicycling Association 2015). This may result from increased throttle usage and tire slippage after traction has been lost, as riders of throttle assisted E-bikes may not sense loss of traction as readily as those riding pedal assisted E-bikes. If so, the increased soil disturbance of throttle assisted E-bikes would be limited to trail segments featuring steep uphill or loose soils.

These studies on E-bike soil disturbance, were extremely limited and further research is needed to corroborate these findings in varying soil types. However, assuming that these trends may also occur on the Womble and Syllamo Mountain Bike Trails, the proposed action could cause localized impacts to soil condition on steep uphill segments of both trails and at the entrances of banked turns such as those found on the Syllamo Mountain Bike Trail. No new impacts are anticipated at low water stream crossings as a result of E-bikes. The extent of soil impacts on steep uphill segments would depend largely upon the number of throttle assisted (Class 2) E-bikes present on the trails. A recent study found Class 2 E-bikes to represent a relatively small minority of the total number of E-bikes being used on public lands in Colorado (Perry and Casey 2021), but it remains unclear as to how project implementation and future trends in the E-bikes may influence E-bike usage in the project area.

These potential impacts are reduced by a variety of design standards, maintenance, and existing trail conditions. As heavily trafficked trails with regular maintenance, there are high levels of existing soil compaction which reduces the potential for soil disturbance in most areas. Furthermore, design standards and monitoring programs detailed in the Ouachita and Ozark-St. Francis National Forest Land Management Plans reduce the likelihood of negative impacts to soils and water resources within the analysis area. This includes trail design features that limit erosion and runoff and regular water quality monitoring. As a result of engagement with local trail users, these trails also receive regular maintenance from volunteer groups to ensure the continued function of trail features and stream crossings and to prevent soil erosion. These activities also serve to monitor soil conditions and alert USFS resource managers to areas requiring further monitoring or rehabilitation. As a result, no impacts, to water quality or watershed condition class are anticipated as part of the proposed action.

Cumulative impacts may result from increased trail usage related to overall trends of increasing forest visitation. These impacts would be similar in nature to those of the proposed action and/or continued management practices and would be lessened by the same design standards, maintenance, and monitoring identified for the impacts of the proposed action.

Wildlife and Fish

Issue Statements

- How do higher average rates of speed impact wildlife and fish?
- How does increased recreation activity impact wildlife and fish?

Affected Environment and Impacts

The Syllamo Mountain Bike Trail passes through forested hills and is situated within the Ozark Highlands Ecoregion, surrounded by a variety of habitat types including forests, agricultural lands, and karst features such as caves and sinkholes (Arkansas Game and Fish Commission 2015). The Womble Trail occurs within the Ouachita Mountains Ecoregion, characterized by ridges, hills, and valleys with scattered agricultural lands (Arkansas Game and Fish Commission 2015). Ephemeral and perennial waterbodies as well as glades and wetlands are present within the project area (Figure 4 and Figure 5).

The analysis area for wildlife and fish consists of a fifty-foot buffer centered on the midline of the existing trails to evaluate potential impacts from noise and recreationist presence, the effects of which could extend beyond the project area. In addition, potential impacts to special status bat species due to emissions of high-frequency noise is analyzed within a 500-foot buffer centered on the midline of the existing trails. The analysis area contains suitable habitat types associated with a variety of wildlife species, including forests, woodlands, glades, karst, and wetlands. Aquatic habitat within the analysis area is marginal and limited to perennial water sources that intersect directly with the existing trails within the analysis area and does not include waterbodies spanned by artificial crossing structures.

Special status wildlife and fish species were grouped for analysis according to the following categories: Proposed, Endangered, Threatened, and Candidate species, USFS Regional Forester's Sensitive Species, Management Indicator Species (for the Ouachita NF), Focal Species (for the Ozark-St. Francis NF), migratory birds, and bald and golden eagles. Habitat descriptions and effects determinations and rationale are presented in detail in the Other Law, Regulation, and Policy Consistency section below.

Within the analysis area, both terrestrial and aquatic wildlife habitat is characterized by ongoing moderate levels of existing recreation activity, which has precluded use by species with heightened sensitivity to human presence. A variety of recreational activities and users are currently allowed on both trails with conventional mountain bikes comprising the majority of trail users. Additional influence of intersecting and overlapping roads allowing motorized use further precludes occupancy and use by species sensitive to vehicle traffic and associated disturbance (Figure 2 and Figure 3). Forest service roads allowing motorized use also allow E-bikes, so it is assumed that wildlife within the analysis area are accustomed to some amount of E-bike use, moderate levels of overall recreation activity, and consistent presence of motorized vehicles. Under the proposed action, there would be no modification or removal of vegetation or habitat. Allowing E-bike use throughout the trails in the project area could increase overall recreation activity levels, average recreation session lengths, and facilitate slightly faster uphill travel and average rates of speed (Mitterwallner et al. 2021). However, these potential effects are expected to be negligible with respect to baseline recreation activity levels and projected trends of future use (see Recreation section).

Recreation activity has been shown to modify wildlife behavior and habitat use, though effects are often inconsistent and highly species-specific (Mitterwallner et al. 2021; Larson et al. 2016; Naidoo and Burton 2020). Studies show that most wildlife exhibit a similar response across recreation types such as hiking,

running, and mountain biking, though survey effort varies across taxonomic groups (Taylor and Knight 2003; Marion and Wimpey 2007; Larson et al. 2016). Faster modes of recreation, such as traditional mountain biking, reduce both human and wildlife reaction times, increasing the likelihood of disturbing wildlife and incurring potentially negative effects (Taylor and Knight 2003). Given the minimal technical and operational differences demonstrated between traditional mountain bikes and E-bikes, wildlife responses are expected to be similar between these two modes, with the exception of high-frequency noise associated with E-bike use. Direct impacts to wildlife and fish are limited to physical collisions and harassment of individuals due to recreationist presence within the project area. Harassment or disturbance of wildlife due to recreationists can result in reduced capacity to engage with necessary biological activities such as breeding, feeding, and parturition; however, given high existing recreation activity associated with the analysis area, wildlife are expected to be relatively habituated to the presence of recreationists. Direct impacts associated with negligible increases in recreation activity would not be expected to result in any long-term impacts to analyzed species or result in impacts to population viability.

Physical collisions between recreationists and wildlife are extremely rare and have not been documented as an issue associated with ongoing recreational activity. Potential collisions are more likely to be associated with elevated speeds such as those exhibited by both traditional mountain bikes and E-bikes on downhill sections. Within the analysis area, species are predominantly composed of species with rapid reaction times, further decreasing the possibility of physical collisions between E-bike users and wildlife. Slow-moving or sessile species associated with aquatic habitat such as crustaceans and mollusks are unlikely to occur within the trail margins due to baseline activity attributed to traditional mountain bikes and other recreational activities, which would preclude establishment where recreationists travel. However, if such species did occur, they could experience physical impacts. Given the negligible differences in speed between traditional mountain bikes and E-bikes as well as the lack of documented issues regarding physical collisions between traditional mountain bikes and wildlife on the existing trails, direct impacts as a result of physical collisions are highly unlikely to occur or result in long-term impacts to analyzed species or impact population viability.

Direct impacts associated with noise attributed to E-bike use are limited to species with the capacity to perceive sounds emitted within high-frequency ranges such as bats and some bird species. Bird species have similar hearing to humans but are more sensitive to noises between 1 to 4 kHz, with no species showing sensitivity above 20 kHz (Beason 2004). Bats are particularly sensitive to noises higher than 18 kHz, as it overlaps with high frequencies utilized for echolocation and communication (Altringham and Kerth 2016; California Department of Transportation 2016; California Department of Transportation, H.T. Harvey & Associates, and HDR 2021). Given that most recreation activity is associated with daylight hours, potential noise impacts are most likely to affect roosting bats; however, roosting bats may be less susceptible to disturbance during day roosting when utilizing torpor to conserve energy (Luo *et al.*, 2014). Disturbance due to novel, high-frequency noises can disrupt bat species' foraging efficiency, communication, and result in abandonment of active roost sites (California Department of Transportation 2016; California Department of Transportation, H.T. Harvey & Associates, and HDR 2021). Individual bat species have differing sensitivities to noise frequencies (California Department of Transportation, H.T. Harvey & Associates, and HDR 2021), though within the analysis area, analysis is focused on high-frequency noise given the ongoing presence of low-frequency noise emissions associated with current recreation modes. H.T. Harvey and Associates found that certain E-bikes emitted louder noise at high-frequency levels compared to traditional mountain bikes; however, the loudest recorded sound for the E-bike was only 9 decibels higher than the conventional bike at 10 feet, so the difference is likely negligible with distance attenuation (H.T. Harvey & Associates 2021). The results of occasional or intermittent high frequency noises, such as those that could be experienced by a bat roosting near a trail used by E-bikes has not been studied.

Increased recreation activity due to E-bike use could result in indirect impacts such as habitat avoidance or modified activity patterns as a result of individuals attempting to avoid recreationists (Patten, Burger, and Mitrovich 2019). The likelihood of indirect impacts is linked to the frequency at which direct impacts such as harassment or physical collision occur, causing individuals to select other habitats with less

disturbance. Given the negligible anticipated increases in recreation activity and speed, most wildlife species are not expected to experience indirect impacts as a result of the proposed action. Bat species sensitive to high-frequency noises may avoid habitat within 250 feet from trails or roads allowing E-bike use, The amount of bat habitat potentially impacted by high-frequency noise is negligible with respect to the larger landscape, and these potential impacts would not be expected to result in long-term impacts or contribute towards a loss of population viability for analyzed bat species.

National Forest Management Act (NFMA) – Land Management Plan Consistency

The pertinent specialist has reviewed the proposed action including design features and provided supporting analysis and rationale for determinations in the project record. The following are specialist determinations regarding project consistency with applicable land management plan direction, standards, and guidelines:

Botany: Consistent

Cultural/Heritage: Consistent

Engineering: N/A

Fisheries: Consistent

Fuels: N/A

Hydrology: Consistent

Lands and Special Uses: Consistent

Minerals: N/A

Range: N/A

Recreation: Consistent

Scenic Resources: Consistent

Soils: Consistent

Silviculture: N/A

Special Management Areas: Consistent

Special Status Species: Consistent

Wildlife: Consistent

Other Law, Regulation, and Policy Consistency

Endangered Species Act

Threatened, Endangered, Proposed, and Candidate Species and Critical Habitat

Federally-listed wildlife species that have the potential to be affected by activities occurring within the analysis area are listed in the Biological Evaluation (BE) of E-bike Use on the Womble Trail and the Draft Biological Assessment/Evaluation (BA/E) for E-bike Use on the Syllamo Trail based on reports generated from USFWS' Information for Planning and Consultation (IPaC) resource (USFWS 2022a, 2022b). The pertinent specialists reviewed the proposed action and made determinations for threatened, endangered, candidate and/or proposed species with potential to be affected by activities occurring within the analysis area. The determinations and supporting rationale are included within the aforementioned BE and BA/E. See Table 3, below, for a link to these documents. No designated critical habitat occurs within the analysis area. Species with suitable habitat present are considered more likely to occur, whereas those with no documented suitable habitat or occurrences are considered highly unlikely to be present within the analysis area.

Sensitive Species (FSM 2670)

A list of USFS Region 8 Regional Forester's Sensitive Species (RFSS) with potential to be impacted by activities occurring within the analysis area was compiled by evaluating habitat descriptions and through discussions with USFS biologists. USFS biologists reviewed the proposed action and made determinations for RFSS with potential to be affected by activities occurring within the analysis area. Tables within the BE's for the Womble and Syllamo Mountain Bike Trails list all sensitive species

analyzed and discuss rationale for each determination. Potential impacts to RFSS are evaluated with respect to population viability and to preclude significant trends towards federal listing.

Table 3. Biological Evaluation Project File Documentation

Documentation Type	Link to File
Biological Evaluation – Womble Trail, Ouachita NF	Project Planning Website - Project 62170
Biological Assessment/Evaluation – Syllamo Mountain Bike Trail, Ozark-St. Francis NF	Project Planning Website - Project 62170

Management Indicator and Focal Species

The Ouachita National Forest LRMP includes direction regarding Management Indicator Species (MIS), in accordance with the National Forest Management Act of 1982. MIS are evaluated in terms of habitat quantity and quality as well as population trends, under the assumption that population trends indicate the effects of management actions. MIS that have the potential to be impacted by activities occurring within the analysis area are compiled for the Womble Mountain Bike Trail and available on the project webpage at the link below. The Ozark-St. Francis National Forests LRMP introduced an amendment replacing monitoring of MIS with “Focal Species”, in accordance with the 2012 Planning Rule (USFS 2016). Focal Species are not evaluated during environmental analysis.

Table 4. Management Indicator Species Evaluation Project File Documentation

Documentation Type	Link to File
Management Indicator Species Determinations: Womble Trail	Project Planning Website - Project 62170

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) (16 U.S.C. 703-712) prohibits the take of protected migratory bird species (including any part, nest, or egg thereof) without prior authorization by the Department of Interior U.S. Fish and Wildlife Service. Take is defined by regulation (50 CFR 10.12) to mean “pursue, hunt, shoot, wound, kill, trap, capture, or collect.” Suitable habitat for a variety of migratory birds occurs throughout the analysis areas, and a list of Birds of Conservation Concern (USFWS 2022b, 2022a). Nesting habitat is available and active nests could occur within the analysis area.

The pertinent specialist has reviewed the proposed action and made the following determination regarding conformance with the MBTA: No surface disturbance, vegetation removal, or habitat modification would occur under the proposed action. No appreciable increase in recreation activity is anticipated under the proposed action with respect to baseline conditions. Noise emissions within the auditory range of avian species are not anticipated to appreciably change under the proposed action. No impacts to migratory birds are anticipated under the proposed action.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d) prohibits the take of bald or golden eagles, including parts, feathers, nests, or eggs without a permit issued by the Secretary of the Interior. Though golden eagles are relatively uncommon throughout Arkansas, they have been observed in close proximity to the analysis area(Ebird 2022b, 2022a). Bald eagles are more prevalent throughout the state and have also been observed in close proximity to the analysis area (Ebird 2022b, 2022a).

Occurrences of both species would be most likely representative of overwintering individuals or migratory vagrants moving between seasonal habitat types. No known nests occur within the analysis area and no vegetation management would occur that could endanger nest or habitat.

The pertinent specialist has reviewed the proposed action and made the following determination regarding conformance with the BGEPA: No surface disturbance, vegetation removal, or habitat modification would occur under the proposed action. No appreciable increase in recreation activity is anticipated under the proposed action with respect to baseline conditions. There are no known active nests within the analysis area. Noise emissions within the auditory range of these species are not anticipated to appreciably change under the proposed action. No impacts to bald or golden eagles are anticipated under the proposed action.

National Historic Preservation Act – Section 106 Review

No surface disturbance will occur under the no action alternative or proposed action. The pertinent specialist has reviewed the proposed action and made the following determination regarding Section 106 compliance: No potential to cause effects - 36 CFR 800.3(a)(1). The proposal is a type of activity that does not have the potential to cause effects on any kind of prehistoric or historic resource, even if such resources were in the project area.

Special Management Areas

The pertinent specialist has reviewed the proposed action and made the following determinations based on special management area presence, proximity, or lack of:

As summarized in the following table, the proposed action complies with all special management area requirements.

Table 5. Special Management Area Compliance Determinations

Management Area Type (Wilderness, Roadless, Wild and Scenic Rivers, etc.)	Applicable Law / Regulation to Demonstrate Compliance With	Rationale for Compliance
North Sylamore Creek Wild and Scenic River	Wild and Scenic Rivers Act of 1968, as amended (16 USC Chapter 28) and Arkansas Wild and Scenic Rivers Act of 1992 (Pub. L. 102-275)	The Arkansas Act brought North Sylamore Creek into the wild and scenic river system with a Scenic classification. Per the 1968 Act, Scenic rivers should be “largely primitive…but accessible in places by roads.” These acts place no other restrictions on motorized use within Scenic River corridors. Additionally, the proposed action will not impact the overarching purpose of protecting outstandingly remarkable values for present and future generations.
North Sylamore Creek Wild and Scenic River	Ozark-St. Francis LRMP (2005)	Management Area 1.C (Scenic) and ROS classification (roaded natural) do not prohibit motorized travel.
North Sylamore Creek Wild and Scenic River	North Sylamore Creek Wild and Scenic River Management Plan (1996)	The river management plan prohibits new motorized trails within the corridor and states that “motorized recreation travel should be restricted to existing open public access routes.” Because no new trails or trail segments will be constructed as part of this action, adding a motorized use to an existing non-motorized trail does not violate plan requirements. Additionally, it is expected that an update to the plan will occur to

		allow E-bikes, which weren't anticipated when the plan was approved in 1996. Until such time that the WSRMP allows E-bike use, the affected loop would not be authorized by the decision. The proposed action would be consistent with the goal, management objectives, and outstandingly remarkable values (recreational, fish and wildlife, and botanical) identified in the plan.
Sylamore Experimental Forest (MA 1.E)	Ozark-St. Francis LRMP (2005)	Management Area 1.E allows motorized use on designated roads and trails and the construction of new motorized trails provided such use does not conflict with research.
Old Growth Restoration (MA 21)	Ouachita LRMP (2005)	The focus of Management Area 21, Old Growth Restoration is on vegetation management and places no restrictions on recreation or motorized use.
Ouachita River Wild and Scenic River: Segment III, eligible	Ouachita LRMP (2005)	This stretch of river adjacent to the Womble Trail is eligible for Recreation classification as a wild and scenic river. Per Management Area 20c, these areas must be managed to retain the characteristics that make them eligible, but the LRMP does not prohibit or otherwise restrict motorized use on designated routes. Allowance of E-bikes will not alter the characteristics that make this segment eligible.
Ouachita River Wild and Scenic River: Segment IV, eligible	Ouachita LRMP (2005)	This stretch of river adjacent to the Womble Trail is eligible for Scenic classification as a wild and scenic river. Per Management Area 20b, these areas must be managed to retain the characteristics that make them eligible, but the LRMP does not prohibit or otherwise restrict motorized use on designated routes. Allowance of E-bikes will not alter the characteristics that make this segment eligible

Clean Air Act

The pertinent specialist has reviewed the proposed action and made the following determinations regarding the Clean Air Act: No new trail construction or increases in hazardous air emissions would occur under the proposed action. The proposed action complies with the Clean Air Act.

Clean Water Act

The pertinent specialist has reviewed the proposed action and made the following determination:

No new trail construction would occur under the proposed action. Best Management Practices used during trail maintenance activities will eliminate impacts to water quality. The proposed action is consistent with the laws and policies related to the Clean Water Act.

Pertinent Executive Orders

The responsible official and/or applicable specialist(s) have determined the proposed action complies with the following Executive Orders (EO), which were deemed pertinent based on the nature of the project:

EO 11644 and 11989, Use of Off-road Vehicles on the Public Lands – Compliance with EO 11644, as amended by EO 11989, was brought up as a concern during the public scoping period. EO 11644 requires federal agencies to identify areas and trails on public lands where off-road vehicles are allowed and prohibited. EO 11898 authorizes agency heads to adopt policies that prohibit off-road vehicle use by default, except for where such use is explicitly authorized. Because both national forests involved with this proposed action have developed Motor Vehicle Use Maps (MVUMs) that comply with the TMR and these EOs, compliance with the TMR (discussed elsewhere in this report and in the appendices) ensures compliance with EOs 11644 and 11989. Travel management database updates occur regularly and changes to trails designations would be updated on MVUMs for both national forests.

EO 12898, Environmental Justice – This EO requires federal agencies to identify and address disproportionately high and adverse effects on minority and low-income populations. Generally accepted guidance on implementing this EO defines “minority” based on race and ethnicity and “low income” based on poverty thresholds in U.S. census data. Based on these considerations, the proposed action would not have disproportionate adverse effects on these communities. The benefits provided, however, would disproportionately go to higher income individuals (i.e., people who could afford electric mountain bikes). Considering social justice more generally and beyond the scope of the EO, the proposed project would have some positive impacts. For example, allowing E-bikes on the proposed trails would expand opportunities for people not capable of enjoying these trails without motorized assistance. This would likely lead to positive impacts for elderly people and people with disabilities.

Agencies and Tribes Consulted

Given the nature of the project, the responsible official consulted the following agencies, organizations, and tribes during development and analysis of the project:

Agencies

Arkansas Historic Preservation Program

Arkansas Archaeology Survey

U.S. Fish and Wildlife Service

Native American Tribes

The Forest determined that this project does not meet the definition of an undertaking per the National Historic Preservation Act as it has no potential to adversely affect historic properties. The scoping notice served to fulfill the obligations of the Section 106 process. Scoping notices were sent out on August 1, 2022, to the following consulting parties:

Absentee Shawnee Tribe, Caddo Nation, Cherokee Nation, Chickasaw Nation, Choctaw Nation of Oklahoma Creek Nation, Coushatta Tribe of Louisiana, Delaware Nation, Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians Wichita and Affiliated Tribes, Muscogee Mississippi Band of Choctaw Indians, Osage Nation, Quapaw Nation, Shawnee Tribe, Thlopthlocco Tribal Town, Tunica Biloxi Tribe of Louisiana, United Keetoowah Band of Cherokee Indians.

NEPA: Finding of No Significant Impact (FONSI)

The Finding of No Significant Impact documents the reasons why an action, not otherwise categorically excluded, will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. The Finding of No Significant Impact discussion considers all information included in the environmental assessment, including the Potentially Affected Environment, as well as documentation in the project record. Pertinent specialists have reviewed the proposal and, based on their input, the responsible official made the following determinations with regards to the potentially affected environment and degree of effects considered for a Finding of No Significant Impact.

The 2020 Council on Environmental Quality (CEQ) NEPA regulations revised the criteria for determining significance from the previous regulations. The term intensity was replaced with degree of the effects, which is very similar, but has slightly different factors to consider. Since this analysis was initiated during this transition, the FONSI for this project will consider both degree of effects and the familiar intensity factors to describe the considerations relevant to determining significance.

Degree of Effect

The following effects (or impacts) discussions focus on changes to the human environment from the proposed action that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action, including those effects that occur at the same time and place as the proposed action and may include effects that are later in time or farther removed in distance from the proposed action.

Both short- and long-term effects.

The proposed action would not involve any highly uncertain risks. Long-term beneficial increases in recreation opportunity would occur. Adverse effects would primarily consist of recurring short-term, minor impacts. Long-term impacts to bats are possible as a result of the indirect effects of localized habitat loss related to the introduction of high frequency noise in portions of the project area. (page 25)

Both beneficial and adverse effects.

Beneficial effects consist of increased opportunity for recreationists wishing to ride E-bikes on national forest lands. This beneficial effect helps meet the desired conditions stated in both forests' LRMPs to provide a variety of recreational opportunities that are responsive to user demands. The proposed action accomplishes this while maintaining abundant opportunities for recreationists wishing to recreate away from the presence of E-bikes. (page 17)

Minor localized impacts to soil condition on steep uphill segments of both trails and at the entrances of banked turns on the Syllamo Mountain Bike Trail are possible. The extent of soil impacts on steep uphill segments would depend largely upon the number of throttle assisted (Class 2) E-bikes present on the trails. Potential soil impacts are not expected to extend to adjacent and intersecting streams. Cumulative impacts resulting from increasing forest visitation would have similar soil impacts to those of the proposed action. These project-specific and cumulative impacts would be reduced by monitoring and maintenance practices. (pages 22-23)

Given the minimal technical and operational differences demonstrated between traditional mountain bikes and E-bikes, wildlife responses are expected to be similar between these two modes, with the exception of high-frequency noise associated with E-bike use. The proposed action may result in adverse impacts to bat species resulting from the introduction of high-frequency noise to the project area. These impacts could result in short-term disturbance and subsequent long-term avoidance of affected habitat within the analysis area, but this is not anticipated to result in significant population-level impacts to analyzed species. (pages 24-25)

Effects on public health and safety.

E-bikes and traditional bikes achieve similar top speeds when traveling downhill (Langford et al. 2017), with top mountain bike speeds depending more upon rider ability and trail character than presence of an electric motor. Although average uphill speeds are faster for E-bikes than traditional mountain bikes, these speeds are, again, limited by terrain (e.g., obstacles and tight turns) and speeds are much lower overall for both bike types. (page 18)

It was determined that the proposed action would have no appreciable impacts on the health and safety of the public. The slight speed differences between E-bikes and traditional mountain bikes or between the various classes of E-bikes are unlikely to impact conflict or injury rates. (pages 18-19)

Effects that would violate Federal, State, or local law protecting the environment.

There are no effects that would violate Federal, State, or local law protecting the environment. See determinations above in Other Law, Regulations, and Policy Consistency section. (pages 25-29)

Intensity Factors

The intensity of effects was also considered in terms of the following:

1. **Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that, on balance, the effect will be beneficial.**

   Beneficial and adverse effects were covered under the degree of effects.

2. **The degree to which the proposed action affects public health or safety.**

   Public health and safety were covered under the degree of effects.

3. **Unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

   The proposed trails are adjacent to or cross both the North Sylamore Creek Wild and Scenic River Corridor and the Ouachita River Wild and Scenic River Corridor. Management Plans for the affected Wild and Scenic River Corridors were considered during proposal development. E-bike use was found to be consistent with Ouachita River Wild and Scenic River Corridor management at this time. However, it is not currently appropriate for the North Sylamore Creek Wild and Scenic River Corridor until the River Management Plan is updated to explicitly allow for redesignation of trail to include motorized E-bike use. (pages 27, 28, 47, and 53-55)

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.**

   While the use of E-bikes on National Forest is relatively new and research is limited, no evidence of significant controversy was identified during this analysis. There was healthy debate on the trade-offs between safety and access by the interested public. However, no safety concerns were found that would increase the risk of E-bikes appreciably above that of comparable mountain bike use. See Effects on public health and safety above.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.**

   Existing management practices have been sufficient for ensuring public safety on the Womble and Syllamo trail systems. Overall, E-bikes do not pose any new risks to public safety that are not already inherent to traditional mountain biking. (page 19)

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

For these particular trails, potential effects of any increased use are expected to be negligible with respect to baseline recreation activity levels and projected trends of future use. (page 23)

As far as a precedent for future actions, this EA does also serve to establish an example framework for USFS use to complete additional site-specific analysis to assess effects when considering E-bike management elsewhere. For this purpose, screening criteria were developed and performed for the trails considered and are provided as a template in Appendices A, B, and C. (page 6)

That said, providing this template to other managers should actually decrease the possibility of the occurrence of significant future effects because the screening criteria are designed to filter out trails not suitable for E-bike use due to site-specific adverse effects. In fact, this scenario was experienced here when the Upper Buffalo Trail was screened out as shown in Appendix C. (page 11)

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

   Overall, visitation for recreation is increasing across all users and uses. Therefore, any expected increase on these particular trails may not be specific to the addition of E-bikes. Particularly since much E-bike use is a transition from users already recreating in the area to a different option. For example, as users age, they opt for an E-bike to replace their traditional mountain bike. (page 10, 16-17) So while cumulative impacts may result from overall trends of increasing forest visitation, they may not be due to the allowance of E-bikes. If any cumulative impacts do occur, they would be similar in nature to those of continued management practices and can be offset by monitoring and maintenance practices. (page 23)

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed, or eligible for listing, in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

   The proposed action was reviewed under Section 106 of the National Historic Preservation Act. The pertinent specialist determined that this proposal is a type of activity that does not have the potential to cause effects on any kind of prehistoric or historic resource, even if such resources were in the project area. Therefore, the following determination was entered into the record regarding Section 106 compliance: No potential to cause effects - 36 CFR 800.3(a)(1). (pages 27 and 29)

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.**

   The project record includes biological evaluations for both trails which include anticipated effects to Threatened, Endangered, Proposed, and Candidate Species and Critical Habitat that have the potential to be affected by activities occurring within the analysis area. The included species are determined by US Fish and Wildlife Service's IPaC database. These evaluations also consider effects to the Region 8 Regional Forester's Sensitive Species (RFSS) with potential to be impacted. (page 25)

   Reports were also compiled for Ouachita National Forest Management Indicator Species and for Ozark-St. Francis National Forest Focal Species. Finally, impacts to migratory birds and bald/golden eagles were considered. (pages 26-27)

   The proposal did identify a potential to have an occasional effect at the individual level for a variety of species, but no significant impacts at a species or habitat level was identified. The only thing of note that was discussed is the potential of bats to be disturbed by high frequency hum which could be emitted from E-bikes as they travel through. This could cause bats to shift their use further away from the trails which would modify that habitat. However, the amount of bat habitat potentially impacted by high-frequency noise is negligible with respect to the larger landscape, and these potential impacts would not be expected to result in long-term impacts or contribute towards a loss of population viability for analyzed bat species. (page 25) In addition there is very limited research suggesting this

effect and it may not be a factor. Monitoring of bat populations that is already being completed based on Forest Plan guidelines will allow forest managers to confirm whether noise effects are present or not.

10. **Whether the action threatens to violate Federal, State, or local law or requirements imposed for the protection of the environment.**

    This element was covered under the degree of effects.

Decision Notice

E-bike Use on the Womble Mountain Bike Trail

U.S. Forest Service

Ouachita National Forest

Caddo Womble and Mena Oden Ranger Districts.

Montgomery County, Arkansas

The Decision Notice incorporates all previous information in the Environmental Assessment and Finding of No Significant Impact (FONSI), as well as information included in the project record.

Decision and Rationale

Based upon my review of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), I have decided to authorize the activities described in the Purpose and Need and Proposed Action sections as follows.

The Womble Trail is a point-to-point trail in western Arkansas on the Ouachita National Forest that extends from McGill Mountain on the northeast end to North Fork Lake on the southwest end. Trail elevations range from about 600 to 1,200 feet in elevation. The total trail mileage currently managed for mountain biking and proposed for E-bike use under this action is about 38 miles. Some stretches of this trail intersect roads that are already managed for motorized use. The trail overlaps with a variety of management areas, as defined in the Ouachita National Forest Revised LRMP, none of which prohibit motorized use (USFS 2005a).

My decision is to designate the Womble Trail on the Ouachita National Forest for use by E-bikes. This designation includes the 38 miles of the Womble Trail currently managed for mountain biking.

No new trail construction or increase in trail lengths would occur on the trail system. Routine trail maintenance and Forest Plan monitoring would continue with no substantial changes anticipated. Any future modification to this authorization may be completed by the Motor Vehicle Use Map analysis process.

A portion of the comments received suggested limiting the class of E-bike authorized by this decision mostly due to concerns regarding safety, see Summary of Public Involvement below. However, the analysis showed no increase in the potential for adverse effects is expected from the different E-bike classes. However, an increase in beneficial effects may be realized for public access by allowing all classes of E-bike. Therefore, I have decided not to set a limit on E-bike classification.

That said, it is my expectation that E-bike users will, like with any other recreational activity, utilize the trails carefully and respectfully. Regulations prohibit careless and reckless operation of motor vehicles on the National Forest, and this includes E-bikes.

The following changes to the draft EA have been made and are incorporated into this decision. A Finding of No Significant Impact (FONSI) and Decision Notice have been added. The Administrative Review and the Public Involvement information has been updated and moved into the Decision Notice. The Appendices were updated as noted on pages 41-42. Any other changes either fix typographical errors or are minor corrections for clarity or flow.

The EA considered impacts that may be both beneficial and adverse through the analysis of direct, indirect, and cumulative impacts of the proposed action. The interdisciplinary team found overall beneficial effects of the project with a few minor localized negative effects and did not identify any significant adverse effects. I have evaluated the effects of the proposed action and determined that the

impacts are not significant and would be within the standards set forth by the forests' LRMPs and consistent with applicable environmental laws. Therefore, an environmental impact statement will not be prepared.

Summary of Public Involvement

A public virtual collaboration workshop was conducted by the Ouachita and Ozark-St. Francis National Forests on May 11, 2022, from 6 p.m. to 7:30 p.m. Central time. The purpose of the workshop was to provide background information about the proposed project and how to be involved in the public process for the upcoming analysis.

A public scoping letter was issued on August 1, 2022, describing the proposed action and the purpose and need for the project. This letter initiated a 30-day public comment period that lasted from August 1 to August 31. Seventy-five letters were received during the comment period and seven additional letters were received after the close of the comment period. Substantive comments provided during this process were used to help develop issues statements that were then analyzed in the draft EA.

On October 29, 2023, a Notice of Public Comment Period and Availability of Draft EA was issued, pursuant to 36 CFR § 218. This began a 30-day public comment period ending on November 28, 2023. 36 letters were received during the comment period. 9 of these opposed E-bike authorization citing concerns regarding wildlife, trail conflicts, and safety. The other 27 comment letters received were in favor of some form of E-bike authorization ranging from Class I use to all use with an emphasis on public accessibility.

A complete breakdown of comments for both of the 30-day comment periods is included in the administrative record and is available for review upon request. Comments received can also be viewed in the comment reading room for the project website: Project Planning Website - Project 62170. Substantive comments provided during this process were considered and addressed in the development of the Final EA as well as the Decision Notice and FONSI.

Throughout the process, the Forest Service maintained a publicly accessible project website where relevant documents were made available. Also, a mailing list of interested parties was maintained on the GovDelivery platform. Finally, the project has been posted to the Schedule of Proposed Actions for both the Ozark-St. Francis and the Ouachita National Forests quarterly.

A list of agencies, organizations and persons consulted regarding this proposal is also provided in the "Agencies & Tribes Consulted" section.

Findings Required by Other Laws and Regulations

Findings required by other laws and regulations applicable to the proposal can be found in the "Environmental Impacts" section.

Implementation

As per 36 CFR 218.12, The reviewing officer has responded in writing to all pending objections and I as the responsible official am authorized to proceed with this decision.

Full implementation of this decision is planned to take effect January 2025 to allow for posting of E-bike use authorization signage at the trailhead and incorporation of E-bike use authorizations into Forest Motor Vehicle Use Maps.

Administrative Review and Objection Opportunities

This decision was subject to the objection process pursuant to 36 CFR 218 Subparts A and B. An objection filing period was provided since substantive comments were received. A letter was sent to those

individuals or organizations that commented on either scoping or the draft environmental assessment. A legal notice was also posted in the newspapers of record.

Only those who submitted timely and specific written comments pursuant to §218.2 regarding the proposed project or activity during the public comment period or scoping were eligible to file an objection (§218.24(b)(6)). One eligible objection was received and reviewed, one ineligible objection was received and set aside because no prior comments were received by the individual submitting the ineligible objection.

The USDA Forest Service Regional Forester for Region 8 was the Reviewing Official for objections received. The objection review team and reviewing official determined that the Finding of No Significant Impact was appropriate for this project and that the Decision Notice correctly concluded that an EIS is not required.

Contact

For additional information concerning this decision contact: Jade Ryles, Ouachita Environmental Coordinator, charity.j.ryles@usda.gov, (479) 394-2382.

DANIEL OLSEN

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September 16, 2024

Daniel Olsen

Forest Supervisor
Ouachita National Forest

Decision Notice

E-bike Use on the Syllamo Mountain Bike Trail

U.S. Forest Service

Ozark St Francis National Forest

Sylamore Ranger District

Stone County, Arkansas

The Decision Notice incorporates all previous information in the Environmental Assessment and Finding of No Significant Impact (FONSI), as well as information included in the project record.

Decision and Rationale

Based upon my review of the Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), I have decided to authorize the activities described in the Purpose and Need and Proposed Action sections as follows.

The Syllamo Mountain Bike Trail is a network of interconnected loops and spurs on the Ozark-St. Francis National Forests north of the town of Mountain View, Arkansas that range from about 300 to 1,000 feet in elevation. Trail grades are generally at or below 10 percent. The total trail mileage in this area currently managed for mountain biking and proposed for E-bike use under this action is about 51 miles. This includes several short stretches that overlap with existing roads that are already classified for motorized use. The trail system overlaps with a variety of management areas, as defined in the Ozark-St. Francis National Forests Revised Land and Resource Management Plan (LRMP), none of which prohibit motorized use (USFS 2005b).

My decision is to designate the Syllamo Trail System, on the Ozark-St. Francis National Forest for use by E-bikes. Included is the Syllamo Mountain Bike Trail System of interconnected loops and spurs with the following exception.

A portion of the Jack's Branch Loop of the Syllamo Trail System falls within the designated Wild and Scenic River (WSR) Corridor of North Sylamore Creek. The Comprehensive River Management Plan for North Sylamore Creek states no new motorized use. Therefore, regarding the portion of Jack's Branch Loop running south of Green Mountain Road into the WSR Corridor, this authorization for E-bike use will be deferred until such time as the Comprehensive River Management Plan is updated to include an exception for E-bike use.

Riders will be able to make the connection between Bad Branch Loop and Scrappy Mountain Loop using the portion of Jack's Branch Loop running along Green Mountain Road or Green Mountain Road itself. Signs will be posted at the intersections of Green Mountain Road and Jack's Branch Loop.

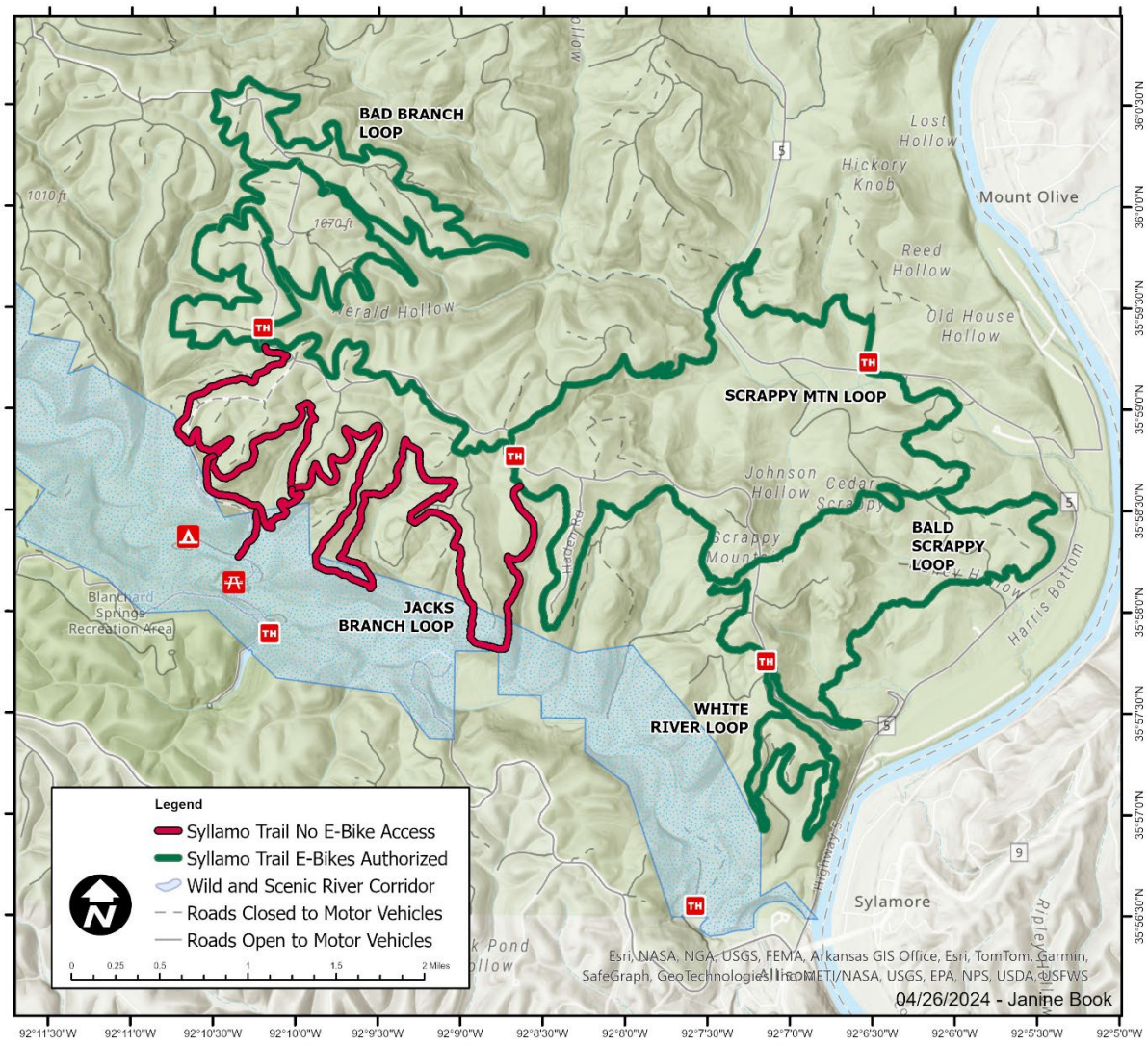

Figure 6. Syllamo Mountain Bike Trail System showing Jack's Branch Loop exclusion

No new trail construction or increase in trail lengths would occur on either trail system. Routine trail maintenance and Forest Plan monitoring would continue with no substantial changes anticipated. Any future modification to this authorization may be completed by the Motor Vehicle Use Map analysis process.

A portion of the comments received suggested limiting the class of E-bike authorized by this decision mostly due to concerns regarding safety, see Summary of Public Involvement below. However, the analysis showed no increase in the potential for adverse effects is expected from the different E-bike classes. However, an increase in beneficial effects may be realized for public access by allowing all classes of E-bike. Therefore, I have decided not to set a limit on E-bike classification.

That said, it is my expectation that E-bike users will, like with any other recreational activity, utilize the trails carefully and respectfully. Regulations prohibit careless and reckless operation of motor vehicles on the National Forest, and this includes E-bikes.

The following changes to the draft EA have been made and are incorporated into this decision. A Finding of No Significant Impact (FONSI) and Decision Notice have been added. The Administrative Review and the Public Involvement information has been updated and moved into the Decision Notice. The Appendices were updated as noted on pages 41-42. Any other changes either fix typographical errors or are minor corrections for clarity or flow.

The EA considered impacts that may be both beneficial and adverse through the analysis of direct, indirect, and cumulative impacts of the proposed action. The interdisciplinary team found overall beneficial effects of the project with a few minor localized negative effects and did not identify any significant adverse effects. I have evaluated the effects of the proposed action and determined that the impacts are not significant and would be within the standards set forth by the forests' LRMPs and consistent with applicable environmental laws. Therefore, an environmental impact statement will not be prepared.

Summary of Public Involvement

A public virtual collaboration workshop was conducted by the Ouachita and Ozark-St. Francis National Forests on May 11, 2022, from 6 p.m. to 7:30 p.m. Central time. The purpose of the workshop was to provide background information about the proposed project and how to be involved in the public process for the upcoming analysis.

A public scoping letter was issued on August 1, 2022, describing the proposed action and the purpose and need for the project. This letter initiated a 30-day public comment period that lasted from August 1 to August 31. Seventy-five letters were received during the comment period and seven additional letters were received after the close of the comment period. Substantive comments provided during this process were used to help develop issues statements that were then analyzed in the draft EA.

On October 29, 2023, a Notice of Public Comment Period and Availability of Draft EA was issued, pursuant to 36 CFR § 218. This began a 30-day public comment period ending on November 28, 2023. 36 letters were received during the comment period. 9 of these opposed E-bike authorization citing concerns regarding wildlife, trail conflicts, and safety. The other 27 comment letters received were in favor of some form of E-bike authorization ranging from Class I use to all use with an emphasis on public accessibility.

A complete breakdown of comments for both of the 30-day comment periods is included in the administrative record and is available for review upon request. Comments received can also be viewed in the comment reading room for the project website: Project Planning Website - Project 62170. Substantive comments provided during this process were considered and addressed in the development of the Final EA as well as the Decision Notice and FONSI.

Throughout the process, the Forest Service maintained a publicly accessible project website where relevant documents were made available. Also, a mailing list of interested parties was maintained on the GovDelivery platform. Finally, the project has been posted to the Schedule of Proposed Actions for both the Ozark-St. Francis and the Ouachita National Forests quarterly.

A list of agencies, organizations and persons consulted regarding this proposal is also provided in the "Agencies & Tribes Consulted" section.

Findings Required by Other Laws and Regulations

Findings required by other laws and regulations applicable to the proposal can be found in the "Environmental Impacts" section.

Implementation

As per 36 CFR 218.12, The reviewing officer has responded in writing to all pending objections and I as the responsible official am authorized to proceed with this decision.

Full implementation of this decision is planned to take effect January 2025 to allow for posting of E-bike use authorization signage at trailheads and incorporation of E-bike use authorizations into Forest Motor Vehicle Use Maps.

Administrative Review and Objection Opportunities

This decision was subject to the objection process pursuant to 36 CFR 218 Subparts A and B. An objection filing period was provided since substantive comments were received. A letter was sent to those individuals or organizations that commented on either scoping or the draft environmental assessment. A legal notice was also posted in the newspapers of record.

Only those who submitted timely and specific written comments pursuant to §218.2 regarding the proposed project or activity during the public comment period or scoping were eligible to file an objection (§218.24(b)(6)). One eligible objection was received and reviewed, one ineligible objection was received and set aside because no prior comments were received by the individual submitting the ineligible objection.

The USDA Forest Service Regional Forester for Region 8 was the Reviewing Official for objections received. The objection review team and reviewing official determined that the Finding of No Significant Impact was appropriate for this project and that the Decision Notice correctly concluded that an EIS is not required.

Contact

For additional information concerning this decision contact: Janine Book, Ozark-St. Francis Environmental Coordinator, janine.book@usda.gov, (479) 964-7282.

DANIEL OLSEN

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September 16, 2024

Daniel Olsen

Acting Forest Supervisor
Ozark-St. Francis National Forests

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Appendices Introduction

Federal regulations require that the USFS evaluate certain factors when proposing to designate roads, trails, and areas for motorized use. These regulations are part of the Travel Management Rule (TMR), which is codified at 36 CFR Part 212. General criteria to be considered when designating roads, trails, and areas for motorized use are provided in § 212.55(a), and specific criteria for the designation of trails and areas for motorized use are provided in § 212.55(b). Because the USFS classifies E-bikes as motorized vehicles, these regulations apply to any USFS action where E-bike use is proposed on trails that are currently designated as non-motorized.

These regulatory requirements were used to create a framework of initial screening criteria that could be applied to each trail under consideration for E-bike use. The discussion below describes the rationale used to develop the screening criteria. Application of the screening criteria to the Womble Trail, Syllamo Mountain Bike Trail, and Upper Buffalo Trail are provided in Appendix A, B, and C, respectively.

Screening Criteria Rationale

General criteria provided in 36 CFR § 212.55(a) (Part A) require the consideration of effects on National Forest System (NFS) natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses of NFS lands, the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated, and the availability of resources for that maintenance and administration. Most of the general criteria requirements from Part A are covered by addressing the specific criteria requirements from Part B. Elements not covered by addressing Part B include:

(1) Consider effects on cultural resources.
(2) Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated, and the availability of resources to meet those needs.

The specific requirements for evaluation in 36 CFR § 212.55(b) (Part B), reproduced below, form the five primary categories used to evaluate each trail considered in this study.

(3) Minimize damage to soil, watershed, vegetation, and other forest resources.
(4) Minimize harassment of wildlife and significant disruption of wildlife habitats.
(5) Minimize conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands.
(6) Minimize conflicts among different classes of motor vehicle uses of NFS lands or neighboring federal lands.
(7) Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.

These seven criteria (screening criteria) were used to evaluate each trail considered for E-bike use in this assessment. An eighth criteria was added after it was recognized during comment review that public access and safety were also general elements from Part A that did not overlap with the specific elements of Part B. These elements had been analyzed but had inadvertently been left out of the screening framework. (Future users of this framework would include criteria 8 from the beginning as criteria 3 while also renumbering criteria 3-7 as 4-8.)

(8) Consider options to increase access for E-bike users while minimizing impacts to public safety.

Together, the criteria were used to develop a set of more specific questions, or Potential Effect Indicators, designed to link regulatory requirements to project specific conditions. Answering these questions for each specific trail then provides an indication of types and levels of effects that trail redesignation to include E-bikes would likely have.

While each trail is unique and E-bike use can impact different resources in different ways, certain types of potential impacts were found to be most relevant to decisions to allow E-bike users on trails managed for traditional mountain bike use. These fundamental considerations are related to:

- Soil erodibility and proximity to 303(d) listed waterbodies.
- Proximity of the trail to special status wildlife species and their habitat, including
    - Federally listed threatened, endangered, or candidate species and designated critical habitat
- Existing trail use (types and quantity).
- Land Management Plan land use designations and associated motorized use restrictions.
- Special management areas (e.g., wilderness, wild and scenic rivers, etc.) and associated motorized use restrictions.

The Potential Effects Indicator questions are designed to prompt consideration of potential impacts and serve as an early screening process for whether a trail should be analyzed in detail or dismissed early in the screening process. As demonstrated in this analysis of three trails, one of them (Upper Buffalo) was dismissed from consideration early in the analysis process for a variety of reasons that were discovered during initial screening. Applying this structured preliminary analysis early in the process facilitated adherence to applicable laws and regulations and prevented unnecessary time expenditures on more detailed analyses for trails where E-bike use was not deemed appropriate.

In order to adequately consider the comments received, the proposal was reevaluated for criteria 8 as well as the original 7 criteria, and the appendices were corrected as shown below.

Screening Criteria Re-evaluation

On November 28, 2023, the draft Environmental Assessment was released for a 30-day comment and review period resulting in 36 responses. Themes identified in these responses include public safety, resource damage, wildlife impacts, use conflicts, and public access. To ensure the screening criteria reflected concerns brought by the public, the screening criteria were re-evaluated. Changes to the criteria that affected the screening results will be reflected as follows.

- Appendix A - Womble Trail criteria updated
    - Resource damage, wildlife impacts, and use conflicts were already considered in the draft criteria
    - Criteria for public safety and access were added.
- Appendix B - Syllamo Trail System criteria updated
    - Resource damage, wildlife impacts, and use conflicts were already considered in the draft criteria
    - Criteria for public safety and access were added.
- Appendix C - Upper Buffalo Trail criteria not updated as this trail was already screened out of the proposed action during scoping.

Appendix A: Womble Trail

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
General criteria for designation of trails and areas:			
(1) Consider effects on cultural resources.			
Consider effects on cultural resources.	Would the project involve any trail construction, including short reroute sections?	No.	N/A
(2) Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated.			
Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated, and the availability of resources to meet those needs.	Is E-bike use expected to result in the need for additional trail maintenance?	No.	N/A
	Will trail redesignation result in the need for additional or new infrastructure?	No.	N/A
Specific criteria for designation of trails and areas:			
(3) Minimize damage to soil, watershed, vegetation, and other forest resources.			
Minimize damage to soil and water quality.	Is the trail located in a watershed that is of concern?	Yes. The trail passes through two watersheds listed as Functioning at Risk (WCC): Cedar Creek-Ouachita River and Middle South Fork Ouachita River	The proposed trail reclassification is expected to have little to no impact on watershed functioning. No mitigation measures necessary.
	Does the trail or area contain sensitive riparian areas, for example wet	Yes. The trail crosses and is adjacent to USFWS National	Many Best Management Practices are already in place. If adverse impacts to sensitive riparian areas are observed, efforts would be

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
	meadows, bogs, fens, etc.?	Wetland Inventory wetlands.	made to reroute or reconstruct the trail to avoid those impacts.
Minimize damage to soil and water quality.	Does the trail or area drain into a 303(d)-listed waterbody?	Yes. Portions of the trail drain into segments of the Ouachita River and South Fork Ouachita River, both of which are listed for failure to meet dissolved oxygen water quality standards.	Allowing E-bikes on the proposed trail will not impact dissolved oxygen levels within adjacent water bodies.
Minimize damage to vegetation and other forest resources.	Does the trail or area contain TES and/or TES habitat?	Suitable habitat for TES species exists adjacent to but not within the project area. No adverse effects to TES individuals or habitat are expected because there will be no surface disturbance or vegetation modification or removal per the proposed action.	N/A
	Does the trail or area contain designated critical habitat?	No.	N/A
	Does the trail or area include designated botanical areas (Special Interest Areas, Research Natural Areas)?	Yes. A portion of the trail crosses through MA 21 – Old Growth Restoration. LRMP guidance focuses on vegetation management and places no restrictions on recreation or motorized use.	No habitat modifications will occur and therefore no mitigations are necessary.

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
(4) Minimize harassment of wildlife and significant disruption of wildlife habitats.			
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain TES and/or TES habitat?	Analysis area contains some suitable TES habitat: no adverse effects to TES habitat are expected because there would be no modification of habitat components per the proposed action. High frequency noise emission may impact bat species. Baseline recreation activity is high, and significant increases in recreation activity would not be expected to occur under the proposed action.	Timing and duration of trail restrictions could be modified as appropriate and in accordance with site and species characteristics.
	Does the trail or area contain designated critical habitat?	No.	N/A
	Does the trail or area contain Management Indicator Species (MIS) and/or MIS habitat	Analysis area contains MIS and/or MIS habitat: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is high, and significant increases in recreation activity would not be expected to occur	N/A

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
		under the proposed action.	
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain migratory birds and/or migratory bird habitat?	Analysis area contains migratory birds and associated habitat: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is high, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A
	Does the trail or area contain bald eagles, golden eagles, and/or known active nests?	Analysis area does not contain known active nests; suitable habitat for bald eagles exists: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is high, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
(5) Minimize conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands.			
Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands.	Is the trail managed for bicycle use?	Yes.	N/A
	Would E-bike use of this trail cause conflicts with non-motorized visitors' desire for solitude and quiet recreation?	No. Conflict level is expected to remain the same as it is currently with existing mountain bike use.	N/A
	Would E-bike use of this trail cause new conflicts with other users?	No. Conflict level is expected to remain the same as it is currently with existing mountain bike use.	N/A
	Is the trail located within or adjacent to a location valued for non-motorized use, including: Wilderness, Wild & Scenic Rivers, and/or Inventoried Roadless Areas?	Yes. Portions of the trail cross corridors eligible for Wild and Scenic River designation, both Scenic (MA 20b) and Recreation (MA 20c) classifications. These areas must be managed to retain the characteristics that make them eligible, but the LRMP does not prohibit or otherwise restrict motorized use on designated routes.	No mitigations necessary.
(6) Minimize conflicts among different classes of motor vehicle uses of NFS lands or neighboring federal lands.			
Minimize conflicts among different classes of motor vehicle uses on NFS	Does the trail or area abut a wilderness area or National Park managed by other agencies?	No.	N/A

Screening Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
lands or neighboring Federal lands	Does the trail abut a non-motorized area or a developed recreation site on adjacent National Forest or other Federal lands?	No.	N/A
(7) Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.			
Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.	Would the trail or area be located adjacent to Federal or State lands designated for E-bike use?	No. Existing roadways in and around the area allow motorized use, which potentially includes E-bikes, but they are not specifically designated for E-bike use. In addition, Arkansas allows E-bike use within state park units.	N/A
(8) Consider options to increase access for E-bike users while minimizing impacts to public safety.			
Consider options to increase access for E-bike users while minimizing impacts to public safety.	Would the use of E-bikes reduce safety of trail users?	No. The existing mountain bike use is comparable on this trail as the primary use. Downhill speeds in particular would be expected to remain the same. In addition, like other motor vehicles, regulations prohibit careless and reckless operation of E-bikes.	Signage would reflect the expectation of safe and courteous travel practices. Any need to re-evaluate authorization in the future can be completed through the MVUM process.

Appendix B: Syllamo Mountain Bike Trail

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
General criteria for designation of trails and areas:			
(1) Consider effects on cultural resources.			
Consider effects on cultural resources.	Would the project involve any trail construction, including short reroute sections?	No.	N/A
(2) Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated.			
Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated, and the availability of resources to meet those needs.	Is E-bike use expected to result in the need for additional trail maintenance?	No.	N/A
	Will trail redesignation result in the need for additional or new infrastructure?	No.	N/A
Specific criteria for designation of trails and areas:			
(3) Minimize damage to soil, watershed, vegetation, and other forest resources.			
Minimize damage to soil and water quality.	Is the trail located in a watershed that is of concern?	No.	All watersheds in the vicinity are classified as Functioning Properly by Watershed Condition Class.
	Does the trail or area contain sensitive riparian areas, for example wet meadows, bogs, fens, etc.?	Yes. The trail crosses and is adjacent to USFWS National Wetland Inventory wetlands.	Many Best Management Practices are already in place. If adverse impacts to sensitive riparian areas are observed, efforts would be made to reroute or

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
			reconstruct the trail to avoid those impacts.
Minimize damage to soil and water quality.	Does the trail or area drain into a 303(d)-listed waterbody?	No. There are no 303d-listed streams in the area.	N/A
Minimize damage to vegetation and other forest resources.	Does the trail or area contain TES and/or TES habitat?	No adverse effects to TES individuals or habitat are expected because there will be no surface disturbance or vegetation modification or removal per the proposed action.	N/A
	Does the trail or area contain designated critical habitat?	No.	N/A
	Does the trail or area include designated botanical areas (Special Interest Areas, Research Natural Areas)?	Yes. Portions of the trail enter the Sylamore Experimental Forest (MA 1.E), which are to be managed for roaded natural ROS experiences, and outstandingly remarkable values included in the North Sylamore Creek Scenic River plan include botanical resources.	MA 1.E allows motorized use on designated roads and trails and the construction of new motorized trails provided such use does not conflict with research. No mitigation measures anticipated.
(4) Minimize harassment of wildlife and significant disruption of wildlife habitats.			
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain TES and/or TES habitat?	Analysis area contains some suitable TES habitat: no adverse effects to TES habitat are expected because there would be no modification of habitat components per the	Timing and duration of trail restrictions could be modified as appropriate and in accordance with site and species characteristics.

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
		proposed action. High frequency noise emission may impact bat species. The Syllamo trail system is located within a 5-mile radius of known Indiana bat and northern long-eared bat hibernacula. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain designated critical habitat?	No.	N/A
	Does the trail or area contain Focal Species or Focal Species habitat	Analysis area contains Focal habitat: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A
	Does the trail or area contain migratory birds and/or migratory bird habitat?	Analysis area contains migratory birds and associated habitat: no adverse effects are expected because there would be no	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
		modification of habitat components under the proposed action. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain bald eagles, golden eagles, and/or known active nests?	Analysis area does not contain known active nests; suitable habitat for bald and golden eagles exists: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A
(5) Minimize conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands.			
Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands.	Is the trail managed for bicycle use?	Yes.	N/A
	Would E-bike use of this trail cause conflicts with non-motorized visitors' desire for solitude and quiet recreation?	No. Conflict level is expected to remain the same as it is currently with existing mountain bike use.	N/A
	Would E-bike use of this trail cause new	No. Conflict level is expected to remain	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
	conflicts with other users?	the same as it is currently with existing mountain bike use.	
Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands.	Is the trail located within or adjacent to a location valued for non-motorized use, including: Wilderness, Wild & Scenic Rivers, and/or Inventoried Roadless Areas?	Yes. The trail is adjacent to the North Sylamore Creek Wild and Scenic River. Approximately 1.9 miles of the trail cross into this designated river corridor.	See "Special Designations" discussion following this table.
(6) Minimize conflicts among different classes of motor vehicle uses of NFS lands or neighboring federal lands.			
Minimize conflicts among different classes of motor vehicle uses on NFS lands or neighboring Federal lands	Does the trail or area abut a wilderness area or National Park managed by other agencies?	No.	N/A
	Does the trail abut a non-motorized area or a developed recreation site on National Forest or other Federal lands?	Yes. The trail is across the North Sylamore Creek Drainage from Blanchard Springs Caverns. The USFS-administered Blanchard Springs Caverns is in MA 2.C (Developed Recreation Area) which allows motorized use.	N/A
(7) Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.			
Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.	Would the trail or area be located adjacent to Federal or State lands designated for E-bike use?	No. Existing roadways in and around the area allow motorized use, which includes E-bikes, but they are not specifically designated for E-bike use. In addition, Arkansas	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
		allows E-bike use within state park units.	
(8) Consider options to increase access for E-bike users while minimizing impacts to public safety.			
Consider options to increase access for E-bike users while minimizing impacts to public safety.	Would the use of E-bikes reduce safety of trail users?	No. The existing mountain bike use is comparable on this trail as the primary use. Downhill speeds in particular would be expected to remain the same. In addition, like other motor vehicles, regulations prohibit careless and reckless operation of E-bikes.	Signage would reflect the expectation of safe and courteous travel practices. Any need to re-evaluate authorization in the future can be completed through the MVUM process.

Special Designations

Approximately 1.9 miles of trail proposed for redesignation lie within the North Sylamore Creek Wild and Scenic River area. North Sylamore Creek carries a “Scenic” classification. In accordance with the Ozark-St. Francis National Forest Land and Resource Management Plan (LRMP), trail users within scenic river areas “may include hikers, mountain bikers, horseback riders, and motorized vehicle enthusiasts...Portions of the river corridor that currently meet the criteria for semi-primitive, nonmotorized recreational opportunities will be maintained; however, the majority of these corridors will be managed as semi-primitive, motorized, or roaded-natural” (LRMP, pp. 2-36 – 2-37).

The North Sylamore Creek Wild and Scenic River Management Plan (River Plan) clarifies that the corridor is classified as roaded natural on the Recreation Opportunity Spectrum (ROS) (p. 7), that new motorized trails are prohibited within the corridor (p. 16), and that “[m]otorized recreation travel should be restricted to existing open public access routes (forest, county or state roads) (USFS 1996). No additional trails or roads should be developed for the purpose of motorized recreation.” (p. 21). The River Plan identifies the overall goal of providing “recreation opportunities within the capability of the resources, the protection of the free-flowing condition of the stream and the preservation and enhancement of values for with the stream was designated” (p. 2) and lists those values as recreational, fish and wildlife, and botanical.

In summary, the LRMP and ROS classification do not prohibit or otherwise restrict this proposed trail reclassification. The proposed action is fully compatible with the goal, management objectives, and outstandingly remarkable values identified in the River Plan. Language in the River Plan clearly prohibits the construction of new motorized trails and restricts motorized travel to existing public access routes.

Because this proposed action does not involve the construction of new motorized trails and the trails in question, while currently designated as non-motorized, are existing public access routes, the proposed action is in compliance with the River Plan. However, it is expected that an update to the plan will occur to allow E-bikes, which weren't anticipated when the plan was approved in 1996. Until such time that the River Plan allows E-bike use, the affected loop would not be authorized by the decision.

Appendix C: Upper Buffalo Trail

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
General criteria for designation of trails and areas:			
(1) Consider effects on cultural resources.			
Consider effects on cultural resources.	Would the project involve any trail construction, including short reroute sections?	No.	N/A
(2) Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated.			
Consider effects on the need for trail maintenance and administration that would arise if the uses under consideration are designated, and the availability of resources to meet those needs.	Is E-bike use expected to result in the need for additional trail maintenance?	No.	N/A
	Will trail redesignation result in the need for additional or new infrastructure?	No.	N/A
Specific criteria for designation of trails and areas:			
(3) Minimize damage to soil, watershed, vegetation, and other forest resources.			
Minimize damage to soil and water quality.	Is the trail located in a watershed that is of concern?	No.	N/A
	Does the trail or area contain sensitive riparian areas, for example wet meadows, bogs, fens, etc.?	Yes. The trail crosses and is adjacent to USFWS National Wetland Inventory wetlands.	Many Best Management Practices are already in place. Where negative impacts to sensitive riparian areas are observed, efforts would

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
			be made to reroute or reconstruct the trail to avoid those impacts.
Minimize damage to soil and water quality.	Does the trail or area drain into a 303(d)-listed waterbody?	Yes. Portions of the trail drain into Little Mulberry Creek which is listed due to pH.	No trail construction will occur and the effects of trail designation are not expected to impact pH.
Minimize damage to vegetation and other forest resources.	Does the trail or area contain TES and/or TES habitat?	Suitable habitat for TES species exists adjacent to but not within the project area. No adverse effects to TES individuals or habitat would occur because there will be no surface disturbance or vegetation modification or removal per the proposed action.	N/A
	Does the trail or area contain designated critical habitat?	No.	N/A
	Does the trail or area include designated botanical areas (Special Interest Areas, Research Natural Areas)?	No.	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
(4) Minimize harassment of wildlife and significant disruption of wildlife habitats.[1]			
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain TES and/or TES habitat?	Analysis area contains some suitable TES habitat: no adverse effects to TES habitat are expected because there would be no modification of habitat components per the proposed action. High frequency noise emission may impact bat species. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	Timing and duration of trail restrictions could be modified as appropriate and in accordance with site and species characteristics.
	Does the trail or area contain designated critical habitat?	No.	N/A

[1] For all wildlife effects analyses, the analysis area is comprised of the respective trail footprint with a 50-foot buffer on each side

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain Focal Species habitat	Analysis area contains Focal Species habitat: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is moderate , and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A
	Does the trail or area contain migratory birds and/or migratory bird habitat?	Analysis area contains migratory birds and associated habitat: no adverse effects are expected because there would be no modification of habitat components under the proposed action. Baseline recreation activity is high, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
Minimize harassment of wildlife/Minimize significant disruption of wildlife habitats	Does the trail or area contain bald eagles, golden eagles, and/or known active nests?	Analysis area does not contain known active nests; suitable habitat for bald eagles exists: no adverse effects would occur because there would be no modification of habitat components under the proposed action. Baseline recreation activity is moderate, and significant increases in recreation activity would not be expected to occur under the proposed action.	N/A
(5) Minimize conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands.			
Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands.	Is the trail managed for bicycle use?	Yes.	N/A
	Would E-bike use of this trail cause conflicts with non-motorized visitors' desire for solitude and quiet recreation?	No. Conflict level is expected to remain the same as it is currently with existing mountain bike use.	N/A
	Would E-bike use of this trail cause new conflicts with other users?	No. Conflict level is expected to remain the same as it is currently with existing mountain bike use.	N/A

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands.	Is the trail located within or adjacent to a location valued for non-motorized use, including: Wilderness, Wild & Scenic Rivers, and/or Inventoried Roadless Areas?	Yes. The trail: (1) is adjacent to the Upper Buffalo Wilderness, (2) passes through portions of the Buffalo National Wild and Scenic River, and (3) is primarily in MA 2.D, Upper Buffalo Dispersed Recreation Area, that establishes semi-primitive non-motorized management of activities.	See "Special Designations" discussion following this table.
(6) Minimize conflicts among different classes of motor vehicle uses of NFS lands or neighboring federal lands.			
Minimize conflicts among different classes of motor vehicle uses on NFS lands or neighboring Federal lands	Does the trail or area abut a wilderness area or National Park managed by other agencies?	Yes. The trail is within ¼-mile of the Upper Buffalo Wilderness boundary (USFS) and within four miles of the Buffalo National River Wilderness boundary (NPS).	Proximity to these wilderness areas does not preclude the proposed E-bike designation, but indicates the potential for increased conflict between E-bike users and non-motorized / non-mechanized users.
	Does the trail abut a non-motorized area or a developed recreation site on National Forest or	Yes. The trail passes through and adjacent to non-motorized areas.	See "Special Designations" discussion following this table.

Criteria	Potential Effect Indicators	If yes, would use of the trail cause adverse effects? If so, how?	If the trail is designated, what measures will be taken to manage use to minimize these effects?
	other Federal lands?		
(7) Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.			
Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.	Would the trail or area be located adjacent to Federal or State lands designated for E-bike use?	No. Existing roadways in and around the area allow motorized use, which includes E-bikes, but they are not specifically designated for E-bike use. In addition, Arkansas allows E-bike use within state park units.	N/A

Special Designations

As indicated in part 3, above, the trail is adjacent to the Upper Buffalo Wilderness; passes through portions of the Buffalo National Wild and Scenic River; and is in management area 2.D (MA 2.D), Upper Buffalo Dispersed Recreation Area, that establishes semi-primitive non-motorized management of activities.

The closest trails proposed for redesignation are less than a quarter mile from the Upper Buffalo Wilderness boundary. Mechanized (and motorized) travel is prohibited in the Congressionally designated Upper Buffalo Wilderness. While this proposed action avoids direct impacts to this designated area, the proximity of designated wilderness to the proposed action is indicative of the primitive character of the area. Additionally, several members of the public mentioned concerns directly related to allowing motorized travel in the area due to its current, primitive nature and proximity to the Upper Buffalo Wilderness. The adjacent wilderness designation does not prohibit the proposed action, but it contributes to the area's characteristics and sensitivity to new, motorized uses.

Approximately 8.2 miles of trail proposed for redesignation lie within the Buffalo National Wild and Scenic River area, all of which have a "Scenic" classification.[2] In accordance with the Ozark-St. Francis Revised Land and Resource Management Plan (LRMP), trail users within Scenic river areas "may include hikers, mountain bikers, horseback riders, and motorized vehicle enthusiasts...Portions of the river corridor that currently meet the criteria for semi-primitive, nonmotorized recreational opportunities will be maintained; however, the majority of these corridors will be managed as semi-primitive, motorized, or roaded-natural" (LRMP, pp. 2-36 – 2-37).

The Buffalo River Wild and Scenic River Management Plan clarifies that the Scenic segment of the designation is classified as semi-primitive non-motorized on the Recreation Opportunity Spectrum (ROS) (p. 17), that new motorized trails are prohibited within the Scenic segment (p. 22), and that ATV and OHV use is not allowed within the corridor except at Dixon Ford crossing (p. 34). While the general Scenic classification does allow for motorized use, specific restrictions within the LRMP and River Management Plan prohibit motorized use within this particular wild and scenic river corridor. Motorized use within this corridor is inconsistent with, and would require amendments to, the LRMP and River Management Plan.

Outside of the wild and scenic river corridor, over 90 percent of the trail miles subject to this proposed action are designated as MA 2.D, Upper Buffalo Dispersed Recreation Area. The LRMP describes the management emphasis of this area as one that provides "a variety of recreational opportunities in a setting that provides quality scenery, non-motorized trails, and limited facilities" (p. 2-52). It also describes the desired condition as one where visitors can "choose from a wide variety of non-motorized dispersed recreation opportunities" (p. 2-52) and articulates the management priority to "[m]aintain semi-primitive non-motorized management of activities." (p. 2-53). Motorized use within MA 2.D is inconsistent with the LRMP and would require amendments to the plan.

[2] Several miles of the river are classified as Wild, but these are all upstream of the action area in the designated wilderness area.