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Environmental Assessment

Upper Buffalo Mountain Bike Trail

Big Piney Ranger District, Ozark-St. Francis National Forest
Newton County, Arkansas

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Background

This project was originally scheduled to commence in 2006. The formal public involvement process was conducted in 2005. However, other priorities arose that precluded the completion of the project analysis as originally planned.

I. PURPOSE AND NEED FOR ACTION

a. Purpose. The purpose of this project is to:

- Provide a safe environment for the public to enjoy a recreational mountain biking experience;
- Provide the public with a variety of recreational opportunities in a visually appealing and environmentally healthy setting;
- Provide facilities to enhance quality recreation, the recreational experience, and to mitigate damage to the environment;
- The proposed site is currently in Management Area 2 D Upper Buffalo Dispersed Recreation Area. This management area is discussed in the Forest Plan p.2-52-p, which indicates that this area will be managed to provide the public a variety of recreational opportunities in a setting that provides quality scenery, non-motorized trails, and limited facilities.

b. Need.

There has been increasing interest and use of undesignated areas on the District for recreational mountain bike riding. Currently there are few areas for mountain bikers to ride other than on roads open to vehicular traffic or on undesignated user created paths. This increases the safety hazard associated with unregulated/undesignated trails that do not meet Forest Service standards. The Forest Plan recognizes mountain biking as an appropriate recreational use of public lands and identifies a need to provide a safe place to ride mountain bikes.

II. PROPOSED ACTION

The Big Piney Ranger District (RD) proposes the following actions:

Designate approximately 33 miles of non-motorized trail and the establishment of one trailhead. The trail system would consist of approximately 9.6 miles of system roads open to motorized vehicles (includes portion of Cave Mountain Road which is a county road), approximately 13.8 miles of closed roads, approximately 8.8 miles of existing user created single track trails, and approximately 2.8 miles of newly constructed single track trails. (See page 4 for description of activities).

Old roads would be utilized where practical to expedite construction and lessen impacts. However some sections of the existing roads / trails will need to be re-routed due to private property and poor locations. The trails would be constructed and maintained using both hand tools and machinery. If implemented, this project would be completed between 2008 and 2012.

III. Decision To Be Made

The decision to be made is whether or not to implement the Proposed Actions or an alternative or portions of alternatives to meet the purpose and need. The District Ranger will make this decision.

IV. Public Involvement

An interdisciplinary (ID) team of Forest Service personnel was selected whose knowledge and expertise are critical to the management of this area. The team conducted public involvement to gather comments on the proposed actions.

Public scoping of the proposed action was conducted on April 27, 2005 by mailing letters to both individuals in the area and organizations and by publishing the proposed action in the Newton County Times on April 28, 2005. The scoping letter and legal notice identified the proposed action and requested comments. Twelve (12) comments were received. Eleven supported the idea of establishing biking trails and one opposed the project because the Forest Plan limited motorized use in the area. These comments are contained in the process file.

V. Issues

The Forest Service received a total of 12 comments as a result of scoping the proposed project. One negative comment was received from a landowner within the project area. The landowner opposed the bike trails because the project area was designated as a non-motorized area during the Forest Plan revision process. This comment did not receive consideration since it was outside the scope of this project and did not directly address any specific issues with the project itself.

The ID team identified the following issues through public involvement and internal scoping. The following selected issues involve conflicts between alternative uses which are site specific to these proposed actions or the alternatives.

1. Closing the user created trails and eliminating illegal trail development.
2. Identify which user created trails are in appropriate location for designation and construction of additional trails and trailheads as needed to promote this recreational use.

VI. ALTERNATIVES INCLUDING THE PROPOSED ACTION

a. Proposed Action

This action involves the designation of approximately 35 miles of single-track non-motorized trail and the establishment of a trailhead. The trails would vary in difficulty level/trail class in order to provide a greater recreational opportunity for a broader spectrum of recreational users. The project would consist of approximately 9.6 miles of system roads open to motorized vehicles (includes portion of Cave Mountain Road which is a county road), approximately 13.8 miles of closed roads, approximately 8.8 miles of existing user created single track trails, and approximately 2.8 miles of new construction of single track trails which would include the following activities:

1. Trail construction would involve:
 - a. Removal of small, woody vegetation (primarily underbrush).
 - b. Digging to establish a trail template or tread.
 - c. Signing and/or blazing trail location to assist in keeping bikers oriented.
 - d. Development of one trailhead with a parking area consisting of 10-20 parking spaces, bulletin board, and pit toilet. The selected location of this trailhead is in an old clearing just south of the Buffalo Lookout Fire Tower along Knuckles Creek Road. (See map). The parking area surface would be monitored for rutting and erosion. If necessary, material would be added when the need arises. If use dictates, another trailhead would be constructed along Cave Mountain Road. (See map).

The trail would be slightly out sloped and long grades would be avoided where possible, to minimize erosion. Trail development would vary in tread width between 12” to 30”, with trail grade ranging from less than 10% up to 25% slope. Clearing width limits would also vary from 18” up to 36” The clearing height would be up to 8 feet. Old roads would be utilized where practical to expedite construction and lessen impacts.

The Trails would be constructed and maintained in accordance with the Forest Service Trail Management Improvement Program Handbook –“Mountain Bike Trails” and “Techniques for Design”, Construction and Maintenance and the International Mountain Biking Association’s (IMBA) Trail Building Basics booklet. A landscape architect would be consulted for any design/layout problem that occurs along the final location.

b. Alternative A – No action alternative

In this alternative no biking trails would be constructed. Efforts would be made to close all user created routes and all use would be discouraged on these routes as well as the closed roads. The use of unregulated, undesignated trails is expected to continue to be an ongoing safety problem.

c. Table 1: Comparison of Alternatives

Action or Treatment	Proposed Action (PA)	Alternative A No Action Alternative
Designation, Marking, and Construction of Single Track Mountain Bike Trail	35 miles & trailheads	0

d. Mitigation Measures that are Common to All Alternatives

This EA is tiered to the Forest Plan. The Proposed Action adheres to all applicable management requirements (Desired Future Condition, Objectives, Management Objectives, Forest Standards, Management Standards and Appendix F) the management requirements, mitigation measures, and Forest and Management Area (MA) 1D, 1H, 3E, 3F and 3I requirements are incorporated by reference. Standards that apply include FW1-9, 11-13, 18-26, 28-30,32-39,42,56,59,61,70,72-94,101-113,115-122,129,131,136,141-142,144-145,149-156, 160-162. MA standards that apply are MA1.C- 1-3, 16, 18-22, 24-27; MA1.H- 1-3, 5-10; MA3.E- 1-2; MA3.F- 1-6; MA3.I- 1-6.

Standard resource protection measures would be implemented. These are measures that are taken in every EA, and they comply with the Forest Plan, Forest Service timber sale contract clauses, the US Fish & Wildlife regulations for Protected, Endangered, and Threatened, and Sensitive species (PETS) and the Arkansas Forestry Commission Best Management Practices (BMP) for silviculture. These measures are incorporated by reference.

A full listing of these measures can be found at the Big Piney district office.

e. Mitigation Measures Specific to the Upper Buffalo Mountain Bike Project

The following mitigating measures apply to the PA.

1. A portion of the proposed trail system lies within the scenic section of the Wild and Scenic Buffalo River Corridor. This section would be strictly limited in construction, maintenance, and clearing limits. The Forest Landscape Architect would be consulted before and during any construction in the river corridor.

2. There are no known wetlands in the vicinity of the trail location. Should a wetland area be discovered during any phase of this project's activities, it would be protected. No machinery would be operated in any wetland.
3. Approximately 300 feet of new construction is within or adjacent to a riparian area (along Knuckles Creek, an ephemeral drain). The approaches to the ephemeral drain crossing would incorporate erosion control measures.
4. If any additional heritage resource sites are found, they would be avoided or protected in accordance with the Forest Service Manual requirements and Section 106 of National Historic Preservation Act (NHPA).
5. Rolling dips would be used to prevent water channeling on long continuous grades that cannot be avoided.

The management requirements and mitigation measures covered in the Forest Plan would be implemented as they apply to the PA and the alternative to the PA.

f. Monitoring

The OSFNF carries out an extensive monitoring program to ensure that projects are implemented consistent with the Objectives and Standards of the Forest Plan and to evaluate whether those requirements are effective in accomplishing their intended purposes, such as protecting the beneficial uses of streams. Results from the monitoring program are summarized in annual and periodic reports on specific subjects. Special attention has been given to monitoring the effects of management on water quality.

Some examples of our monitoring efforts have included bat surveys, deer surveys, Christmas bird counts, breeding bird surveys, herbicide sampling (water quality), macro-invertebrate sampling (water quality) and perceptual monitoring for soil disturbance. Monitoring results indicate that projects are consistent with the Forest Plan management objectives and standards and would not significantly affect the quality of the human environment. The overall monitoring plan is displayed in the Forest Plan.

All trail construction by contractors or volunteers would be closely monitored to ensure construction activities are in accordance with Forest Service guidelines.

g. Tiering/Incorporation by Reference

The actions described by the PA are typical projects in the Forest Plan. The Upper Buffalo Mountain Bike Environmental Assessment tiers to the analyses and disclosure of effects presented in the FEIS.

The Forest Plan, and Final Environmental Impact Statement (FEIS), has been reviewed through the Forest Services administrative appeals process. Each level of review has determined that these documents were complete and in compliance with all relevant statutes. To eliminate repetitive discussions of issues and to focus on the actual decision being made, the effects analyses in these EIS documents are incorporated by reference.

The actions described in the Proposed Action are similar to other actions that have been proposed and analyzed for effects in other EAs implemented on this district. An Analysis and Monitoring Summary has been prepared for twenty (20) Environmental Assessments (EA) and the Findings of No Significant Impact (FONSI) done on the Big Piney Ranger District (RD) since 1990. These EAs and FONSI include timber harvest in pine and hardwood types, road construction/reconstruction, herbicide application, and prescribed burning. This Summary is incorporated by reference and is on file at the Big Piney RD office.

VII. ENVIRONMENTAL EFFECTS

The PA and one alternative are disclosed in this section to present the environmental impacts, provide a clear basis for choice among options for the District Ranger, and to inform the public. Information is depicted by resource area. Some information is located in Appendices or incorporated by reference.

a. Soils

Current Condition

The project area lies within the Boston Mountain and Springfield Plateau physiographic areas of the Ozark Highlands. Soil types found in the project area are Nella – Enders - Steprock, Linker – Steprock – Leadvale and Enders – Leesburg. Nella – Enders - Steprock: Deep and moderately deep, strongly sloping to very steep, well drained, stony and very stony soils that formed in residuum or in collunium of acid sandstone or shale.

Linker – Steprock – Leadvale: Moderately deep and deep, gently sloping to strongly sloping, well drained and moderately well drained, loamy or gravelly soils that formed in residuum of acid sandstone or interbedded sandstone, siltstone, and shale. Enders – Leesburg: Deep, gently sloping to steep, well drained, stony soils that formed in residuum or collunium of acid sandstone or shale.

Most of the project is made up of Nella – Enders – Steprock with a portion of Linker – Steprock – Leadvale up in the vicinity of Kapark road and a small portion of Enders – Leesburg near Cave Mountain Road. Erosion hazard for all of the soils types are slight with the exception of Enders which is moderate. The major recreational limitation for these soil types appears to be the steepness of the terrain and the large amounts of stones/rocks on the surface.

Effects of (PA)

Construction of these trails would result in very minor soil disturbance. Average tread width will be 18” except where open or old roads are utilized. Grades would generally be kept at or below 12% with only short pitches of slope up to 35%. Long continuous grades would be avoided unless rolling dips are used to prevent water channeling. Overall, the trails would be built to current Forest Service or IMBA standards, which would minimize soil movement. There would be a slight amount of erosion resulting from trail construction and use. Also, undesignated user created paths would be eliminated resulting in fewer problems in these areas.

Cumulative Effects for the PA

One other action that has taken place in this watershed and will continue to be implemented in the foreseeable future is the County Line Prescribed burn (1850 acres) which is burned approximately every three years. Several factors are evaluated at the time this unit is burned and include, (time of year, dead fuel moisture, humidity on the day of the burn, days since rain, and expected intensity of the burn), If burning should coincide with trail construction activities along with a significant rain afterwards, it could create a small increase of sedimentation into the streams. The impacts would be expected to be short-term and minimal.

Cumulative Effects / Effects of Alternative A (No Action)

Current trends would continue. Minor amounts of erosion from use of undesignated, user-created trails would continue.

Table 5: Erosion Hazard by Soil Type

Soil Type and Slope Range	Permeability	Erosion Hazard	Hydric Soils	% Area
Linker-Mountainburg, Steep, Leadville	Well drained	Slight	Not hydric	20
Linker-Mountainburg association, Steep	Well drained	Slight	Not hydric	30
Enders-Leesburg association, steep	Well drained	Slight	Not hydric	10
Nella-Enders association steep	Well drained	Slight	Not Hydric	40

b. Water

Current Condition

This project area is located in the Upper Buffalo Drainage and includes a tributary Knuckles Creek which runs into the Buffalo River. The Buffalo River at the project area is designated Scenic. The Buffalo National River designation is 11.5 miles down stream from this project area.

Effects of the PA

Approximately 10 miles of trails are planned on existing open system roads, 14 miles are planned on closed existing roads, 9 miles are planned on existing user created trails, and there are 3 miles of new trail construction. One trailhead and parking area would be constructed. Dependant on use, an additional trailhead may be needed in 3-5 years. The major portions of the trails are located away from streams. There are 6.6 miles of the 35 miles that are located adjacent to streams or on old woods roads within stream corridors and riparian areas. All of the trails within the riparian area would be located on existing roads except for two newly constructed sections of approximately 300 feet each. There would be a slight temporary increase in sedimentation during the construction phase of these two sections, however once the two sections stabilize, the sedimentation would decrease to a low level with no significant impacts to water quality. The two sections would be constructed in accordance with Arkansas Best Management Practices and Forest Service Trail Construction Handbook. By adhering to these trail construction practices, no reduction in water quality would be expected. Use primarily along the ephemeral creeks would add a slight amount of erosion, however since these trails would follow already existing old roads currently in use, there would be an opportunity to improve and relocate sections that are experiencing erosion. In the long term conditions would improve in these areas due to better management.

The rest of the trails would be located primarily on ridge tops and mid to upper slope of the ridges. These areas would have very little or no effect on water resources. There are portions of the trails that would be within the scenic river corridor, however these portions follow old existing roads that have been in place for many years and would not impact water quality. The Buffalo National River has had a water sampling procedure in place since the park was designated. They take water samples at regular intervals. To date no measurable degradation of water quality in the upper end of the river downstream from the Forest Boundary has been identified.

Cumulative Effects of PA

Any impacts to water quality would be minimal and restricted to the construction phase and shortly thereafter.

The County Line Prescribed Burn is a decision which has been implemented and will continue to be implemented in this watershed but would have very little or no impact on water quality in conjunction with the PA.

Effects of Alternative A – No Action

This alternative would have a decrease from the current conditions and/or trends, due to closing unregulated / undesignated trails. This administrative action would improve water quality in both the short and long term.

Cumulative Effects for Alternative A

Current conditions would remain the same due to erosion from unregulated / undesignated trails. The continued implementation of the County Line Prescribe Burn will have very little cumulative effects on water quality.

c. Air

Current Condition

Present air quality is good with no visible or odoriferous smog or industrial pollutants present. The trails would be located just west of a Class I air quality zone (Upper Buffalo Wilderness Area).

Effects and Cumulative Effects of the PA and Alternative A

None of the actions of the PA or Alternative A would have any effects on air quality.

d. Visual Quality

Existing Condition

The project area would be located in a very rural and predominantly forested area. A few pastures occur on private land in the center of the project area. The Scenic Integrity Objectives for the analysis area includes classes 2 and 8, with the outlying areas in class 1. Scenic classes 1 and 2 have been identified as high within the analysis area and class 8 as low. Scenic class 1 consists primarily of the areas with existing open roads on which a passenger vehicle can travel. The majority of the trails lies within classes 2 and 8. Scenic Integrity Objectives refers to landscapes where the value has been identified based on past and existing land patterns along with emphasis of the public acceptance of expected activities within an area. A more in depth definition of these classes can be found in the Forest Plan Appendix G. Other scenic integrity information is contained in Appendix H.

Scenery management priorities are

1. Maintain or enhance the visual character of the Forests by using the Scenery Management System (SMS) to achieve the scenic integrity objectives. This allows for vegetative treatments in order to maintain the visual character over time such as thinning and promoting regeneration of future stands within the proximity of the trails proposed.
2. Promote the planning and improvement of infrastructure through the best practices appropriate in order to harmonize changes in the landscape.

Effects of PA

The proposed activities lie primarily within class 2 and 8. The implementation and development of the trails upon vegetation would be low and therefore the impacts would be expected to have a minimum effect on the scenic character.

Visuals would be moderately impacted in the areas along the trail during the construction phase of the trail system, but would quickly lessen over time due to site recovery.

Cumulative Effects

The development and designation of additional recreational opportunities in the area would be expected to increase the recreational use as the trails are publicized.

There has been some mountain bike use in the area (some has been illegal use in the creation of bike paths) but the development of these trails is expected to greatly expand the use in areas that have received limited use in the past.

There is a growing interest in mountain biking and the development of this trail system would allow the Forest Service and our partners to monitor and control the situation.

Visual impacts would be temporarily affected during construction, but this impact would be minimal and short-term.

Alternative A - No Action

Closing of unregulated and undesignated trails will reduce recreational use in this area.

Cumulative Effects

e. Recreation

Existing Condition

This portion of the Ozark National Forest receives fairly heavy recreational pressure with the majority of the current attraction associated to the Upper Buffalo River Wilderness Area, Whitaker Point (scenic overlook within the wilderness) and the Buffalo National River. Currently the mountain biking use is from local people and bikers from the Fayetteville area. Western Newton County and eastern Madison County (Boxley and Ponca) moderately benefit from the tourist industry. There are no developed recreational sites in this project area. Hunting for whitetail deer, squirrel, and eastern wild turkey is a popular recreational activity in this area. Several dispersed hunter camps are located within this project area. Other activities within the project area include hiking, berry gathering, driving the roads, and firewood gathering.

This area is classified in the Recreation Opportunity Spectrum (ROS) as semi-primitive motorized to roaded natural. The ROS provides a framework for defining classes of outdoor recreation opportunity environments (1986 ROS Book). Semi-primitive areas are characterized by a predominantly natural or natural-appearing environment of moderate to large size. Motorized use is permitted. In a roaded natural ROS, the area is characterized by predominately natural-appearing environments with moderate evidences of the sights and sounds of man. The PA and Alternative A conform to current ROS guidelines.

Effects of the PA

The impacts of designating and constructing approximately 35 miles of mountain bike trails and a trail head would be very similar to that of constructing a hiking trail of similar distance. The proposed action if implemented would be in accordance with the Forest Plan for a dispersed non-motorized type of recreation. The designation of approximately 35 miles of single track mountain bike trail would draw a significant number of mountain bike riders to this area. Ten miles of this system would utilize existing open Forest Service roads. Nine miles are located on user created single track paths. Approximately 14 miles would be located on existing but closed timber roads and old travel ways. Less than 3 miles would be new construction and would be in accordance with trail design and construction from the Forest Service Manual. Forest visitors would be able to enjoy the beauty and scenic qualities of the National Forest by riding mountain bikes or hiking the trails. This would allow visitors to see more of the forest through outdoor recreation. These trails would add to the recreational diversity of the area.

Cumulative Effects of PA

More people would be utilizing the area to recreate by riding mountain bikes or hiking.

Prescribed burning would periodically impact the users of the trail through temporary closures and smoke. These impacts would have no long lasting effect on the trails. Specifically two trails would be closed before the prescribed burn was ignited and remain closed until a member of the prescribed burn team inspected them after the burn was complete and deemed them safe for public use. This could take a few days. Notice of the closure would be posted at the trailhead(s) and the trails would be walked or rode by a member of the prescribed burn

team to ensure no one was on the trail before any ignition occurred. Signs and personnel would also be stationed at entry points to the closed trails so no one accidentally got onto the closed trails. In addition, the trail system could experience significant smoke during and shortly after the ignition of the prescribed burn which could last up to eight hours. The prescribed burn is implemented once every three years and would affect the trail system a minimum of two days but could potentially affect the trail system for up to five days.

Effects of Alternative A

This alternative would leave unregulated user-created mountain bike trails on national forest with potential erosion problems occurring

Cumulative effects of Alternative A

If these trails are not designated and managed, the need for this trail system would still exist. The problem of unregulated, undesignated, and unsafe bike trail use will continue.

f. Heritage Resources

Existing Condition

A Heritage Resource Survey (06-10-02-14) was conducted and submitted to State Historic Preservation Office (SHPO). Fifteen new sites were recorded and of those, 7 were determined to be not eligible for the national register, and 8 were undetermined. The determination of eligibility for sites was made by the Forest Service. The SHPO may or may not concur and the Forest Service will accept the recommendation from the SHPO.

No historic cemeteries are known to exist within the area of potential effect of the project.

Effects and Cumulative Effects of PA and Alternative A

The values of known HR would be protected through proper documentation and complete avoidance for potentially significant (Undetermined and Potentially Eligible) properties. Resources would be flagged and painted-out in order to place them outside the area of potential effect of the project or other management recommendations as determined by the nature of the HR. With these actions there would be no adverse effect to the resources. Sites that are determined to be insignificant by SHPO (Not Eligible) would be recorded as such and may not be protected.

Action alternatives produce a positive effect. HR surveys (required for any action alternative) discovered fifteen previously unknown heritage resources in the project area. These resources are documented and protected until their NRHP eligibility has been determined.

If new HRs are located during management activities, they would be flagged, painted-out, and recorded with a state site form and submitted to the Arkansas Archeological Survey (AAS) Coordinating office for state site numbers.

g. Transportation

Current Condition

This proposed project area did not have a Roads Analysis Process completed for this project. The proposed project area was reviewed by the Big Piney District Engineering Technician to ensure the existing road system would handle increased use by recreational mountain bike riders. The Engineering Technician also examined the existing user created trails and the location of proposed new construct trails to ensure the location would be viable. If the PA is implemented a minimum of one trailhead would be constructed along the Knuckles Creek Road to allow 10-20 vehicles to park and access the trail system. This site was chosen due to its central location of the proposed trail system and the ease of ingress and egress in vehicles from the trail system. It is possible that other trailheads may be necessary with increased use.

Effects of the Proposed Action

The District Engineering Technician has reviewed the transportation plan for this area and recommends that the current level of maintenance would be sufficient for increased use of the system roads due to trail designation contained in PA. The trail system would be maintained by volunteers unless unusual degradation occurs from excessive rain or other environmental factors.

Cumulative Effects of the PA

There are no cumulative effects because there are no other engineering activities proposed in this area in the foreseeable future.

Effects of Alternative A

Existing conditions would continue.

Cumulative Effects of Alternative A

Same as above.

h. Vegetation

Existing Condition

This area is predominantly Oak- Hickory upland hardwood forest. Timber types vary from short-leaf pine planted in old fields to mixed hardwoods with Northern red oak, white oak, black oak, black gum, and hickories being the dominant species, with dogwood and red maple predominant in the understory. Ground covers were usually heavy leaf litter, poison ivy, greenbriers, blackberries and other vines and small plants with multi-flora rose bushes common in some areas. According to the Forest Plan this area's management emphasis is recreation primitive non-motorized. Vegetation management is a secondary benefit and is only to take place if doing so would enhance the primary management emphasis, primitive non-motorized, or for public health and safety.

Effects of the PA

There would be less than a 1% change in the vegetation or composition of the vegetation if the Proposed Action is implemented.

Cumulative Effects of the PA

Same as above.

Effects and Cumulative Effects of Alternative A.

No Effects

i. Minerals

Existing Condition

The project area is located in Newton County, Arkansas, with the majority of the area allocated to Management Area 2D, Upper Buffalo Dispersed Recreation Area. There are no known minerals contracts or rock collection contracts, and none are planned.

The PA or Alternative A would have no effects on the mineral resources of this area.

j. Wildlife, MIS, Fisheries

Wildlife, MIS Existing Condition

The diversity of wildlife species within this project area is typical of the Boston Mountains of the Ozark Plateau.

Roads and streams are the two types of corridors occurring within the project area. These stream and road corridor systems are elements of terrestrial and aquatic habitat. Big Buffalo Creek is the south and west perimeter of the area. This stream, along with Knuckles Creek, a tributary of the Big Buffalo Creek, provides an avenue for movement of water, nutrients, and organisms within the project area. These aquatic and riparian corridors serve as a linkage system for all the components of the area.

Wildlife habitat is being altered by the oak decline phenomenon including the current red oak borer infestations on the forest. Habitat changes could include: a long-term reduction in hard mast production; an increase in the amount of soft mast production as non-oaks make up more of the overstory; a short-term higher density of snags and down trees, and a short term increase in available early successional habitat. The red oak borer causes a degree of uncertainty when attempting to forecast future mast crops, and landscape average of early seral habitat. The more extensive the outbreak the greater the reduction of hard mast and early seral habitat production and the corresponding impact to those species.

Management Indicator Species (MIS)

The foundation for MIS can be found in the National Forest Management Act and Planning regulations (36 CFR 219.19). Briefly, MIS were selected because “their population changes are believed to indicate the effects of management activities” and they were used to help meet the Forest’s legal requirement to “preserve and enhance the diversity of plants and animals consistent with overall multiple-use objectives.” It is important to remember that MIS are a planning and monitoring tool that reflects a way to analyze a change in conditions. Seventeen MIS were chosen for the Forest. The Forest completed a report assessing the population and habitat trends for the MIS (USFS 2001) and has since completed annual Monitoring & Evaluation Reports on the Forest evaluating the status of MIS. This report is available upon request.

A more complete description of the habitat relationships for these species can be found in the process file and reference section of the EA and are tiered in part to the Nature Serve database: <http://www.natureserve.org/>,

Bird Conservation Report: <http://www.rmbo.org/pif/pifdb.html> and a Land Manager's Guide to Birds of the South: <http://www.srs.fs.usda.gov/pubs/2702>.

Effects of PA

Wildlife – With the public utilizing the trails some wildlife would be disturbed. This occasional disturbance should not have a great impact on the wildlife in the area. The construction of the trails would also disrupt some animals' normal patterns and routines, but this would be a temporary issue and would not result in any decline of wildlife populations

MIS – The indicator species like other species would have their normal patterns occasionally disrupted when a user rides through and during the construction phase of the trails, but no populations would be impacted by the construction of the trails or by forest visitors using the trails.

Cumulative Effects of PA

There are no known activities for this area in the foreseeable future, so no cumulative effects would occur.

Effects of Alternative A

If the illegal trails are shut down then the disturbance of wildlife would be less and this would be a benefit.

Cumulative Effects of Alternative A

Same as above.

Fisheries

Existing Condition

None of the proposed trails locations cross creeks with a viable sport fishery resource. Only ephemeral and upper reaches of intermittent streams are involved in this project.

Effects of PA

The implementation of this alternative would not result in any significant changes in the fisheries resource in any of the creeks within the area.

Cumulative Effects of PA

Short and long term effects of the proposed action would not cause significant changes to water quality or aquatic habitat.

Effects of Alternative A – No Action

There would be no change from current conditions and trends.

Cumulative Effects of Alternative A

Current conditions will continue under the present conditions.

k. Proposed Endangered, Threatened, and Sensitive Species (PETS)

Existing Condition

A Biological Evaluation (BE) has been completed that examines all known occurrences of PETS species that occur on the Regional Forester's Sensitive Species list and applicable to the OSFNF. In addition the 19 federally proposed, endangered and threatened species identified through informal consultation with the FWS (Forest Plan Biological Assessment) were also considered. All but 13 of the PETS species were eliminated from further evaluation due to one or more of the following factors:

- The Project Area is not within their known, documented geographic range.
- The species has never been documented from within the Project Area or its sphere of influence in field surveys, monitoring activities, reports, or the scientific literature.
- The treatment area does not provide habitat conditions known to be needed or used by the species.

The BE completed for the actions and alternatives proposed of the 13 PETS species evaluated and is hereby incorporated by reference. The BE made use of internal expertise, earlier discussions with the FWS (Conway, AR Office), conversations and species data from the Department of Arkansas Heritage, field reviews by District personnel and collected inventory data on the District and field surveys conducted within the project.

No critical habitat for any PET species has been identified within the analysis area. For a complete description of each species needs and habitat conditions, reference the BE found in the process file for this project.

Effects Common to the PA and Alternative A.

Neither the PA or Alternative A are likely to adversely affect PETS. BMP and all standards identified in the Forest Plan would be applied regardless of which is selected. These measures should minimize or eliminate any potential effect to these species.

Individuals may be impacted by the action alternative but are not likely to cause a trend to federal listing or loss of viability.

Cumulative Effects

Of the sensitive species identified as occurring within the analysis area, Ozark chinquapin would likely continue to decline overall due to the effects of the chestnut blight across its known range. Because of the protection measures identified, sensitive species are not likely to be affected. For these sensitive species identified there is a determination that actions may impact individuals but are not likely to cause a trend to federal listing or loss of viability.

l. Human Health Factors

Current Condition

Currently no designated mountain biking trails exist in the project area, however some trails have been created that do not meet Forest Service safety standards.

Effects of PA

The PA would provide for a safe place for the public to bicycle and hike. The construction/designation of trails would meet the current demand in the area. There would be no effect to the forest visitor from trail construction since visitors would not likely be present when the construction takes place. Each trail would receive a standard

difficultly rating from easy to most difficult. The rating takes into account things like average steepness, tread width, clearing width, and change in elevation. The difficulty levels would be posted on trails, at the trail head(s), and on the trail map to indicate the level of skill needed to safely traverse a trail.

Cumulative Effects of the PA

A properly constructed, posted, and rated mountain bike trail system would create a safe, enjoyable place for mountain bike enthusiasts and hikers to use. Critical to the success of this trail system would be partners and volunteers. Volunteers from IMBA have agreed to assist with maintenance of the trail system. If interest in this trail system drastically decreases in the future and volunteers become disinterested in helping maintain the trails, the trail system would be closed.

Effects of Alternative A – No Action

Under this alternative no biking trails would be constructed and existing use on user created routes and closed roads would be discouraged from a safety perspective.

Cumulative Effects of Alternative A

Current demands for biking trails would continue to be unanswered. This would continue to encourage individuals to create their own routes that do not comply with Forest Service standards.

VIII. AGENCIES CONSULTED

The following is a list of agencies that were consulted during this analysis:

State Historic Preservation Office	AR Natural Heritage Commission
AR Game and Fish Commission	AR Forestry Commission BMPs
U.S. Fish & Wildlife Service	

IX. INTERDISCIPLINARY TEAM or TECHNICAL EXPERTISE

John Andre	Ecologist – Big Piney RD
Tony Crump	Hydrologist – OSFNF
Jimmie Dixon	Timber Management Assistant – Big Piney RD
Ricky Adams	Engineering Technician – Big Piney RD
Robert Flowers	Landscape Architect – OSFNF
Roger Gunter	NEPA Coordinator – Big Piney RD
Terry Hope	Recreation Specialist – Big Piney RD
Mark Morales	Fire Management Officer – Big Piney RD
Michael Pfeiffer	Archaeologist – Big Piney RD
Dwayne Rambo	Wildlife Biologist – Big Piney RD
Keith Whalen	Fisheries Biologist – OSFNF

X. GLOSSARY of Acronyms & abbreviations.

AAS	Arkansas Archeological Survey
ADEQ	Arkansas Dept. of Environmental Quality
AGFC	Arkansas Game & Fish Commission
BA	Basal Area
BE	Biological Evaluation
BLM	Bureau of Land Management
BMP	AR Forestry Commission - Best Management Practice(s)
Comp	Compartment
DOT	Arkansas Highway & Transportation Department
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	US Environmental Protection Agency
FONSI	Finding of No Significant Impact
FR	Forest Road(s)
FRCC	Fire Regime Condition Class
FS	US Forest Service
FWS	US Fish and Wildlife Service
HDS	High Disturbances Species
HQ	High Quality Management Area 3E
HR	Heritage Resources
HUC	Hydrologic Unit
ID	Interdisciplinary
IMPROVE	Interagency Monitoring of Protected Visual Environments
LDS	Low Disturbances Species
LWD	Large Woody Debris
MA	Management Area
MIS	Management Indicator Species
NAAQS	National Ambient Air Quality Standards
NF	National Forest
NNIS	Non-Native Invasive Plant Species
NRHP	National Register of Historic Places
OHV	Off Highway Vehicle
ORV	Outstandingly Remarkable Value
PETS	Proposed Endangered, Threatened and Sensitive Species
OSFNF	Ozark- St. Francis National Forest
RAP	Roads Analysis Process
RD	Ranger District
RLRMP	Ozark St. Francis NF Revised Land Resource Management Plan
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Office
SI	Site Index
SMZ	Streamside Management Zones
SS	Seldom Seen

Std	Stand
SSURGO	Natural Resources Conservation Service Soil Survey Geographic Database
USGS	US Geological Survey
WMA	Wildlife Management Area
WSI	Wildlife Stand Improvement
WSR	Wild Scenic River
WUI	Wildland Urban Interface

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USGS Breeding Bird Survey Results (USGS, 2006)

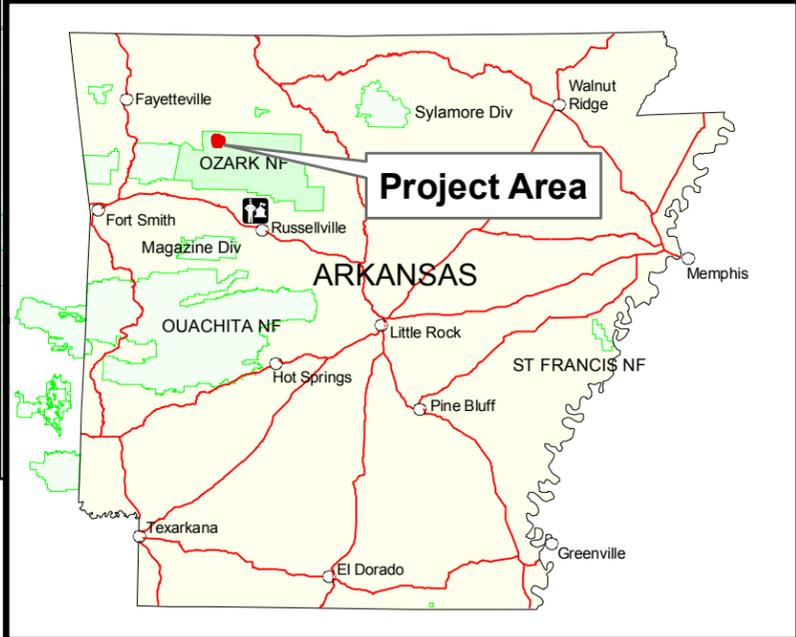
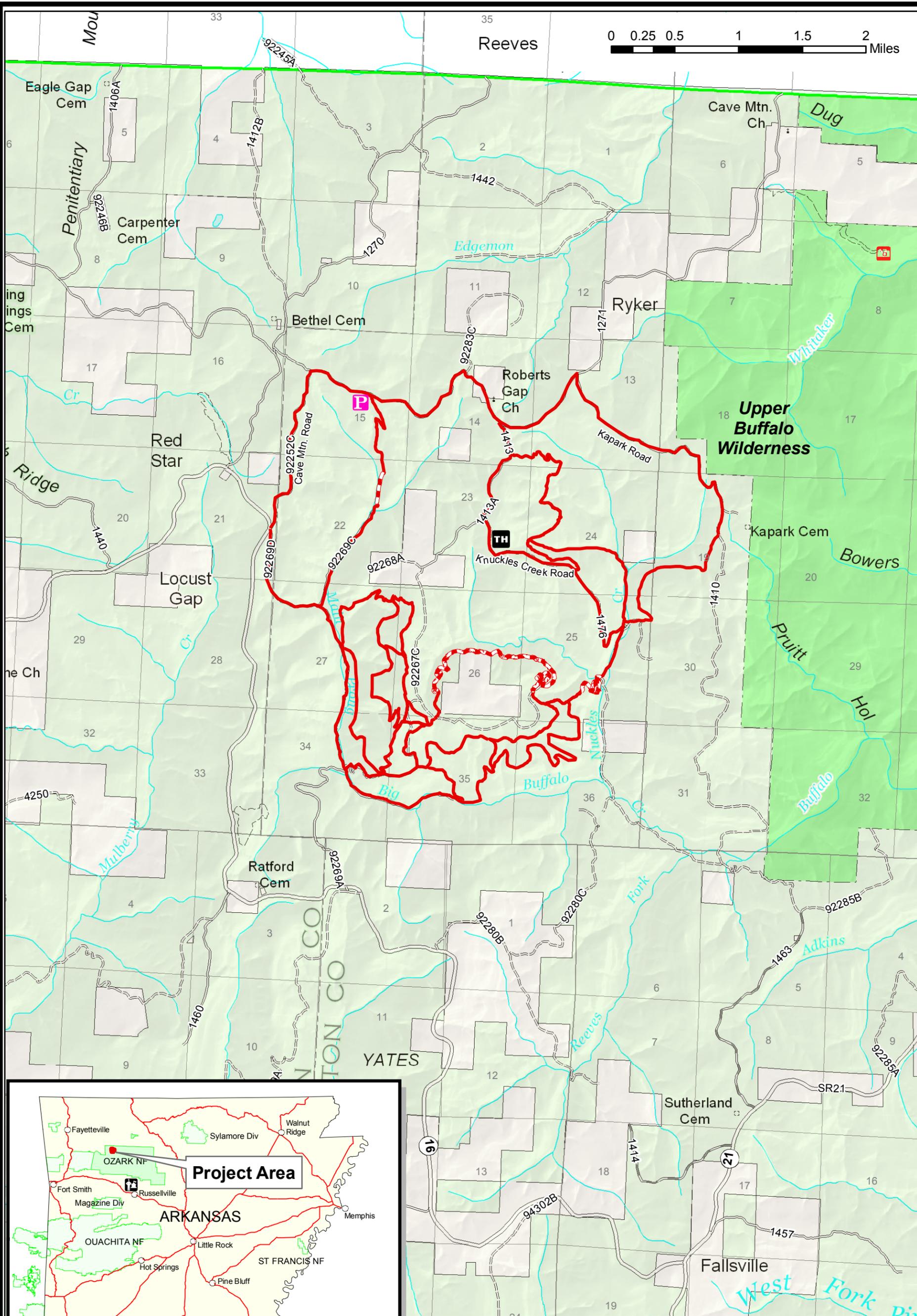
Management Indicator Species Population and Habitat Trends, Ozark-St. Francis National Forests (USDA,2001)

Nature Serve database: <http://www.natureserve.org/>,

Bird Conservation Report: <http://www.rmbo.org/pif/pifdb.html>

Land Manager's Guide to Birds of the South: <http://www.srs.fs.usda.gov/pubs/2702>

Ozark-St. Francis Interim Cumulative Effects Soil Disturbance model (Dipert, 2003)
Arkansas (Miller and Liechty, 2001)



Upper Buffalo Bike Trail

-  Bike Trail - 33.25 miles
-  Bike Trail Construction - 2.81 miles

-  Trail Head
-  Proposed Parking Area