

**FINAL
DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT**

USDA Forest Service R-8
Ozark National Forest
Pleasant Hill Ranger District
Johnson County, Arkansas

Compartments 171, 206, 316, 317, 318, 319, 321, 322, 323, 677, 696, and 757

Bee Ridge
9-25-2015

DECISION NOTICE (DN)

Based on an Environmental Assessment (EA) prepared by an interdisciplinary team of Forest Service specialists, decisions regarding management actions for forest health, watershed improvement, ecosystem restoration, wildlife habitat, and recreation over the next several years have been made for the Bee Ridge project. Decisions have been made for pine forest stand management and the connected actions of site preparation for pine regeneration, pine reforestation, thinning, Timber Stand Improvement (TSI), pine woodland thinning and associated roadwork to access and decommission the forest management areas. Wildlife habitat improvement will include the construction and enlargement of new and existing wildlife openings, herbicide application for herbaceous vegetation improvement, gate installation, prescribed fire, and the placement of large woody debris (LWD) in stream channels.

These actions are planned to implement the Ozark-St. Francis National Forests (OSFNFs) 2005 Revised Land and Resource Management Plan (RLRMP) goals, objectives, and desired future condition for the timber, wildlife, and recreation resources within the project area. In general, the objectives for management in the project area are to regenerate pine stands on appropriate sites, restore ecosystem health and sustainable conditions, watershed improvement, increase plant and wildlife diversity, reduce forest fuel loading through prescribed burning, reduce conflicts between motorized vehicles and other resource values, and increase Forest visitor safety. The management actions designed to meet these objectives address issues and concerns expressed by the public and interdisciplinary team.

The project area of **Bee Ridge** comprises a total of approximately 14,169 total acres; 12,591 acres of National Forest land and 1,578 acres of private land. The Bee Ridge project area includes compartments 171, 206, 316, 317, 318, 319, 321, 322, 323, 677, 696, and 757. The legal description is T13N R23W Section 36; T13N R22W Sections 31; T12N R23W 1, 2, 11, 12, 13, 14, 15, 23, 24, 25; T12N R22W Sections 6, 7, 8, 9, 10, 11, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 32, 33, 34, and 35; T11N R22W Sections 2, 3, 4, and 11. The project area is bounded

on the north and east by Rosetta Road. The Little Piney Creek borders the south boundary and the Big Piney Ranger District borders the east boundary of the project area while the west boundary is bounded by Highway 21. The southeast portion of the project area is bounded by Highway 123. The Bee Ridge project area falls within the following management areas (MAs): Pine Woodland (3.A), Riparian Corridor (3.I), Scenic Byway Corridor (1.H), and Ozark Highlands Trail Corridor (2.A).

Based on the analysis documented in the EA, it is my decision to implement **alternative 2** (see attached maps). These actions will have some impact on National Forest lands from vegetation management, watershed improvement, and wildlife habitat improvement work.

Private lands may be involved in the completion of prescribed burning to restore ecosystem health and reduce forest fuel loading, but only with proper consent of private landowners and completion of applicable agreements.

Specifically, the following actions are planned:

VEGETATION MANAGEMENT:

Pine Reforestation – Pine site preparation, planting and release will be implemented in compartment 318, stands 24 and 32 and compartment 321, stand 5, totaling approximately 88 acres. These stands were damaged by a wildfire in July 2012. Currently, hardwood brush has overtaken existing pine regeneration. These stands may require site preparation measures through mechanical and handtool/herbicide methods. After site preparation, planting with pine seedlings is recommended. Subsequent treatments of release using handtool/herbicide means will be needed to ensure pine seedlings survive to fully stock the stands.

Pine Thinning – This will occur on 803 acres. Thinning will increase growth of residual trees, reduce susceptibility of the stand to insects and disease, and improve wildlife habitat. The stands will be thinned to an average basal area of 70 ft²/acre. Trees that are suppressed or possess poor form will be removed. Large trees of good form and/or close to the correct spacing will be favored as leave trees. The target spacing of trees will depend on average tree diameter of the stand. Prescribed burning followed by thinning will provide beneficial effects for wildlife. TSI treatments of the midstory using herbicide and/or handtools may be utilized to further reduce competition.

TSI – This will occur on 408 acres. Treatments in the midstory and understory using herbicide and/or handtools will benefit desirable tree species and support the development of grasses and forbs.

Pine Woodland Thinning – This will occur on approximately 954 acres. The objective of this prescription is to create a woodland condition in shortleaf pine where trees are moderately-spaced apart. While maintaining an average of 60-70 ft²/acre basal area, prescribed burning will be implemented every 3 to 10 years to control the understory woody vegetation and create an herbaceous component of grasses and forbs. Control of midstory hardwood with chainsaw

felling or cut surface application of herbicide will occur following harvest. This will improve woodland conditions while retaining some mast-producing hardwoods per acre.

Salvage of Dead, Down, and /or Damaged Timber: The Pleasant Hill Ranger District is susceptible to natural occurrences such as severe drought, wildfire, tornadoes, windstorms, lightning strikes, insect and disease outbreaks, catastrophic ice storms, natural mortality, and human-caused events such as arson and residual material from implemented management activities (i.e. ponds, midstory reduction, thinning, and prescribed burning). These occurrences create hazards for the public and have negative effects on the overall health of the forest. This action will allow the District Ranger to respond to situations within the Bee Ridge project boundaries where dead, down or damaged trees pose a threat to the public or the health and well-being of the forest in a consistent and timely manner. If the District waits until an incident occurs before making the decision to remove the dead, down, or damaged trees through a salvage or firewood sale, a time lag of several months or more could pass before the decision will be implemented. In many cases this time delay is unacceptable because of hazards to the public and/or it could cause the value of the timber product to degrade significantly due to insect and fungal infestations of damaged trees.

Prior to conducting salvage and/or regeneration operations within the Bee Ridge project area boundaries, site-specific documentation for each salvage and regeneration action will be prepared and retained by the District. As a minimum, that documentation will have a statement of heritage resource survey requirements and clearance type (categorical exclusion or project notification, or other written agreement between the Arkansas State Historic Preservation Office, affected Native American Tribes, and the OSFNs), stand prescription cards with details of the current stand and a regeneration plan to return the affected area back to its desired future condition as well as a statement of effects on proposed, endangered, threatened, or sensitive species (TES). Documentation will include the location (compartment and stand), estimated area affected (acreage), a map of the impacted area(s), an estimated volume of timber to be removed, identification of the watershed containing the affected area, and identification of the management area within which the affected area lies and actions to be conducted. Each salvage site will be reviewed by the timber assistant and the timber sale administrator or other qualified staff prior to commencement of salvage operations. The number of acres in which salvage operation activities may take place will not exceed 3,000 acres per event. Salvage and/or regeneration operations will be conducted within the project area boundaries following the guidelines listed in the 2005 RLRMP.

WILDLIFE HABITAT IMPROVEMENT

Wildlife Opening Construction and Enlargement – Timber in locations of new openings will be marked with 1 to 2 acre timber removal cuts. There will be 16 new wildlife openings constructed and 6 existing openings which will be enlarged. Total acreage of new and enlarged areas of existing openings is approximately 39 acres. The method of construction for the wildlife openings will be with the use of a bulldozer and herbicide application followed by liming, disking, seeding, fertilizing, and maintenance with mowing and herbicide application.

Herbicide Application for Herbaceous Vegetation Improvement – This action will occur in areas where the forest canopy has been reduced by repeated prescribed burning. Application of herbicide will be used to reduce shrub layer vegetation further and benefit native herbaceous species. This treatment is proposed for 10 areas of approximately 87 acres total.

LWD – LWD placement for stream and fish habitat improvement will be implemented in Owens Creek, Lick Creek, and Cedar Creek. Approximately 9 miles of stream channel could potentially have LWD introduced. Approximately 15-30 trees/mile ranging in size from 10-30 inches dbh will be felled into creek channels.

Gates – Eight new gates will be installed for roads which serve as access to wildlife openings. Installation of these gates will also close 17 roads to administrative use only.

PRESCRIBED BURNING

Prescribed burning will help reduce hazardous fuels and wildfire risk, improve wildlife habitat, and be utilized for silviculture purposes. Knutson-Vandenberg (KV) retained receipt funded prescribed fire will be implemented on all acres possible within KV sale area boundaries surrounding pine thinning units.

Prescribed fire treatments may occur on private lands located within the Bee Ridge project area, but *only* after consultation with landowners and a prescribed fire agreement under the Wyden Amendment (Section 334(a) of Public Law 105-83) and/or Stevens agreements in cooperation with the Arkansas State Forestry Commission is signed by both parties. Should agreements with private landowners be signed, private lands will be burned by the Arkansas Forestry Commission under prescription in conjunction with prescribed burns on public lands. Prescribed fire will be utilized for several purposes in the project areas.

Prescribed fire will serve to re-introduce fire into a fire-adapted ecosystem, promote oak regeneration in canopy openings created by red oak borer damage/oak decline, regeneration in shelterwood and seedtree harvest areas, maintain pine/hardwood stands in open conditions, increase herbaceous understory species density and diversity, improve habitat conditions for fire-dependent special-status plants, increase soft-mast production and reduce potentially hazardous accumulations of fuels on the forest floor, and improve wildlife habitat conditions. Portions of the project area will be burned on an approximate 3-10 year fire return interval, based on best available science regarding beneficial fire-return intervals for the project area. Mechanical fuels reduction may be utilized in areas where use of fire is not possible, or to better facilitate fuels reduction adjacent to private lands or developments.

ROADWORK

Reconstruction – Approximately 4 miles of old, existing roads will be reconstructed within the project area. These roads are situated on somewhat stable templates that display signs of age where spots of erosion are occurring and drainage crossings are crumbling. Reconstruction will help stabilize, thereby reducing erosion and sediment from reaching streams.

Maintenance – Approximately 44 miles of open and closed roads will receive maintenance within the project area in order to obtain suitable road conditions for hauling timber. County roads anticipated to be used are regularly maintained by their respective counties, along with Forest Service assistance. Closed roads will temporarily be opened during timber/silvicultural activities and then immediately closed with gates or mounds after all activities have been completed to reduce erosion caused from vehicle traffic and protect wildlife habitat.

Decommissioning – Approximately 26 miles of existing roads no longer needed for management or access will be decommissioned within the project area. This entails restoring roads to a more natural state. Activities used to decommission a road will include, but are not limited to the following: re-establishing former drainage patterns, stabilizing slopes, restoring vegetation, blocking the entrance to the road, installing water bars (earthen mounds), and removing culverts. Unnamed and illegally accessed off-highway vehicles (OHV) trails present in the project area may be closed using debris, rocks, earthen mounds, or gates.

Road decommissioning is defined by 36 CFR 212.1 as activities that result in the stabilization and restoration of unneeded roads to a more natural state. Several of these roads currently traverse natural fluvial systems and concentrations of water may result in possible resource damage. Priorities for decommissioning these roads include access, drainage, stability, erosion, and re-vegetation. These roads will be removed from the transportation system.

Temporary Roads – Approximately 7 miles of temporary roads will be needed to access timber stands. These roads will be blocked, and then rehabilitated with seeding and/or natural re-vegetation. Temporary roads will not be included as part of the forest transportation system as they are managed for short-term projects or activities, followed by decommissioning after use.

Access: Adjacent landowners whose property blocks access to Federal land will be contacted by the Forest Service. Neighbors of the forest will be asked to consider allowing entrance to these otherwise inaccessible areas for forest management and fire protection.

HERITAGE RESOURCES

The project has been designed so that all sites that may be eligible for the National Register of Historic Places, or that are of undetermined eligibility, lie outside any of the project's areas of planned ground-disturbing activity. Historic site areas which contain no organic cultural material will undergo prescribed burning. Past research has shown that sites such as these will not be affected by prescribed fire.

Should any additional sites be found during project implementation, they will be examined by a professional archeologist, who will prescribe appropriate mitigation measures.

Based on these findings, all sites will be preserved intact and no significant effects will occur to historical or prehistoric sites that may be eligible for nomination to the National Register of Historic Places.

ENVIRONMENTAL EFFECTS:

Implementation of alternative 2 using the mitigation measures as shown on pages 28-37 of the EA will have some effects on the environment. These effects are stated on pages 37-115 of the EA and are summarized in Table 12 on page 38 and 39 of the EA. Environmental effects by various resource categories are briefly described as follows:

Water – The project area and the sub-watershed analysis area support streams and rivers that have a dendritic drainage pattern. Dendritic drainage patterns typically have branching tributaries, which can concentrate precipitation across a wide area into one main stream channel. There are approximately 155.7 miles of streams within the analysis area, 25.9 miles of which occur in the proposed project area. The primary streams that are found in the project area are: Devils Fork, Owens Creek, Lick Creek and Cedar Creek and several unnamed tributaries. Little Piney Creek borders the project area on the western edge. The creeks and tributaries flow south and join Big Piney Creek approximately 17 miles downstream of the proposed project area. Big Piney Creek then flows into Piney Bay where the city of Clarksville has a municipal water intake.

The cumulative effects analysis indicates minimal risks to the water resource's current condition. The activities proposed by the Forest Service for the proposed action will result in a decrease in sediment production from the landscape. Additionally, it should be possible to schedule these activities over time instead of instantaneously as predicted by the analysis, thus further reducing the possibility of acute effects. Through the use of forest plan standards and the use of Arkansas Silviculture BMPs, the activities scheduled for implementation should not pose additional risks to water quality or designated uses. Monitoring in the form of subsequent fisheries evaluation and BMP compliance checks should be adequate to discern any adverse effects which may result from the implementation of the proposed action.

Soils - Soils are mostly well drained and range from shallow to deep. There are some small areas of poorly drained hydric soils in depressions on the floodplains along Little Piney Creek, Lick Creek and Owens Creek.

Most of the soils have 100% cover consisting of leaf litter twigs, limbs, logs, gravel, stones, and have an intact root mat. Soils in the road beds of closed roads have some ground cover protecting them, but are mostly bare and eroding in some sections.

Under Alternative 2, approximately 12% (211 acres) of the harvested area will sustain a temporary reduction in soil productivity due to harvesting operations. The temporary reduction will last 25 years or less. An additional 17 acres (1% of the harvest area) will sustain a temporary reduction in soil productivity due to temporary road construction. Soil productivity will be lost on approximately 3 acres due to road reconstruction. Approximately 14 acres of the harvested area will sustain a temporary reduction in soil productivity due to fireline construction. Twenty six miles of road are will be decommissioned returning approximately 51 acres of soil to a productive state.

Total expected temporary reduction of soil productivity will be 231 acres (13% of the harvested area), including skidding, temporary roading, and road reconstruction. Fireline construction will

add approximately 14 acres to the estimated soil disturbance (0.2% of the area proposed for burning). Road decommissioning will reduce the net acreage of soil disturbance to 194 (11%). Temporary roads, primary skid trails, and landings will be disked, seeded and closed following harvesting to speed the recovery of the soil productivity. Firelines will be bladed and seeded when prescribed burning is completed to speed recovery of soil productivity and to prevent erosion. Road reconstruction will stabilize roads and prevent loss of productivity on soils adjacent to these roads and reduce erosion and sedimentation. Road maintenance will also prevent the loss of productivity on soils adjacent to the roads by helping to control runoff. Less than 15% of an activity area can sustain a reduction in soil productivity, according to the 2005 RLRMP standard. If more than 15% of the activity area sustains a reduction in soil productivity, mitigation measures must be installed. The documentation for temporary reduction in soil productivity can be found in the analysis file.

The areas in which will timber harvest will occur have not been harvested for 10 years or more and show little to no evidence of detrimental soil disturbance consisting of rutting, displacement of the top soil, compaction, or erosion. There are no known future activities in addition to the proposed activities that will impact soils. Soil disturbance that will potentially result from the proposed activities are expected to be within the 2005 RLRMP standard that requires that on soils dedicated to growing vegetation, the organic layers, topsoil, and root mat will be left intact over 85% of activity areas.

Herbicides – The herbicides glyphosate, triclopyr, imazapic, imazapyr, and hexazinone have the potential to be applied for site preparation. Non-ionic surfactants may be mixed with herbicides in order to improve application success. With the use of listed mitigation measures, no significant long-term degradation or cumulative effects, including state standards, on soils and water quality are anticipated from implementation of alternative 2.

Direct effects, occurring at time of application, to birds or large mammals are unlikely, since these species are likely to move from the area when project activities are implemented. Although direct effects to amphibians are more likely since contact with herbicide could be absorbed through the skin, amphibians are likely to be under logs, rocks or leaves, making direct contact (from spray) with chemicals less likely. Direct effects to other non-target plants occurring in these habitats could occur. Application methods, including directed application to target foliage or freshly cut stumps/surfaces, will minimize the possibility of direct contamination to non-target species. The most plausible possible direct effects to humans will be to workers from continuing work in contaminated clothing. Proper handling and cleanliness of personal protective gear will mitigate this possibility. More implausible direct effects to the general public may occur via walking through recently treated (wet) vegetation in shorts and consuming contaminated fruit.

Direct and indirect effects from chemical spills of all herbicides analyzed - to humans, wildlife and plants are minimized by following proper mixing and handling procedures, Forest-Wide Standards and BMPs.

Adverse, indirect effects to management indicator species (MIS) and habitats treated with all chemicals are reduced given that applicators treat target plants only and field formulations

contain diluted concentrations of chemical. Additionally, mitigation measures, BMPs and Forest-Wide Standards will be used.

There are likely to be few negative cumulative effects to humans, wildlife or plants over time as a result of implementing alternative 2. None of the herbicides proposed for use will bio-accumulate or have lengthy half lives in the environment.

Air - Alternative 2 has total emissions/day of 27,282 tons (based on approx. 4,000 acres/day) but will last for only 3 days, which may not necessarily be consecutive. This calculation does not take into account the private land acreage that is within the project boundary. Some or a large majority of these lands may be burned, depending on private landowner cooperation within the National Forest via prescribed burning agreements. So, burning days may be extended to accommodate private land acreage; but rarely is the daily acreage rate increased.

For air quality, cumulative effects include all reasonable and foreseeable activities that produce pollutants. Emissions from prescribed burning and from vehicles and machinery during management activities will contribute greenhouse gases and pollutants to the atmosphere, but the volume of these emissions will be inconsequential and are not expected to have a cumulative impact on current air quality.

Burns will follow approved burning plans to manage the smoke and burning intensities. Mitigation measures will ensure compliance with federal, state and local clean air requirements, and no long-term cumulative effects are anticipated from implementation of the proposed action. Arkansas voluntary smoke management guidelines will be followed to assure adherence to air quality regulations and prevent negative impacts to smoke sensitive areas.

Climate Change - Some of the carbon currently sequestered in vegetation and soils will be released back to the atmosphere. In the short-term, greenhouse gas emissions and alteration to the carbon cycle will be caused by hazardous fuel reduction activities, harvests, and thinning of overstocked stands. In the long term, however, these actions will also increase the forest's ability to sequester additional carbon, improve the forest's resilience to the potential impacts of climate change and decrease the potential for uncharacteristically severe wildfires. Timber harvest will remove some of the mature stems with diminished ability to sequester additional carbon; some of the carbon sequestered in harvested stems will continue to be stored in manufactured wood products. Residual stems and regeneration in the proposed project area will continue to sequester and store carbon.

Road Work – Maintenance on approximately 44 miles of open and closed roads will be performed in the project area to ensure suitable conditions for hauling timber across them. Maintenance consists of spot blading and graveling. County roads that will be used are regularly maintained by their respective counties. Special cooperative agreements are in place to assist in any required maintenance resulting from logging operations. Several Maintenance Level 1 and 2 roads that were previously closed will be re-closed with gates/berms to reduce erosion and protect resources. The Forest Service Manual states that Maintenance Level 1 roads are to be closed to motorized traffic when management activities are complete.

Reconstruction on approximately 4 miles of roads will occur: (1405, 94206B, 94206E, 94318A, and 94319A). These roads are not maintained on a regular basis thus will require more work than the roads that receive maintenance. Up-grading these roads by installing culverts, wing-ditches, gravel, and rolling dips will stabilize them, thus minimizing sediment delivery to streams and drainages.

Approximately 26 miles of existing roads no longer needed for management or access will be decommissioned. Decommissioning will involve restoring these roads by allowing them to blend back in to the general forest area. Activities used to decommission a road include, but are not limited to the following: re-establishing former drainage patterns, out sloping and stabilizing all road sections, restoring vegetation, blocking the entrance of the road, installing water bars (earthen mounds), and removing culverts. These activities are designed to completely eliminate the road bed by restoring natural conditions. Unnamed and unauthorized accessed OHV trails that are present in the project area may be closed using debris, rocks, earthen mounds felling non-commercial trees, or installing gates.

Approximately 7 miles of temporary roads will be needed to access timber stands. These roads will be blocked and rehabilitated with seeding and/or natural re-vegetation. Temporary roads are not intended to be included as part of the forest transportation system but rather managed for short-term projects or activities and will be decommissioned after use.

The density of open roads will decrease under both alternatives as all presently-closed roads will be re-closed upon completion of the project. Currently, within the project area, the total road density of roads per square mile is approximately 4.2 miles length/mile². Under alternative 2, the road density will decrease to approximately 2.9 miles.

The auditory and visibility impacts of road-using equipment should be relatively short-lived with very little effect on the environment. Re-closure and decommissioning of roads will reduce erosion and improve water quality in the project area.

Based on the watershed analysis that evaluates roads' contribution of erosion and sediment in alternative 2, rates of delivery are considered low risk.

Heritage Resources – The greatest risks for archeological sites on the Forest come from unmanaged and unmonitored resources. Planned management and restoration activities benefit the cultural landscape by controlling intrusive vegetation, excessive accumulation of fuel load and risk of wildfire, and managing recreational use (i.e. dispersed campsites, OHV usage of roads and trails). The federal presence that results from the implementation of project activities will be expected to benefit cultural resources over time by increasing opportunities for the monitoring of sites for looting and vandalism, thus assisting with enforcement of federal protection laws.

Vegetation and Vegetation Diversity – The Bee Ridge project has approximately 798 acres (<7%) that are currently classified as unsuitable for timber production. There are about 82 acres (<1%) that have been designated for old-growth forest management status. Table 18 in the EA exhibits the age-class distributions on public lands in the Bee Ridge project area.

Implementation of this alternative is not expected to have a negative cumulative impact on vegetation. The forest condition will be improved and left in a more sustainable condition. Risk of insect/disease outbreaks will decrease and growth of residual trees will increase. Also, potential old-growth will not decrease in the project area.

Wildlife – With implementation of alternative 2, approximately 118.5 acres will be converted through herbicide treatment, wildlife opening construction, existing wildlife opening enlargement and subsequent conversion to herbaceous species, to grass/forb habitat. Implementation of conversion to grass/forb habitat will result in 1% of the public land-base within the project area compartments in this habitat type, as opposed to <0.2% under current conditions. Through use of herbicide and construction/enlargement of wildlife openings approximately 24.5 acres will be changed from the current 11-20 year age class, 45 acres changed from 21-40 year age class, 47 acres changed from the 81-100 year age class and 2 acres changed from the 100+ year age class – to grass/forb habitat.

Approximately 1,757 acres will be restored to woodland condition through thinning in the 61-100 year age classes, and maintenance of prescribed burning. Browse and early-successional habitat will be provided in these grass/forb habitat areas and thinned woodlands for a variety of wildlife species, especially when combined with prescribed fire. Viability of disturbance-dependent avian species will be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge will benefit.

Implementation of alternative 2 will result in an approximate 1% reduction of forest habitat that is greater than 81 years old (federal lands). Following implementation of this alternative, approximately 73% of the forested (both pine and hardwood) public land base within the project area compartments will remain in the 81-100 and 101+ year age classes. With implementation of alternative 2, and taking into consideration recruitment of stands from the 61-80 year age class over the next 1-10 years (approximately 477 acres or 4% of project area land base), as well as examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated.

Fisheries – Activities planned will have minimal effect on water quality and fish habitat using the planned mitigation measures. Existing quality of fisheries should be maintained with a low risk of acute or chronic adverse effects to aquatic species from the planned actions.

TES (Threatened, Endangered and Sensitive Wildlife Species) – The occurrence analysis results table in the EA shows 1 bird species (bald eagle), 3 mammal species (gray bat, Northern long-eared bat and Indiana bat), 1 isopod species (*Lirceus bicuspicatus*) and 4 plant species (Ozark chinquapin, French's shooting star, small-headed pipewort and Ozark spiderwort) were identified within the analysis area (OAR "5").

Nine species were not seen during field surveys, but possibly occur in the analysis area based on habitat observed or the field surveys were conducted when the species is not recognizable (OAR "6"); 2 mammal species (Ozark big-eared bat and Eastern small-footed bat), and 7 plant species

(Ouachita lead plant, Bush's poppymallow, Southern lady's slipper, Moore's larkspur, Ovate-leaf catchfly, Nuttall's cornsalad, and Ozark cornsalad).

Based upon the site-specific water quality analysis for the Bee Ridge project - the minor sediment increase from alternative 2 is expected to be insignificant in comparison to the existing sediment load of Little Piney Creek and its tributaries, and will not have significant effect on habitat for fish or other aquatic life. There will be no negative direct, indirect or cumulative effects to aquatic species from implementation of management activities associated with this project proposal. No significant impacts (from loss of water quality) will result from implementation of this project that will push aquatic species closer toward federal listing under the ESA, or cause loss of viability for these species. There are no foreseeable activities in the area that will directly or indirectly affect water quality needs for *Lirceus bicuspidatus* or cause additive or synergistic adverse cumulative impacts in conjunction with the proposed action – due to sedimentation. Therefore, no negative direct, indirect or cumulative effects to these species as a whole from management activities associated with this project due to sedimentation is anticipated.

The proposed action and action alternatives were all designed to totally incorporate all Forest-wide standards, and direction provided by the USFWS related to the conservation of all listed bat species.

There are no foreseeable, additional management activities in the area (not associated with this project) that would directly or indirectly affect the Ozark big-eared bat, Gray bat, and Indiana bat or cause additive or synergistic adverse cumulative impacts in conjunction with the proposed action, for these species.

With implementation of Forest-wide standards from the RLRMP which were developed in coordination with the USFWS during the revision process, the determination of effect for these three bat species related to this proposed project is: "may affect – not likely to adversely affect."

There are no foreseeable, additional management activities in the area (not associated with this project) that would directly or indirectly affect the northern long-eared bat, or cause additive or synergistic adverse cumulative impacts in conjunction with the proposed action.

This project is likely to adversely affect the northern long-eared bat; however, there are no effects beyond those previously disclosed in the programmatic biological opinion dated August 5, 2015 (FWS Log #04E00000-2015-F-0003). Any taking that may occur incidental to this project is accepted from the prohibitions for taking threatened species under 50 CFR 17.31 and 17.32. This project is consistent with the forest plan, the description of the proposed action in the programmatic biological opinion satisfies the Forest Service's responsibilities under ESA section 7(a)(2) relative to the northern long-eared bat for this project.

Implementation of this proposed project may benefit Ozark big-eared bat, gray bat, Northern long-eared bat and Indiana bat by providing habitat improvement.

For sensitive species bald eagle, Eastern small-footed bat, *Lirceus bicuspicatus*, Ouachita leadplant, Bush's poppymallow, Ozark chinquapin, Southern lady's slipper, Moore's larkspur, French's shooting star, small-headed pipewort, ovate-leaf catchfly, Ozark spiderwort, Nuttall's cornsalad, and Ozark cornsalad direct negative impacts to individuals of these species may occur through implementation of the project. However, the project is not likely to cause a trend to the federal listing of these species under the Endangered Species Act. Furthermore, there will be no loss of population viability for these species due to implementation of this project.

Implementation of the Bee Ridge Projects would benefit sensitive species which require open (unshaded) and/or fire dependent habitats. These sensitive species include Ouachita leadplant, Bush's poppymallow, Ozark chinquapin, Moore's larkspur, small-headed pipewort, ovate-leaf catchfly, Ozark spiderwort, Nuttall's cornsalad and Ozark cornsalad.

Because there were no other sensitive species or habitat for such species present, the project will have no impact on any other Southern Region sensitive species.

The USFWS Arkansas Field office concurred with the Forest Service's determination of effect for listed T and E species on September 2, 2015.

Human Health – There is a risk of worker injury during the completion of manual/mechanical vegetation treatments, and prescribed fire. Proper use of PPE, adherence to job hazard analyses and safety practices mitigate this risk. Risk to the public from these types of work is minimal. However, with proper handling/transport methods, use of signing in application areas (where required), use of proper application methods and equipment, and use of required PPE, risk of herbicide exposure to workers and the public is mitigated with implementation of alternative 2.

Removal of dead and/or aging trees through thinning operations and fireline preparation will make the forest safer for visitors, through reducing the incidence of falling snags and limbs.

Use of prescribed burning will lessen potential wildland fire occurrence, wildland fire severity and unplanned smoke emissions. Strict adherence to the Final Environmental Impact Statement (FEIS) and 2005 RLMRP guidelines, a site-specific burning plan and Arkansas Voluntary Smoke Management Guidelines will limit the area where specific burn plans, and Arkansas Voluntary Smoke Management Guidelines ensure that smoke or other combustion products do not reach, or significantly affect, smoke sensitive areas. Smoke monitoring during and after prescribed burns will be conducted to determine compliance with smoke management guidelines, and for potential future mitigation required for downwind smoke sensitive areas. These actions will ensure that the requirements of the Clean Air Act, EPA air standards, and state requirements will be met and there should be no smoke related long-term or cumulative effects from implementation of prescribed fire.

Economic/Social – Activities proposed will affect the local economy by supplying timber for local mills, employing loggers to harvest timber, employing people to do site preparation, TSI/PCT, and wildlife habitat improvement work.

The revenues derived from the selling price of timber will contribute to school and road funds in

Johnson County, in accordance with PL 114-10. At the time of economic analysis for the Bee Ridge project, pine sawtimber sold for \$57.05/CCF, and pine pulpwood sold for \$16.56/CCF. These figures reflect an average from several timber sales recently sold on the Ozark National Forest. Table 23 in the EA lists the Present Net Value of implementing alternative 2.

Management Areas, Aesthetics, and Recreation –Vegetation management and prescribed burning will allow views which penetrate into the stands, allowing views further than the existing near foreground, and in the long-term provide the stands with greater aesthetic value and greater diversity of understory species. Area visitors will see and smell smoke during burning, see blackened trees and ground for the first season until the next spring green-up, see some browning of vegetation from harvest activities during the initial work in stands along county and forest roads.

Planned activities will have some short-term effects on aesthetics and recreational users may suffer temporary inconveniences from the implementation of planned work. No significant long-term or cumulative effects on these aesthetic and recreation resources are anticipated. Implementation of the selected alternative will have no long-term negative effects or cumulative negative effects.

Other alternatives considered in detail were:

Alternative 1. No Action: Analysis of this alternative measured the effects of not implementing the proposed ecosystem restoration, wildlife and associated vegetation management actions on the physical, biological, human health, and economic and social components of the environment. Only custodial management such as road maintenance, fire control and law enforcement will occur. Implementation of this alternative will not allow for the restoration of ecosystem health or create sustainable forest ecosystem conditions through thinning and regeneration treatments and restoration of the fire regime mimicking historic/natural fire-return intervals. Implementation of this alternative will not increase plant and wildlife diversity. Habitat for early successional/disturbance-dependent species will not be improved. Historic ecosystems of oak forest will not be maintained for vegetation and wildlife. Implementation of this alternative will not reduce forest fuels or reduce risk to forest ecosystems and private property. Implementation of this alternative will not reduce conflicts between motorized vehicle use and other resource values. Implementation of this alternative will not increase or improve recreational uses on the Forest. Implementation of this alternative will not improve Forest visitor safety. No direct revenues to the federal or county treasuries will occur from the sale of commodities and no employment opportunities will be generated. The objectives of the 2005 RLRMP for wildlife and timber will not be met.

My reasons for choosing **Alternative 2** were:

Overall, I viewed this proposal as the one best meeting the goals and objectives of the 2005 RLRMP while still addressing the issues and concerns raised by the public, other agencies, and by the interdisciplinary team. Specifically, the reasons are:

- The selected alternative, as mitigated, addressed the issue of immediate and cumulative effects from past, current, and proposed actions on soil erosion, soil nutrient/productivity loss, and sediment/storm runoff, and wildlife habitat in the project area. The analysis shows that at the harvest level of alternative 2, some soil compaction, soil disturbance, slight increases in nutrient and erosion loss, some increased sedimentation and stormflow, and a possible change in water chemistry will occur. However, these changes are still below the threshold level of environmental concern. After a short degradation of wildlife habitat from vegetation manipulation, the early seral habitat produced from the activities will provide for increased biological diversity and long-term wildlife benefits. There should be no long-term or cumulative effects on the environment from the planned actions.
- The issue of effects of past, present, and proposed activities on vegetation is analyzed in the EA pp. 37-115. Effects for this alternative on fragmentation are minimal, since all areas to be worked will retain a forest canopy, except for road corridors.
- With implementation of alternative 2, approximately 118.5 acres will be converted through herbicide treatment, wildlife opening construction, existing wildlife opening enlargement and subsequent conversion to herbaceous species, to grass/forb habitat. Implementation of conversion to grass/forb habitat will result in 1% of the public land-base within the project area compartments in this habitat type, as opposed to <0.2% under current conditions. Through use of herbicide and construction/enlargement of wildlife openings approximately 24.5 acres will be changed from the current 11-20 year age class, 45 acres changed from 21-40 year age class, 47 acres changed from the 81-100 year age class and 2 acres changed from the 100+ year age class – to grass/forb habitat.
- Approximately 1,757 acres will be restored to woodland condition through thinning in the 61-100 year age classes, and maintenance of prescribed burning. Browse and early-successional habitat will be provided in these grass/forb habitat areas and thinned woodlands for a variety of wildlife species, especially when combined with prescribed fire. Viability of disturbance-dependent avian species will be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge will benefit.
- Implementation of alternative 2 will result in an approximate 1% reduction of forest habitat that is greater than 81 years old (federal lands). Following implementation of this alternative, approximately 73% of the forested (both pine and hardwood) public land base within the project area compartments will remain in the 81-100 and 101+ year age classes. With implementation of alternative 2, and taking into consideration recruitment of stands from the 61-80 year age class over the next 1-10 years (approximately 477 acres or 4% of project area land base), as well as examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated.

- Prescribed fire will serve to re-introduce fire into a fire-adapted ecosystem, promote oak regeneration in canopy openings created by red oak borer damage/oak decline, promote regeneration in shelterwood and seedtree harvest areas, maintain pine/hardwood stands in open conditions, increase herbaceous understory species density and diversity, improve habitat conditions for fire-dependent special-status plants, increase soft-mast production and reduce potentially hazardous accumulations of fuels on the forest floor, and improve wildlife habitat conditions. If Rx burning is not conducive, then mechanical fuel reduction will be applied if sufficient funding is available.
- Alternative 2 will provide a positive effect on the local economy by providing forest products, government revenues, and job opportunities. This alternative will also improve forest health and the surrounding watershed.
- When implemented, alternative 2 will be monitored through timber sale inspections, regeneration surveys, water quality monitoring, and other actions listed in the mitigation measures on pages 28-37 of the EA.

FINDING OF NO SIGNIFICANT IMPACTS (FONSI):

Based on my review of the above analysis and from past experience, I have determined that the proposed actions are not a major Federal action either individually or cumulatively, and will not significantly affect the quality of the human environment. Therefore, an EIS is not necessary. This determination is based on the following factors (40 CFR 1508.27):

1. Both beneficial and adverse effects have been considered and this action should not have a significant effect on the quality of the human environment (EA, pp. 37-115).
2. The actions should not significantly affect public health or safety (EA, pp. 103-107).
3. The project will not significantly affect any unique characteristics of the geographic area such as proximity to historic or cultural resources, ecologically critical areas, or the Ozark Highlands Trail (OHT) or Scenic Byway (EA, pp. 81-86, 86-90, 108-115).
4. The effects on the quality of the human environment are not likely to be highly controversial (EA, pp. 37-115).
5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment (EA, pp. 37-115).
6. The actions in this decision will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration.
7. There will be no cumulatively significant impacts on the environment. The cumulative effects of the proposed actions have been analyzed with consideration of other similar

activities on adjacent lands, in past actions, and in foreseeable future actions (EA, pp. 37-115).

8. The actions will not affect any sites listed, or eligible for listing, in the National Register of Historic Places nor cause loss or destruction of significant scientific, cultural, or historic resources (EA, pp. 81-86).
9. The actions are not likely to adversely affect endangered or threatened plant or animal species, or their critical habitat (EA, pp. 98-103).
10. None of the actions threaten to lead to violation of federal, state, or local laws imposed for the protection of the environment (EA, pp. 37-115).

For water quality management, state-approved Best Management Practices (BMPs), which are incorporated into the mitigation measures, will be used for this project. These BMPs are from the state water quality management plan and have been designed with the goal of producing water that meets state water quality standards. The project will be monitored to ensure BMPs are implemented. If implementing BMPs on a specific site results in effects significantly higher than anticipated because of unforeseen site factors or events, appropriate corrective measures will be considered and implemented.

Actions are also consistent with the Antiquities Act, Endangered Species Act, Clean Air Act, Clean Water Act, and all other applicable state and federal laws and regulations. Additionally, the best available scientific data was used when selecting and analyzing the effects of the proposed action.

OTHER FINDINGS:

1. The actions of the project are consistent with the OSFNFs 2005 RLRMP goals and objectives. All of the actions associated with this project occur within Management Areas: Scenic Byway Corridor (1.H), Pine Woodland (3.A), Ozark Highlands Trail Corridor (2.A), and Riparian Corridors (3.I). All of the planned actions associated with these projects are consistent with the management prescriptions and management practices for these Management Areas. The actions are also consistent with the 2005 RLRMP because mitigation measures for impacts shall be fully applied in implementation. The project is feasible and reasonable, restores ecosystem health, protects the environment while producing goods and services.
2. The actions of this project comply with the ecological, social, and economic requirements of 36 CFR 219.19 by following the Forest-wide standards and guides. These actions also meet the General Management requirements and Mitigation Measures in the Record of Decision (ROD) of the FEIS for Vegetation Management in the Ozark/Ouachita Mountains. The requirements met are:
 1. The activities chosen are best suited for the multiple-use goals of the area.

2. All practices prescribed for vegetation management areas will maintain adequate stocking for the area now and in the future. Areas selected for shelterwood harvest are mature stands of trees, have good seed-producing qualities, and are situated on suitable soils for natural regeneration.
3. Alternative 2 was not selected based upon the output of timber. This alternative provides a positive effect on the local economy, forest health, recreation and wildlife and has only minimal short-term effects on other resources.
4. The activities chosen will not adversely affect residual trees in adjacent stands.
5. The activities chosen, with mitigating measures, avoid permanent impairment of site productivity and ensure conservation of soil and water resources.
6. The activities provide for meeting 2005 RLRMP objectives for all resources.
7. The activities are practical in terms of transportation, vegetation management and total cost of site preparation, logging, and administration.

IMPLEMENTATION:

The EA and DN/FONSI are available on-line at:

<http://www.fs.usda.gov/detail/osfnf/landmanagement/planning/?cid=stelprdb5212216>

Once you have reached this site, scroll down the page and the Final EA/DN will be located under the project name "Bee Ridge".

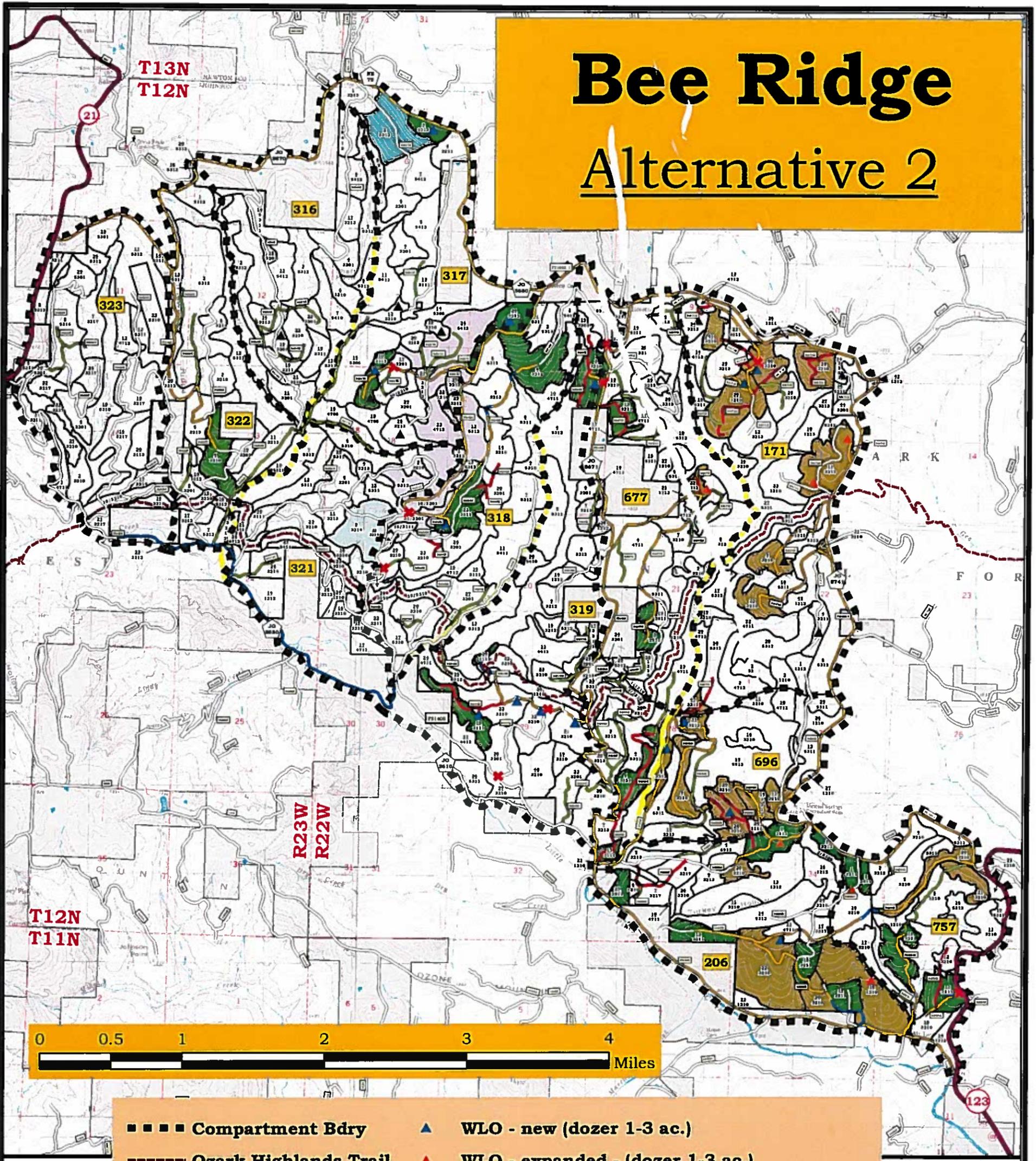
These documents along with any additional information are also available for review at the Pleasant Hill Ranger District, 2591 Hwy 21 North, Clarksville, AR. 72830.


PAT KOWALEWYCZ
District Ranger


Date

Bee Ridge

Alternative 2



- | | | | |
|-----------------|------------------------------|---|---|
| ■ ■ ■ ■ | Compartment Bdry | ▲ | WLO - new (dozer 1-3 ac.) |
| ----- | Ozark Highlands Trail | ▲ | WLO - expanded - (dozer 1-3 ac.) |
| □ | Private Ownership | ▲ | Herbaceous Vegetation Imp. - (herb 2-30 ac.) |
| Roadwork | | ✖ | Proposed Gates |
| — | Existing | — | LWD Emplacement |
| — | Reconstruction | — | NNIS Treatment - (herb) |
| — | Maintenance | — | Pine Woodland Thinning |
| — | Temporary-Decomm | — | Pine Forest Thinning |
| — | Decommission | — | Pine Reforestation |
| | | — | Timber Stand Improvement (TSI) |



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact : Ozark National Forest, 2591 Highway 21, Clarksville, AR 72830, (479) 754 -2864. This information was released on 3/ 15/2015 (tc).

