

DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT

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

Compartments 327, 333, 341, 342, 343, 346, 347

Lock Hollow
11-18-2011

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, ecosystem restoration and wildlife habitat over the next several years have been made for the Lock Hollow project. Decisions have been made for pine and hardwood forest stand management and the connected actions of site preparation for regeneration, midstory control, release, timber stand improvement (TSI) and associated roadwork to access the forest management areas, together with decommissioning of roads. In addition, decisions for wildlife habitat improvements consisting of wildlife opening construction, reconstruction, and restoration, wildlife stand improvements (WSI), and prescribed burning have been made.

These actions are planned to implement the Ozark-St. Francis Land and Resource Management Plan (LRMP-Revised 2005) goals and objectives for the timber, recreation and wildlife resources within the project area. In general, the objectives for management in the project area are to restore ecosystem health and sustainable conditions, increase plant and wildlife diversity, reduce forest fuel loading through restoring a more frequent fire-return interval, reduce conflicts between motorized vehicles and other resource values, increase Forest visitor safety and provide forest products to the public. The management actions designed to meet these objectives address issues and concerns expressed by the public and interdisciplinary team.

The project area, which includes a total of 11,094 acres includes compartments 327, 333, 341, 342, 343, 346, and 347. Approximately 4,485 acres are privately owned. The project area is bounded by JO 4490 (Low Gap Road) on the south, JO 4291 on the west, JO 5440 on the north, and Highway 21 on the east. The analysis area falls within Management Areas: Mixed Forest (3.C), Oak Decline Areas (3.D), and Pastures and Large Wildlife Openings (3.J).

Based on the analysis documented in the EA, it is my decision to implement **Alternative 2** (see attached map). These actions will have some impact on National Forest lands from vegetation management 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 consent of private landowners and completion of applicable agreements.

Specifically, the following actions are planned:

VEGETATION MANAGEMENT:

TIMBER HARVESTING:

Hardwood Shelterwood followed by Site Prep Herbicide & Burning would occur on 291 acres. This treatment would sustain long term forest health, provide for the succession of early seral habitat, and contribute to providing a sustainable forest. The objective of a shelterwood is to open up the stand allowing sunlight to reach the forest floor while leaving an adequate amount of trees to provide seed. As the name implies, several trees would be left in the overstory to give shelter to the developing regeneration on the ground. The mature hardwood left over from the harvests will remain until the new stands receive their first thinning. The combination of stump/root sprouts from oak species and the other existing desirable seedlings will establish the new stands. An average basal area of 20-40 ft² would be retained.

After harvest, these stands will have herbicide applied to undesirable stems by the hack and squirt and foliar methods, then site prep burned.

Connected Treatments for the Hardwood Shelterwood stands: If desired species adequately replenish the new stands by natural means, release measures may be implemented using handtools/herbicide, if necessary, to reduce competing vegetation. This would occur within 3-7 years after harvest. If desired species fail to adequately establish new stands, planting & release of oak species will be required.

Hardwood Pre-commercial Thinning (PCT) with Handtools would occur on 10 stands (218 acres). This is a treatment used in stands that are not commercially mature. The purpose of PCT would be to cut small, unmerchantable trees that are competing with desired hardwood species. This treatment would allow for the selection of the trees with the best form to remain and to free them of competition. Prescribed burning may follow this treatment to further control unwanted competitors of oak.

Hardwood Timber Stand Improvement (TSI) - Midstory Treatment by Herbicide would occur on 268 acres (5 stands). These stands are mostly immature sawtimber but do have a component of mature trees; they have a dense midstory and understory of undesirable species. Removal of these undesirable species will allow oak and other desirable species currently in and underneath the midstory to be released and become competitive. The success of this treatment would allow a regeneration harvest to be considered next entry. Prescribed burning may follow this treatment to further control unwanted competitors of oak.

Pine Thinning followed by TSI- Midstory Control would occur on 777 acres (43 stands). Thinning would increase growth of residual trees, reduce the susceptibility of the stand to insect and disease, and improve habitat for wildlife. The pine stands would be thinned to a target basal area of 60-70 ft²/acre. Trees that are suppressed or that have poor form would be removed. Trees of good form and/or close to the correct spacing would be favored over trees that are simply of larger size. The target pine spacing would depend on the average DBH of the stand. Prescribed burning following thinning would provide beneficial effects for wildlife. TSI treatments of the midstory using herbicide and/or handtools may be utilized to further reduce competition of the pines.

Pine Seedtree followed by Site Prep Herbicide and Burning is proposed on 16 units that total approximately 446 acres. This type of regeneration harvest would remove 90% of the overstory (BA=20 ft²). Site preparation will be done with herbicide treatments and with a prescribed burn in order to prepare a proper seed bed. The remaining mature overstory trees would be harvested when the new stand is ready for its first thinning.

Pine Shelterwood followed by Site Prep Herbicide and Burning would occur on fifteen stands totaling about 348 acres would be treated. Shelterwood cutting would reduce the current density from about 130 trees per acre to 25-35 trees per acre (BA=30-40), allowing more sunlight to reach the forest floor and provide for the growth of new trees underneath the overstory. This harvest is similar to the hardwood shelterwood in that several trees would be left (more than in the Seedtree harvest method) in the

overstory to give shelter to the developing seedlings on the ground. The remaining mature overstory trees would be harvested when the new stand is ready for its first thinning.

These stands are mature; growth has slowed and the trees are beginning to decline. Removing some of the larger trees would open up the area and allow young productive trees to become established. After harvest, these stands will have site prep treatments of herbicide and burning to prepare a good bed for seed fall.

Connected Treatments for all Pine Shelterwood & Seedtree stands: If desired species adequately replenish the new stands by natural means, release measures may be implemented using handtools/herbicide to competing vegetation within 3-7 years after harvest. If desired species fail to adequately establish new stands, planting & release of oak species will be required.

Pine Pre-commercial Thinning (PCT) is proposed for six stands, about 157 net acres. These stands are between the ages of 15-24 years old. Hardwood encroachment is becoming more intense; the pine is in danger of losing its dominance. Herbicide/handtool means to control the competition is recommended. Rx burning may also be employed to further control the hardwood species.

Pine TSI- Midstory Treatment with Rx Burning/Herbicide is proposed in seven stands, around 207 acres. These stands were thinned 10-15 years ago but have not accumulated any pine regeneration to be adequately stocked. They are approaching maturity and need more pine seedlings on the ground to be prepared for final harvest in the next entry. Hardwood competition needs to be controlled by herbicide treatments and the seed bed prepared by Rx burning for natural seedfall.

Site Preparation, Pine Planting, and Release is recommended in five stands, approximately 157 acres. These stands were harvested about fifteen years ago to start a new generation of trees. However, natural regeneration methods have not been able to fully restock these sites. Now, hardwood brush and saplings have encroached to the point that only scattered pine regeneration has been able to become established. Treatments in the form of handtool/herbicide/mechanical means should be employed in order to prepare these units for seedfall. Where pine seedlings do occur, release treatments can be employed to eliminate hardwood competition using handtools and/or herbicides. Finally, where pine regeneration has not much chance of occurring, planting by hand is recommended.

Prescribed Fire and Mechanical Fuels Reduction

Prescribed Fire and/or Mechanical Fuels Reduction would occur on approximately 6,609 acres of federal lands within the Lock Hollow analysis area. Prescribed fire treatments may occur on private lands located within the Lock Hollow analysis area (approx. 4,485 ac.), 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 Forestry Commission. Should agreements with private landowners be signed, private lands would be burned under prescription in conjunction with prescribed burns on public lands. Prescribed fire would be utilized for several purposes in the analysis area in both the dormant and growing seasons. Prescribed fire would 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. Prescribed burning may be done on a 3-10 year rotation throughout the Lock Hollow analysis area in Management Areas 3.C and 3.D and on a 1-3 year rotation in Management Areas 3.J.

Roadwork will be completed to improve administrative access within the analysis area and implement vegetation management; roadwork will consist of (approximately): reconstruction of 0.5 mile, maintenance of 27.96 miles of existing roads, reconditioning of 5.6 miles, 6.45 miles of temporary roading, and decommissioning of 10.3 miles of road.

Maintenance will consist of blading (usually with a crawler tractor) existing roadways and drainage structures, and adding spot gravel and installing drainage structures (water diversions and wing ditches) where needed. Roads to be maintained are: **1435** (2.35 mi), **94341G** (1.5 mi), **4432** (0.75 mi.), **4432C** (1.5 mi), **4432D** (1.6 mi), **1400-1** (7.8 mi.), **4428** (0.5 mi.), **94333C** (0.48 mi.), **1425A** (3.75 mi.), **4433**(1.0 mi.), **4432B** (0.84 mi.), **4434** (0.75 mi.), **4435** (0.1 mi.), **1400A** (0.75 mi.), **1473** (0.1 mi.), **1473A** (0.69 mi.), **1473B** (1.2 mi.), **1456** (0.47 mi.), **1003-2** (0.25 mi.), **94327A** (0.62 mi.) **94327B** (0.49 mi.), **94327C** (0.41 mi.). A total of 27.96 miles of maintenance will occur.

Reconditioning would occur on approximately 5.6 miles of roads. These roads are not maintained on a regular basis thus requiring slightly more work than the roads that require maintenance. However, these roads are not degraded enough to be categorized as reconstruction. Therefore, reconditioning activities would be slightly more than maintenance but less than reconstruction. Reconditioning would bring these roads to their approved traffic service level. Roads to be reconditioned are: **94341G** (0.5 mi.), **4432C** (0.5 mi.), **4428** (1.6 mi.), **94342A** (1.8 mi.), and **94347B** (1.2 mi.).

Temporary roads will be constructed (approx. 6.45 mi.), usually with a crawler tractor, to a low standard for one-time timber removal. Water diversions will be installed where needed. Following timber harvest, these roads will be blocked, obliterated by fertilizing, and revegetating with a mixture of grasses and forbs. Closed temporary roads will be managed as linear herbaceous strips for wildlife in appropriate locations.

Decommissioning of roads will occur on Forest Roads **94333A** (0.5mi.), **94333B** (0.33 mi.), **4436** (0.2 mi.), **94347E** (0.43mi.), **94347C** (0.78mi.), **94347D** (0.15 mi.), **94347A** (0.46 mi.), **94347H** (0.65 mi.), **94341A** (3.7 mi.), **1453C** (0.25 mi.), **94341B** (0.5 mi.), **94341C** (0.5 mi.), **94341D** (0.2 mi.), **94341E** (0.15 mi.), **94343E** (0.28 mi.), **94343F** (0.3 mi.), **4427** (0.75 mi.), and **1467** (0.2 mi.), A total of 10.3 miles of decommission will occur.

Gate installation- All access roads leading from established roads to newly constructed wildlife openings would be gated. This will amount to approximately 16 gates. An Additional 6 proposed gates include the following locations:

- 94333A @ junction with 1425A
- 94333B @ junction with 1425A
- 94333C @ junction with 1425A
- 94341C @ junction with 4432C
- 94347C @ junction with Johnson County Road 5419
- 4436 @ junction with Low Gap Road

Recreation:

Recreational experiences should not change with implementation of the proposed action. Maintenance of the Ozark Highlands trail and Ozone Trail head may be possible through grant dollars with the proposed action.

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 a low-intensity prescribed burn.

Should any additional sites be found during project implementation, they will be examined by a professional archeologist (mitigation measure 3), who will prescribe necessary mitigation measures. Based on these findings, all sites will be preserved intact and no significant adverse effects will be produced upon significant historical or prehistoric sites that may be eligible for nomination to the National Register of Historic Places.

WILDLIFE & FISHERIES HABITAT IMPROVEMENT:

Wildlife Openings:

Fifteen new wildlife openings and 1 new linear wildlife opening would be constructed and would be approximately 1-2 acres each. Size may be less than 2 acres if terrain, slope, etc. doesn't allow for this size. Methods used to accomplish construction of these wildlife openings would include dozing, blasting stumps, herbicide use, disking and seeding.

Additionally, ten existing wildlife openings would be expanded by at least 1 acre. Methods used to accomplish this would be dozing, blasting stumps, herbicide use, disking, and seeding.

Large Wildlife Opening Restoration would be accomplished for the Cowan Fields. This area is in Management Area 3.J-Pastures and Large Wildlife Openings. Compartment/stands that comprise this area include: 342/47 (13.4 acres) and 346/11 (40.4 acres). The management objective is to return these fields to open condition. Timber harvest would be used to remove the majority of the trees from the old fields. Remnant basal area would not exceed 20ft² /acre. Herbicide application would be used to treat remnant hardwood and cedar following the timber harvest. Fields would be maintained with prescribed fire on a 1-3 year rotation. Native warm season grasses are present in the old fields. However, if necessary, seeding with native warm season grasses would occur at a later date. This would entail site preparation with prescribed fire, stump removal, herbicide use, and seeding native species.

Wildlife Thinning & Wildlife Stand Improvement (WSI):

WSI is proposed in Compartment 333, stand 40 on approximately 30 acres and in Compartment 342, stand 51 on approximately 13 acres. Chainsaw falling and cut surface application of herbicide would be used for these treatments.

ENVIRONMENTAL EFFECTS:

Implementation of alternative 2 using the mitigation measures as shown on pages 26-28 of the EA will have some effects on the environment. These effects are stated on pages 30-85 of the EA and are summarized in Table 3 on pp.28-29 of the EA. Environmental effects by various resource categories are briefly described as follows:

Soil & Water – The proposed project falls into two watershed units within the Headwaters Mulberry River (1111020106) watershed. At the smallest scale, the proposed project is located in parts of sub-watersheds consisting of Washita Creek-Mulberry River (111102010605) sub-watershed on the western side of the project area and Headwaters Mulberry River (111102010604) sub-watershed on the eastern side of the project area. Some natural erosion occurs on the project lands in the watershed analysis area. Soil disturbance (including compaction) is the major contributor to sediment loading in rivers and streams, as well as reducing productivity of soil properties. Soil productivity will be reduced on approximately 191 acres (10% of the activity area) during the logging and other operations. Less than 15% of an activity area can sustain a reduction in soil productivity, according to the LRMP standard. If more than 15% of the activity area sustains a reduction in soil productivity, mitigation measures must be installed. Soil disturbance for this project will be well within the LRMP standard. Road work (including temporary roads), skid trails, and log landings will be highly disturbed and have some degree of compaction. The area of soil disturbance is directly related to on- and off-site movement of soil and soil nutrients through erosion processes. Bladed firelines would be seeded and water-barred 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 will reduce erosion and sedimentation.

Herbicides - The herbicides glyphosate, triclopyr, imazapyr, imazapic and hexazinone have the potential to be applied for site preparation, TSI, and wildlife opening creation. Additionally, non-ionic surfactants may be mixed with herbicides in order to improve application success. With use of listed mitigation measures (pages 26-28, EA), no significant long-term degradation or cumulative effects, including state standards, on soils and water quality are anticipated from implementation of this alternative.

Air - Prescribed burning for pine and hardwood site preparation, TSI/PCT, wildlife forage production, ecosystem health, and hazardous fuel reduction will release approximately 19,859 tons of carbon dioxide along with lesser amounts of other emissions into the atmosphere for a short period of time. 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 effect is anticipated from implementation of the proposed action. Arkansas voluntary smoke management guidelines will be followed to assure adherence to air quality regulations to manage smoke from prescribed fire so the smoke's impact on people will be acceptable.

Climate Change - With this alternative, 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 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.

Road Work –Maintenance of 27.96 miles and Reconditioning of 5.6 miles of several existing roads followed by road closures and rehabilitation, will have some effect on soil erosion, water quality, wildlife habitat, vegetation and other resources. Use of mitigation measures, such as water diversion structures, use during dry weather, closure to traffic after use, and other measures will lessen road impacts to acceptable levels. Through planned maintenance and rehabilitation measures, the overall long-term cumulative effect of the planned work is insignificant. Decommissioning of 10.3 miles of existing open roads will improve water quality, wildlife habitat, vegetation and recreation opportunities in the project area.

Sixteen gates may be constructed to improve/maintain watershed conditions and wildlife habitat by reducing disturbance from vehicles and providing recreational experiences to forest users by limiting areas to walk-in hunting/wildlife viewing. An additional 6 gates would be installed at the following locations:

94333A @ junction w/ 1425A
94333B @ junction w/ 1425A
94333C @ junction w/ 1425A
94341C @ junction w/ 4432C
94347C @ junction w/ JO 5419
4436 @ junction w/ Low Gap Road

Gating has proven to be an effective method of eliminating illegal motorized vehicle use.

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 low-intensity prescribed burning. Should any additional sites be found during project implementation, they will be examined by a professional archeologist (mitigation measure 3) who will prescribe necessary mitigation measures. Based on these findings, all sites will be preserved intact and no significant adverse effects will be produced upon significant historical or prehistoric sites that may be eligible for nomination to the National Register of Historic Places.

Vegetation and Vegetation Diversity – Of the 6,609 acres of total public lands in the project area for which vegetation was analyzed, 6,500 acres are suitable for timber management. Currently, the project area does not have a balanced age-class with 68% of stands being 80 years or older. Implementing the selected alternative will create about 777 acres of within-stand diversity change and 1,085 acres of between-stand diversity change from timber harvesting and connected actions. Some additional diversity will be introduced by the planned stand mid-story control and site preparation, release and TSI actions, as well as prescribed burns, and wildlife opening construction. No conversions between forest types will

occur. With the project area containing timber that is from 41-100+ years old on 82% (~5,438 acres) of the area, the impact of planned harvests, road reconstruction, maintenance, wildlife opening construction/reconstruction, and prescribed burning will not have negative effects on the overall, long term vegetation diversity. About 2% (113 acres) of the area's "timber management-unsuitable" acreage will remain designated for old-growth management. Overall, old-growth will not be significantly affected.

Wildlife – With implementation of Alternative 2, approximately 1085 acres would be converted, through harvest and subsequent regeneration, from the 81-100 year age classes to the 0-10 year age class. Browse and early-successional forest habitat would be provided in these regeneration areas for a variety of wildlife species. Viability of disturbance-dependent avian species would be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge would benefit. Implementation of shelterwood harvest would result in 16% of the public land-base within the project area compartments in early successional forest habitat, as opposed to <1% under current conditions. In addition, approximately 33 acres in the 61-100 year age class and 45 acres in the 81-100 year age class would be converted to grass/forb habitat (wildlife openings). This would result in 2% of the public land-base within the project area being in grass/forb habitat, as opposed to <1% under current conditions.

Implementation of Alternative 2 would result in an 17% reduction of forest habitat that is greater than 81 years old (within project area compartments). Following implementation of this alternative, 51% of the forested (both pine and hardwood) public land base within the project area compartments would remain in the 81-100+ year age classes. When considering recruitment of stands from the 61+ year age classes (approximately 633 acres or 9% of project area land base) in the next 1-20 years, and examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated.

The construction of 15 early seral stage wildlife openings, 1 linear opening, and the reconstruction of 10 openings would provide necessary habitat for several wildlife species including neo-tropical migratory birds. Wildlife stand improvement (WSI) /thinning completed in 2 stands would create indirect positive impacts to wildlife through increasing herbaceous and shrub understory vegetation and increasing hard and soft mast production. Additionally, Large Wildlife Opening Restoration in Management Area 3.J would provide additional native warm season grasses creating a positive effect on wildlife.

The effects of Prescribed Burning on roughly 6,609 acres of federal land and 4,485 acres of private land (if consent of landowner is given) will be the replacement of brushy and woody vegetation in the understory to a more grass and forb composition, benefiting quail, deer, and neo-tropical migratory birds. Oak & Pine regeneration would be encouraged, fuel accumulations would be reduced, risk of wildfire would decrease, and an increase in favorable habitat for fire- adapted and fire-dependent vegetation species would occur.

TES (Threatened, Endangered and Sensitive Wildlife Species) –Extensive field surveys were conducted within the project area in all areas proposed for treatment. Three TES species were documented within the project area. These include three plant species (Ozark Chinquapin, Southern lady's slipper, and French's shooting star). Twelve 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; 2 bird species (Bachman's sparrow and bald eagle), 4 mammal species (Ozark big-eared bat, gray bat, Indiana bat and Eastern small-footed bat), 1 isopod species (Lirceus isopod), and 5 plant species (Ouachita leadplant, Bush's poppymallow, Moore's larkspur, Ozark spiderwort, and Nuttall's cornsalad).

Three aquatic species are known to occur downstream of the project area, but outside identified geographic bounds of water resource cumulative effects analysis area (defined as a point below which sediment amounts are immeasurable and insignificant). Species with OAR code "7" include: longnose darter, William's crayfish, and Nearctic paduniellan caddisfly.

A "may effect - not likely to adversely affect" determination was made for all potential endangered or threatened species utilizing the project area. Concurrence from the U.S. Fish and Wildlife Service was obtained for these determinations. In addition, the biological evaluation for the project area determined

that there are no foreseeable activities in the area that will directly or indirectly affect the viability of sensitive species found in the project area, or cause additive or synergistic adverse cumulative impacts in conjunction with the proposed projects. Planned actions will not have a negative effect on sensitive plant species. Protection measures defined in the Land and Resources Management Plan and will be implemented and will provide protection for all known TES species.

Human Health – Risk of injury to forest workers performing the various tasks necessary to remove or manipulate the vegetation by using cutting tools (usually chainsaws) is possible. Manual application of handtools and herbicides using direct stem/leaf treatment for actions such as site preparation and creating wildlife openings provides opportunities for worker injuries from cutting tools and exposure to herbicide. Proper procedures for worker and public safety will be followed and the risk for on- and off-site health hazards will be very low. Mitigation measures for herbicides on EA pgs. 26-28 will be applied and monitoring will be implemented. Mitigation measures to be employed greatly reduce the chance of workers being exposed and ensure risks for any public exposure remain slight. Removal of dead and dying trees through harvest and thinning operations will make the area safer for forest visitors. When implementing prescribed fire, all precautions are taken to avoid damage to private property and minimize risk to worker and public health as per site specific burn plans, smoke management guidelines, standard fire safety guidelines and job hazard analyses. No significant short-term, long-term, or cumulative effects to human health are anticipated.

Economic/Social – Gross timber sale receipts are estimated at \$1,647,910.00. Annually, a portion of the gross National Forest receipts are returned to Arkansas to be distributed to the counties containing the public forests. An additional 10% of the gross receipts are also available to the Ozark National Forest to be used to improve watershed conditions at sites across the forest based on priority needs each year. Contracts for site preparation, wildlife habitat improvement, road work, and other treatments will also add benefits to the local economy. Implementation of the selected alternative will have a positive effect on the local economy in that it will provide revenue to the counties/schools and provide local jobs while at the same time improving ecosystem health in the project area. Long-term or cumulative effects on the social and economic factors are predicted to be non-significant.

Management Areas, Aesthetics, and Recreation – Timber harvest and prescribed burning will allow views which penetrate into the stands, allowing views further than the existing near foreground, giving the stands a more park-like appearance and providing for a 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.

Currently, there are not any designated OHV roads in the Lock Hollow analysis area. Therefore, this project will have no effect on authorized OHV use. Gate construction would reduce unauthorized OHV use in the analysis area. Some changes will be made to highway legal vehicles with in the project area. This will affect the Motor Vehicle Use Map (MVUM). Changes can be seen on the Project Roads Management Chart Table 2 (pp. 23-24) of the EA.

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 would occur. Implementation of this alternative would not allow for the restoration of ecosystem health and creating 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 would not increase plant and wildlife diversity. Habitat for early successional/disturbance-dependent species would not be improved. Historic ecosystems of oak forest would not be maintained for vegetation and wildlife. Implementation of this alternative would not reduce forest fuels and not reduce risk to forest ecosystems and private property. Implementation of this alternative would not reduce conflicts between motorized vehicle use and other resource values. Implementation of this alternative would not increase or improve recreational uses on the Forest. Implementation of this alternative would not improve Forest visitor safety. No direct revenues to the federal or county treasuries would occur from the sale of commodities and no employment opportunities would be generated. The objectives of the LRMP for wildlife and timber would not be met.

Alternative 3. No Herbicide/Daily Burn Limit not to Exceed 1500 Acres:

This alternative differs from Alternative 2 (the proposed action) by including a daily limit for prescribed burning that would not exceed 1500 acres per day. Additionally, there would be no herbicide use for this alternative. This alternative was developed in response to past public comments which relate to the use of prescribed fire and herbicides, and its perceived effects upon the environment and human health. Prescribed fire would be utilized for the purposes of fuel reduction, silvicultural treatment, and wildlife habitat improvement in stands, but only in 1500 acre increments. Herbicides would not be used, but would be replaced by mechanical and/or hand-tool methods. Generally, hand-tools are not as effective for vegetation manipulation as herbicides; therefore, more applications would be required in this alternative.

With implementation of Alternative 3, the same number of acres in the proposed action could potentially be burned; however, the District would be limited to 1500 acres per day, thereby reducing smoke output. Conversely, the District may have to burn more days because smaller areas would be burned. Burning larger land areas generally reduce the number of days needed to burn. Because natural barriers, such as ephemeral/perennial streams and man-made barriers such as roads and pastures as fire-breaks wouldn't always be available for use when burning the proposed smaller blocks of land, approximately 5 miles of additional dozer line would need to be constructed. However, if consent is given from private land-owners to burn off Forest land, some man-made barriers such as roads and pastures could be used as fire-breaks and could possibly reduce the amount of fire-line needed to be constructed.

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

Overall, I viewed this proposal as the one best meeting the goals and objectives of the LRMP 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 would 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.
- Use of herbicides continues to be a concern for many people. Concerns regarding harmful effects to humans, plants and animals from herbicide residues in water are the primary issue. The proposed action contains the potential use of herbicide on approximately 1,700 acres for site preparation, TSI/PCT, and creation of early seral habitat in wildlife openings. I decided this selection was acceptable due to the effects analysis in the EA which shows that, with mitigation measures in place, herbicides can be a safe, cost-effective, and an efficient tool to accomplish the needed work. Overall, there will be no significant short-term harmful effects

to humans, TES species, or wildlife, and no significant long-term or cumulative effects from the planned herbicide use.

- The issue of effects of past, present, and proposed activities on vegetation is analyzed in the EA pp. 55-60. Effects for this alternative on fragmentation are minimal, since all areas to be worked will retain a forest canopy, except for road corridors, wildlife openings, and wildlife ponds.
- With implementation of Alternative 2, approximately 1,085 acres would be converted, through harvest and subsequent regeneration, from the 81-100 year age classes to the 0-10 year age class. Browse and early-successional forest habitat would be provided in these regeneration areas for a variety of wildlife species. Viability of disturbance-dependent avian species would be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge would benefit. Implementation of this alternative will result in a 17% reduction of interior forest habitat which is greater than 81 years old (within project area compartments). Following implementation of this alternative, 51% of the forested land base within the project area compartments would remain in the 81-100+ year age classes. When considering recruitment of stands into the 61+ year age classes in the next 1-20 years, and examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated. Determination of effects to TES species is disclosed in the EA on pages 68-73. These determinations and concurrence from the U.S. Fish and Wildlife Service indicates viability of TES species found in the project area will not be compromised. Wildlife habitat is affected by the planned activities of Alternative 2 in an overall positive manner.
- Analysis for the selected alternative shows that prescribed fire can be a useful practice for several purposes. Prescribed fire would serve to reintroduce fire into a fire-adapted ecosystem, promote oak regeneration in shelterwood harvest areas, maintain pine/hardwood stands in open conditions, increase herbaceous understory species density and diversity, increase soft-mast production and reduce potentially hazardous accumulations of fuels on the forest floor.
- Alternative 2 will provide acceptable economic benefits. This alternative will provide a positive effect on the local economy by providing forest products, government revenues, and job opportunities.
- 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 pgs. 26-28 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 environmental impact statement 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. 30-85).
2. The actions should not affect public health or safety (EA, pp. 73-75).
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 wild and scenic rivers (EA, pp. 54-55, 54-73, 77-85).

4. The effects on the quality of the human environment are not likely to be highly controversial (EA, pp. 30-85).
5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment (EA, pp. 30-85).
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. 30-85).
8. The actions will not affect any sites listed, or eligible for listing, in the National Register of Historic Places nor will they cause loss or destruction of significant scientific, cultural, or historic resources (EA, pp. 54-55).
9. The actions are not likely to adversely affect endangered or threatened plant or animal species, or their critical habitat (EA, pp. 61-73).
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. 30-85).

For water quality management, State Best Management Practices (BMPs), which are incorporated into the mitigation measures, will be used for this project (EA, pp. 26-28). These BMPs 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:

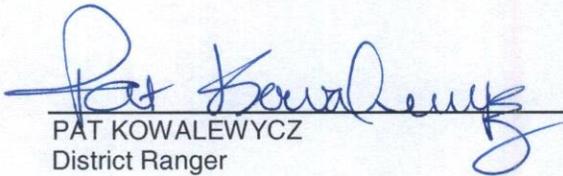
1. The actions of the project are consistent with the Ozark-St. Francis National Forests LRMP goals and objectives (Revised-2005). All of the actions associated with this project occur in the General Forest Area Management Areas: Mixed Forest (3.C), Oak Decline Areas (3.D), and Pastures and Large Wildlife Openings (3.J). All of the planned actions associated with these projects are consistent with the management prescriptions and management practices for this Management Area. The actions are also consistent with the LRMP 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 ROD of the FEIS of the 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 timber harvest 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 solely 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 LRMP objectives for all resources.
7. The activities are practical in terms of transportation and harvesting and total cost of site preparation, logging, and administration.

IMPLEMENTATION:

Only those who provided substantive comments regarding the proposed action during the scoping and/or comment period were accepted as appellants. No substantive comments were received as a result of public involvement. Therefore, the project is not subject to appeal.


PAT KOWALEWYCZ
District Ranger

11-18-11
Date