Shortleaf – Bluestem Community (CFLR018)

Ouachita National Forest

1. CFLRP Expenditures, Match, and Leveraged Funds:

a. FY21 CFLN and Matching Funds Documentation

Fund Source – (CFLN Funds Expended)	Total Funds Expended in Fiscal Year 2021
CFLN16	$248,688
CFLN18	$-81,939[1]
CFLN19	$-8,614[1]
CFLN20	$444,328
CFLN21	$1,023,769
TOTAL	**$1,626,232**

This amount should match the amount of CFLN dollars spent in the FMMI CFLRP expenditure report. Include prior year CFLN dollars expended in this Fiscal Year. CFLN funds can only be spent on NFS lands.

[1] Negative balances as displayed in the CFLRP expenditure report.

Fund Source – (Forest Service Salary and Expense Match Expended)	Total Funds Expended in Fiscal Year 2021
NSCF21	$835,600
WSCF21	$353,629
TOTAL	**$1,189,229**

This amount should match the amount of matching funds in the FMMI CFLRP expenditure report for Salary and Expenses. Staff time spent on CFLRP proposal implementation and monitoring may be counted as CFLRP match – see Program Funding Guidance for details.

Fund Source – (Forest Service Discretionary Matching Funds)	Total Funds Expended in Fiscal Year 2021
CFRD	$113,376
CFKV	$213,655
CFHF	$14,529
CFWF	$1,560
TOTAL	**$343,120**

This amount should match the amount of matching funds in the FMMI CFLRP expenditure report, *minus* any partner funds contributed through agreements (such as NFEX, SPEX, WFEX, CMEX, and CWFS) which should be reported in the partner contribution table below. Per the Program Funding Guidance, federal dollars spent on non-NFS lands may be included if aligned with CFLRP proposal implementation within the landscape.

Fund Source – (Partner Match)	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY21	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
USFWS Oklahoma Ecological Services Field Office	☒ **In-kind contribution** ☐ **Funding**	**$ 750**	**Monitoring of RCW active clusters both on the Ouachita National Forest and McCurtain County Wilderness Area**	☒ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:** McCurtain County Wilderness Area (State of Oklahoma)
Oklahoma Dept. Of Wildlife Conservation	☒ **In-kind contribution** ☐ **Funding**	**$77,000**	**Prescribed burning, midstory reduction, and monitoring of RCW active clusters on both the Ouachita National Forest and McCurtain County Wilderness Area**	☒ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:** OK-owned McCurtain County Wilderness Area
Natural Resource Conservation Service - Arkansas	☒ **In-kind contribution** ☐ **Funding**	**$79,395**	**Financial assistance (FA) for certified practices completed within the project area vicinity, as well as salary for technical assistance, meetings, and shared stewardship collaboration**	☒ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:** Private lands within the CFLRP project area vicinity.
Arkansas Game and Fish Commission	☒ **In-kind contribution** ☐ **Funding**	**$83,300**	**Wildlife Openings: Mow/seed 300 acres; NNIS chemical 200 acres NNIS roadsides 530 acres; monitor turkey with banding to understand exploitation; pulling deer samples for CWD and education; nuisance hog trapping; and bear den work for reproductive rates**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
National Wild Turkey Federation	☒ **In-kind contribution** ☐ **Funding**	**$500**	**Salary involved in coordination of wildlife stand improvements and thinnings**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**

Fund Source – (Partner Match)	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY21	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
University of Arkansas at Monticello	☒ **In-kind contribution** ☐ **Funding**	**$8,370**	**Salary for collaboration meetings and planning/coordination for economic monitoring for the CFLRP project**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
The Nature Conservancy (based out of Little Rock, AR)	☒ **In-kind contribution** ☐ **Funding**	**$15,245**	**Salary involved in planning and hosting partner meeting, staff time on video agreement, and planning for the monitoring and analysis of vegetative plots**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Missouri Department of Conservation	☒ **In-kind contribution** ☐ **Funding**	**$228**	**Salary involved in coordination of Brown-Headed Nuthatch translocation from the CFLRP project area to Missouri**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
TOTALS	**Total In-Kind Contributions: $264,788** **Total Funding: $0**			

Total partner in-kind contributions for implementation and monitoring of a CFLR project across **all lands** within the CFLRP landscape. For CFLRP projects under the CFLRP Common Monitoring Strategy, note that this table addresses the core CFLRP common monitoring strategy question, "If and to what extent has CFLRP investments attracted partner investments across the landscapes?"

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY21)	Totals
Total revised non-monetary credit limit for contracts awarded in FY21	$0
Revenue generated through Good Neighbor Agreements	**Totals**
	$0

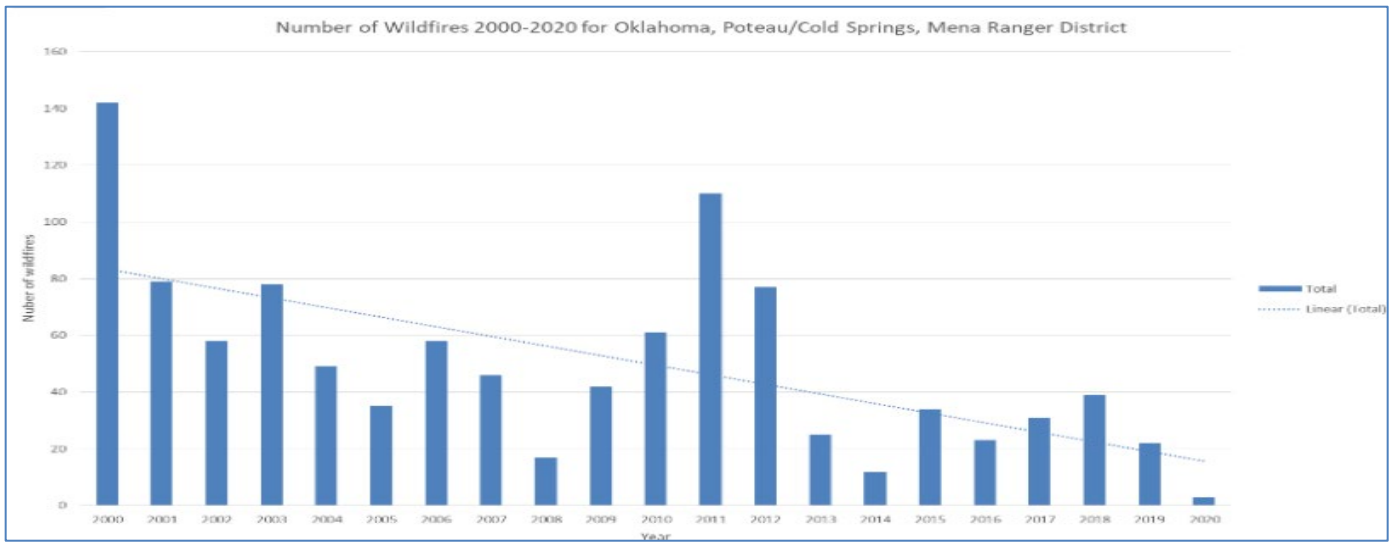
Revised non-monetary credit limits should be the amount in contract's "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements," the "Revised Non-Monetary Credit Limit," as of September 30. Additional information on the Progress Reports is available in CFLR Annual Report Instructions document.
Revenue generated from GNA should only be reported for CFLRP match if the funds are intended to be spent within the CFLRP project area for work in line with the CFLRP project's proposed restoration strategies and in alignment with the CFLRP authorizing legislation

b. *(OPTIONAL)* Describe additional leveraged funds in your landscape in FY2121, if relevant. Leveraged funds refer to funds or in-kind services that help the project achieve proposed objectives *but do not meet match qualifications*- examples include research (not monitoring) and planning funds.

Description of Item	Where Activity/Item Is Located or Impacted Area	Estimated Total Amount	Type of Funds	Source of funds
NEPA Planning – Includes inventories for heritage, biological, roads, and forest stand conditions (CSE); analysis and documentation; GIS support and support services	**Cold Springs–Poteau Ranger District:** Dogwood, Jack Creek, Peanut Mountain, Jack Pigeon, Right Hand Sugar, West Blackfork Creek, Johnson Creek, Logan Side, West Newman, Wolf Pinnacle, Square Rock, and Farm Bill 4. **Mena–Oden Ranger District:** Upper Black Fork, Clear Fork, and Robertson Creek **Choctaw–Kiamichi–Tiak Ranger District:** Choctaw Unit Prescribed Fire, Big Cedar Restoration, Holsom Vegetation Management, East of Broken Bow Lake Vegetation Management, FSR 28830 Buffalo Creek Crossing Replacement, 1863-1865-1866 Midstory, and 1859-1861 Midstory.	**$498,600**	**Forest Service**	**NFTM NFVW WFHF NFWF NFSE**

2. Please tell us about the CFLR project's progress to date in restoring a more fire-adapted ecosystem as described in the project proposal and how it has contributed to wildfire risk reduction goals.

Over the past ten years, the project has focused on the ecological benefits of reestablishing the Shortleaf Bluestem ecosystem on the Ouachita. Many of the same objectives in this project coincide with the Comprehensive strategy. Instead of looking at small blocks around the Forest, the CFLR has allowed us to look at landscape strategy that improves thousands of acres of our watershed health. It also aligns with the reduction of hazardous fuels that not only increases herbaceous habitat, but also decreases the intensity of any wildfire inside the treatment area for 3-5 years. Instead of suppressing a wildfire in Fuel Model 6 with heavy fuel loading, we can utilize a smaller number of resources and suppress a fire in Fuel Model 1, an open pine-grassland. This conversion to pine-grasslands lowers the effort of suppression and decreases the mortality of desired timber.



Graph 1. Number of wildfires 2000-2020 for Oklahoma, Poteau/Cold Springs, Mena Ranger Districts

In addition, most of the designated CFLR project area is defined as Wildland Urban Interface (80%). With this project's focused efforts in restoration from 2010 to 2020, our fire occurrence has statistically dropped from an average of 70 fires per year to 35. There have been a number of fires realized after they were out. The number of natural ignitions or human-caused fires hasn't decreased, but the number of fires responded to on these three districts has dropped. It is our assessment that many natural ignitions go unnoticed due to the reduction in available fuel. The area that could typically hold heat in the heavy fuels during a natural ignition through the moisture that accompanies lightning, is extinguished by rain in the fine, grassy areas that are now on the forest floor. Wildfires in areas that we have treated do not support large fire growth and go out naturally, unnoticed. This is statistically shown in Graph 1.

FY2021 Overview

FY21 Activity Description (Agency performance measures)	Acres
Number of acres treated by prescribed fire	103,863*
Number of acres treated by mechanical thinning	3,147
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	0
Number of acres treated to restore fire-adapted ecosystems which are maintained in desire condition	107,010
Number of acres mitigated to reduce fire risk	327,630**

* Due to the complications of data entry and spatial inconsistencies, FACTS spatial puts the CFLN RX burn acres at 94,803.

** R8 says a treatment lasts three years in reducing wildfire risk. ((103,863RX+3,147Mechanical +2,200 adjacent state acres) X 3 years = 327,630 acres of reduced wildfire risk over three years)

Please provide a narrative overview of treatments completed in FY21, including data on whether your project has expanded the pace and/or scale of treatments over time, and if so, how you've accomplished that – what were the key enabling factors?

FY2021 was an extremely successful year in CFLN Pine Bluestem restoration efforts. The size and scale of this project took some time to get up to the restoration accomplishments this Forest knew it could attain. There have been many hurdles for this team to navigate, but this year the effort paid off. The Ouachita burned 103,863 acres inside the CFLRP boundaries according to the Forest FMO and dispatch records. Due to the complications of data entry and spatial inconsistencies, FACTS spatial puts the CFLN RX burn acres at 94,803. Although there is a discrepancy in our official reporting data base, we know there was 158,856 total forest acres burned and 103,863 acres accomplished on this project.

Figure 1. Mena-Oden Ranger District, CFLR Johnson Prescribed Burn (1655 acres) on March 7, 2021

The Ouachita has developed creative ways to be more efficient and maximize burn acres within the limited weather windows: partnering with other forests to dedicate an additional helicopter to the project (outside of the normal two helicopters); detailing a significant number of outside ground resources to assist; adjusting the size/complexity of prescribed burns to increase the average burn size (up to 9,000 acre blocks burned at one time); coordinating the additional ground resources needed to simultaneously burn multiple blocks; and putting more focus on mechanical treatments over a longer period of time. This is not weather dependent and can be accomplished around WUI specific areas.

We learned to develop agreements with other agencies to assist in prescribed burn implementation. This partnering also diversified the workforce and the availability. The Ouachita worked with the state regulatory agency to clarify smoke regulations allowing larger and multiple prescribed burn tracks within an airshed while still meeting state smoke guidelines. The Ouachita continues to be innovative in exploring alternative methods and is currently reviewing the restriction of evening or night burning. The advent of evening and/or night burning for black lines would be more smoke efficient, safer for ground crews, reduce resource needs, and result in greater acreages.

- **How was this area prioritized for treatment? What kinds of information, input, and/or analyses were used to prioritize? Please provide a summary or links to any quantitative analyses completed.**

For the length of the project, the Forest has prioritized identified project boundaries over other areas. These areas are then annualized at the district level with multiple planning meetings with all disciplines. Priority is given to areas that are three years or more since last treatment, areas where a timber sale is planned, and areas in and around the RCW clusters.

Arkansas State Forestry Division annually consults with Fire Management Officers on the Forest to prioritize areas where private land (within 10 miles of NF) can be burned in conjunction with Forest lands to minimize unnecessary control lines and mitigate private fuel loading. This arrangement is authorized under the Community Assistance Grant (4,400 acres annually).

In addition to the Community Assistance Program, CWPP and the National Forest Plan directive, the Forest uses LANDFIRE and the Wildfire Hazard Potential mapping to identify and prioritize treatment areas. Although not the sole focus of the project, targeting the overlapping areas of wildfire potential and vegetation departure from historic conditions, point to the same outcome.

Fire Management attempts to keep burn units in a rotation that puts that landscape into its natural condition. It has been argued, “What is the natural fire return interval for the southern pine/hardwood stands?” Based on numerous research, the pine/bluestem ecosystem should be in a 3-5 year rotation. Once the stand has had a first entry, it must be maintained over the years. This rotation determines where the managers have to focus from year to year.

- **Please tell us whether these treatments were in "high or very high wildfire hazard area from the "wildfire hazard potential map" (https://www.firelab.org/project/wildfire-hazard-potential)**
- **Were the treatments in proximity to a highly valued resource like a community, a WUI area, communications site, campground, etc.?**

Figure 2. Mena-Oden Ranger District, CFLR Johnson Prescribed Burn (1655 acres) on March 7, 2021

The restoration efforts on the Ouachita are for ecological benefits. The risk of wildfire is reduced due to the restoration efforts, but it is not the driving factor in the Ouachita Mountains. Our restoration efforts began as a need to improve the habitat for the Federally listed RCW, with the tremendous benefit of improving habitat for native flora and fauna, both game and non-game. With that said, most of the Oklahoma district falls in the "high" fire danger rating based on the Wildfire Hazard Potential Map. This area was targeted in FY 2021 (along the National Talimena Scenic Byway, Lennox burn block 6,000 acres). This area was chosen because it is the target MA/ecosystem but also has high wildfire potential and has larger areas that fall under Condition Class 3 (over 15 years since a fuels treatment).

Within the project boundary, the Forest tries to focus on the WUI meeting the objectives of the National Fire Plan. Of the acres burned, 78% of land is identified as WUI. The Forest doesn't statistically track the number of values protected by prescribed fire implementation, but each burn has some complexity or value to mitigate. Most of the time it is infrastructure or private land such as communication sites, campgrounds, and communities.

- **What did you learn about the interaction between treatment prioritization, scale, and cost reduction? What didn't work? Please provide data and further context here.**

The Forest focused on increasing the scale of burns. By doing this, many burns increased in complexity and required a larger number of resources to implement. With the agency going through budget modernization and the shift in CFLR funding, resources were difficult to attain. The project no longer allowed for funding to be used to pay for per diem/wages/overtime, minimizing other forests' willingness to assist in these larger burns. During one of type one burns, resources were stretched too thin, and there was an escape that impacted a private residence causing damage.

Once burns were converted to type one, an RXB1 and advanced agency administrator was required. This is an added burden to the Forest because no one is qualified at that level, again relying on limited off-forest resources to assist.

Please provide visuals if available, including maps of the landscape and hazardous fuels treatments completed, before and after photos, and/or graphics from fire regime restoration analysis. You may copy and paste or provide a link.

Before and after photos of macro-plots are in process, with the entire report available in Spring 2022. Photos from fuels projects in FY 2021 are provided throughout this section of the report.

Category	$
FY21 Wildfire Preparedness[1] (Project area makes up 36% of the Forest) on CFLR project area NFHF Fuels Reduction costs for the Forest WFSE Wages for the Forest	*$1,188,262 $300,728 $3,000,000
FY21 Wildfire Suppression[2]	**
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	0
FY21 Hazardous Fuels Treatment Costs (CFLN)	$312,140
FY21 Hazardous Fuels Treatment Costs (other BLIs)	***

*Most of our implementation cost for the project comes from outside resources, not captured in this amount. We had 250 days and travel from around the country come and help us reach out goals. Under the current budget direction, we don't track those costs. In terms of preparedness and suppression it is difficult to measure CFLRP cost, wildfire preparedness and wildfire suppression costs across a landscape or Forest.

**Suppression Costs are given a national P-Code and several fires can have one P-Code. We have minimized our suppression costs by maximizing our fuels reduction. Of the 1.8 million acres of NFS land on the Ouachita, approximately 130,000 acres are treated annually by prescribed fire. That is 7% and calculated over our fire return interval of 6 years, 43% of the Forest is treated. This 43% treated is misrepresented due to areas that naturally don't hold fire or may not be attainable. For example, river, lakes, and stream areas would decrease the overall burnable acres while increasing the % burned over a natural interval. Based on the previous statement, assume 70% or 1.2 million acres can burn bringing our % treated over 6 years to 65%. This inevitably has a significant impact to the large fire potential due to hazardous fuels from either human or natural ignition.

*** 63% of total forest acres prescribed burned was funded by CFLRP, the other 37% in and around CFLRP designated areas were treated with NFHF funding. These other acres also contribute to reducing wildfire risk in the designation. If the funding for CFLRP is diminished, our treated acres will be reduced to half, leaving us to fight the uphill battle the rest of the Forests are facing with large wildfires.

Figure 4. Clay Van Horn lights off control line on the Andy Knight Prescribed Burn on the Poteau-Cold Springs Ranger District on April 1, 2021

[1] Include base salaries, training, and resource costs borne by the unit(s) that sponsors the CFLRP project. If costs are directly applicable to the project landscape, describe full costs. If costs are borne at the unit level(s), describe what proportions of the costs apply to the project landscape. This may be as simple as Total Costs X (Landscape Acres/Unit Acres).

[2] Include emergency fire suppression and BAER within the project landscape. Describe acres of fires contained and not contained by initial attack. Describe acres of resource benefits achieved by unplanned ignitions within the landscape. Where existing fuel treatments within the landscape are tested by wildfire, summary and reference the fuel treatment effectiveness report.

How may the treatments that were implemented contribute to reducing fire costs? If you have seen a reduction in fire suppression costs over time, please include that here.

There were four situations *reported* requiring a response inside a CFLR boundary that had been treated the year prior (one year rough). The Forest was able to put them out in about thirty minutes with three people. This effort/cost would have been much different if it had been 12 plus years since treatment. It is very difficult to calculate the true cost savings in comparing RX versus suppression costs. Now that wages are all covered by the host forest and district preparedness is blended with other work in other resource areas, it makes it more difficult to find true costs.

Have there been any assessments or reports conducted within your CFLRP landscape that provide information on cost reduction, cost avoidance, and/or other cost related data as it relates to fuels treatment and fires? If so, please summarize or provide links here:

The forest has not done any assessments except from the collection of fire data in our Inform systems.
As noted above, our observed wildfire occurrence has decreased from the year 2000 by an average of 50%.

Figure 5. Back burn operations on the Fodderstack Wildfire (2065 acres) November 29, 2021

Please include acres of fires contained and not contained by initial attack and acres of resource benefits achieved by unplanned ignitions within the landscape, and costs.

There were no applicable fires within the CFLRP project area, nor any unplanned ignitions within the landscape that provided resource benefits.

If a wildfire interacted with a previously treated area within the CFLR boundary:

Each unit is required to complete and submit a standard fuels treatment effectiveness monitoring (FTEM) entry in the FTEM database (see FSM 5140) when a wildfire occurs within or enters into a fuel treatment area.

For fuel treatment areas within the CFLR boundary, please copy/paste that entry here and respond to the following supplemental questions. Note that the intent of these questions is to understand progress as well as identify challenges and what didn't work as expected to promote learning and adaptation.

- ***Please describe if/how partners or community members engaged in the planning or implementation of the relevant fuels treatment.***

Partners are engaged in the planning and implementation of prescribed burning through participating agreements for implementation and monitoring. Agreements with TNC, Oklahoma Forestry Services (OFS), Arkansas Forestry Division, National Park Service – Buffalo River, Choctaw Nation, U.S. Fish and Wildlife Service – Wichita Mountains, and the BLM continue to supplement our workforce executing prescribed burns. TNC is our major partner in monitoring vegetation in the CFLRP project area. In addition, the Oklahoma Department of Wildlife Conservation (ODWC) is a significant partner carrying out fuels treatment on the McCurtain County Wilderness Area (MCMA) that is surrounded by National Forest System lands within the CFLRP boundaries in Oklahoma. The Choctaw Nation has been under a participating agreement for several years to provide dozer services for completing fire line construction and re-construction. As a leveraged activity, the Forest has agreements with the Cherokee Nation and other tribes for heritage surveys for project areas that include fuel treatments within the CFLRP boundaries.

- ***Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands within or adjacent to the CFLR landscape?***

In addition to state land burned in Oklahoma under the management of the ODWC, private lands are also burned using agreements authorized under the Community Fire Protection Grant. These agreements allow for the efficient fuels reduction of private lands and, in many cases, reduces ground-disturbing control line blading or plowing. The Oklahoma Fire Master Cooperative agreement allows Federal and State resources to respond during initial attack under a 24-hour mutual aid period on and off-forest.

- ***What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns?***

A significant portion of the Shortleaf Bluestem Community project is within the Habitat Management Area (HMA) for the Endangered (under the Endangered Species Act) red-cockaded woodpecker (RCW). There are two HMA's on the Ouachita: one in Arkansas south of Waldron, and one in Oklahoma near Hochatown. Both commercial and non-commercial thinning along with prescribed burning are needed to maintain an open canopy with few woody saplings in the midstory and increased herbaceous species in the understory with woody stems being continually top-killed. These treatments, including the accomplishments in 2019, continue to gradually increase the active territories and breeding attempts by the RCW over time.

- ***Did the treatments do what you expected them to do? Did they have the intended effect on fire behavior or outcomes?***

The prescribed burning provides the top-killing of woody stems across the burn area and perpetuates the restored pine –bluestem community or provides an incremental improvement in the area as it transitions to a fully restored condition. The other two treatments, commercial thinning and non-commercial thinning, create a short-term challenge for implementing prescribed burning due to the temporary increase in forest floor fuels. In addition, sometimes timber purchasers essentially "lock up" the area in terms of prescribed burning because they wait until the latter part of the contract life to finish the harvesting, and burning cannot proceed until the payment units with painted trees are completely harvested.

- ***What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future?***

As stated in other places in this document, the prescribed burning preparation and logistical support needs to change for the forest to successfully treat this pine-bluestem landscape of about 320,000 acres. We need to recognize when and where burn units are coming within parameters and then react aggressively to provide personnel, equipment (including engines, dozers and helicopters) to get the high priority work on this landscape completed.

<u>If a wildfire occurred within the CFLR landscape on an area planned for treatment but not yet treated</u>:
Please include:

- ***Acres impacted and severity of impact***
- ***Brief description of the planned treatment for the area***
- ***Summary of next steps – will the project implement treatments elsewhere? Will they complete an assessment?***
- ***Description of collaborative involvement in determining next steps.***

As a total, the Ouachita National Forest had 63 wildfires that burned 6,496 acres, or an average of 103 acres per wildfire. There was little to no overstory kill from these wildfires, and most did top-kill the midstory component of the stand. The size of the fires is significantly higher due to a change in suppression tactics on a couple of occasions. The CFLR project has decreased the fuel loading enough that responders can look at the area a wildfire is currently burning in and change suppression tactics. Instead of chasing the fire up the hill using direct tactics, many times the moderate fire behavior allows firefighters to bring the fire down to existing control lines minimizing equipment damage and firefighter risk. This tactic would be more difficult or undesirable if the fuel loads were higher because it would cause significant resource damage. The increase in acres per wildfire specifically is reflected in this change in tactic. When this technique is used, a specialist is asked to evaluate the effects on the resource, and reports show a favorable outcome. This Forest's wildfire season and prescribed fire season coincide, so if fuel conditions are in desirable condition, wildfire or prescribed fire are beneficial to the landscape.

In all cases, the treatment will be the same as an unburned stand: commercial timber sale of thinning, midstory reduction treatment, and then three prescribed burns over the next decade. Over time, wildfire can be used in lieu of prescribed fire to restore pine – bluestem communities although mechanical treatments such as midstory reduction and timber harvest accompanied by prescribed burning speeds up the restoration process. Prescribed burning is used to protect the Forest's investment in thinning and RCW habitat. Once a stand meets the desired condition, the investment is naturally protected from wildfire.

The Forest has put in for an extension for six years to complete the project. The goal would be to continue to maintain the investment while targeting areas that were left untreated in the 2012 original proposal. The Forest has shown significant success and recognition for the restored ecosystem. We want to continue to grow this

landscape until the 955,000 acres are classified in a natural condition. If there is an extension, the TNC, States, and many others will continue to assist/support us in this effort.

3. What assumptions were used in generating the numbers and/or percentages you plugged into the TREAT tool? Information about Treatment for Restoration Economic Analysis Tool (TREAT) inputs and assumptions available here.[3]

This project has had the Enterprise Group involved within the project boundaries in past years. However, this year, the group did work outside the CFLRP project area, and so there was no input for this "contractor."

Looking at your CFLRP project's TREAT Data Entry "Full Project Details" Tab, what percent of funding was used for contracts within the local impact area? (see cell D13)[4] If you have data on what percent of funding was used for agreements within the local impact area, please note.

Contract Funding Distributions ("Full Project Details" Tab):

Description	Project Percent
Equipment intensive work	8%
Labor-intensive work	61%
Material-intensive work	10%
Technical services	3%[1]
Professional services	15%
Contracted Monitoring	3%
TOTALS:	100%

[1]*Treat-reported percentage was 2% but was increased to 3% so subtotals would total to 100%.*

Please provide a brief description of the local businesses that benefited from CFLRP related contracts and agreements, if known. Consider characteristics such as tribally-owned firms, veteran-owned firms, women-owned firms, minority-owned firms, and business size.[6]

As reported last year, firms with a large percentage of minority laborers have been grateful for continued operations through the pandemic. Income from the continued execution of contracts has been critical to maintaining their family incomes and paying recurring bills.

FY 2021 Modelled Jobs Supported/Maintained (CFLN and matching funding):

FY 2021 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	39	55	2,381,700	3,089,979
Forest and watershed restoration component	16	25	652,324	1,066,288
Mill processing component	57	139	3,810,720	8,234,796
Implementation and monitoring	15	19	950,170	1,097,405

[3] *For CFLRP projects under the CFLRP Common Monitoring Strategy this and the responses below address the core CFLRP common monitoring strategy questions, "*How have CFLRP activities supported local jobs and labor income?" and "How do sales, contracts, and agreements associated with the CFLRP affect local communities?

[4] If you would prefer to use other data collected locally, you may include that here. Do not include dollars that were contracted to firms outside of the local area.

Other Project Activities	0	1	30,608	44,411
TOTALS:	127[1]	239[1]	7,825,522[1]	13,532,879[1]

[1] *Totals corrected for rounding errors.*

4. Briefly describe community benefits that align with the CFLRP proposal and strategies socioeconomic goals. How has CFLR and related activities benefitted your community(ies) from a social and/or economic standpoint? Please link to monitoring reports or other relevant information if available.

The ***Shortleaf – Bluestem Community*** project continues to build more relationships and better collaboration. In November 2021, the Ouachita National Forest worked with the Arkansas Department of Agriculture Forestry Division to hold a timber purchaser's meeting, and it was a huge success. The Forest documented 45 attendees at the event, and there was excellent participation, as well as commitment, to help plan future meetings that more involvement overall so purchasers can be heard by the Forest Service as well as the Forestry Division and others. Tim Hahn, from West Fraser, Inc. wrote in to the FACA Committee in support of the extension proposal for the ***Shortleaf – Bluestem Community*** project.

The Ouachita worked with the NRCS in both Arkansas and Oklahoma and submitted new Joint Chiefs' Landscape Restoration Partnership projects for consideration for the 2022-24 funding commitment. Partners included NRCS, Arkansas Game and Fish Commission, U.S. Fish and Wildlife Service, Oklahoma Department of Wildlife Conservation, Oklahoma Forestry Services, Arkansas Department of Agriculture Forestry Division, Quail Forever, and others.

The CFLRP projects on the Ouachita and the Ozark-St. Francis National Forests, combined with the Public Affairs staff unit, funded three videos designed specifically for social media platforms and internet sites. Fauna Creative of Michigan was the video contractor, and they incorporated numerous partners and operations within their footage to produce stories of on-the-ground restoration that will build even more relationships, will continue to increase public support and awareness, and will simply be fun to watch.

5. Based on your project monitoring plan, describe the multiparty monitoring process.

The Nature Conservancy, based out of Little Rock, Arkansas, continues to be our main monitoring partner. On June 8-9, 2021, six TNC staff members assisted with plant community monitoring on the CFLRP-Pine Bluestem area. A total of 50 permanent macroplots were monitored in Arkansas as part of the 3rd repeat effort of data collection for this project. The remaining 50 macroplots on the project area, in Oklahoma, will be monitored in 2022, as part of this 3rd repeat of data collection.

TNC analyzed the plant community monitoring data for the 2nd repeat (data collected in 2018-2019) and began drafting a report that will be submitted to USFS in the spring of 2022. The results demonstrate that steady progress was made, since the previous monitoring efforts and since baseline (2012-2013), in the overall condition of the Pine Bluestem, with community structure and composition moving towards desired ecological condition in many metrics. Average live basal area per macroplot decreased by 4 ft^2/ac. since Repeat 1, resulting in a decrease of 7 ft^2 acre since baseline. Total species richness increased by 13 species since Repeat 1, resulting in an increase of 44 species since baseline. Total ground layer species richness increased by 15 species from Repeat 1 to Repeat 2 and the average number of herbaceous species per macroplot increased by 2 species over this same period. Since baseline, average herbaceous species richness per macroplot increased by 5 species, to 14 species per macroplot, and just below the desired condition of 15 or more species per macroplot.

Below is a link to a shared folder containing the monitoring reports produced thus far.
https://tnc.box.com/s/d8ztxm6lebidmlaogyol3jyup674kchg

Based on current and anticipated near-future forest management needs in Oklahoma, Arkansas, and Missouri, the University of Arkansas at Monticello is seeking non-CFLN funding for a proposal with the following three major objectives. A decision on the funding award is still pending.

1) Quantify and model Ecosystem Services (ES) including forest health (i.e., structure, species composition, etc.), wildlife habitat, and carbon storage on both restored and unrestored (control plots) forest lands of the Ouachita National Forest, Ozark-St. Francis National Forests, and the Mark Twain National Forest. The hypothesis is that restoration practices and ongoing management activities on three national forests could improve ES provision in terms of forest health, wildlife habitat, and carbon sequestration.
2) Assess and examine different stakeholders' (i.e., private landowners) acceptance and perceptions regarding performing sustainable management practices to conserve ES. The hypothesis is that achievement of conserving and sustaining ES on private lands is influenced by factors including economic, socio-political, as well as private landowners' acceptance and support for those practices.
3) To estimate potential landscape-level impacts of ecosystem health-oriented management, the models used to quantify forest health, wildlife habitat, and carbon storage (Objective 1) will be related to private lands in the Ozark Highlands Region through Forest Inventory and Analysis data. The likelihood of practices being applied will be modeled through a probabilistic model based on data observed in the survey instruments used for objective 2.

6. FY 2021 Agency performance measure accomplishments:

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Acres of forest vegetation established FOR-VEG-EST: 221	Acres	221	CWKV $24,072
Acres of forest vegetation improved FOR-VEG-IMP: 617[1]	Acres	202[1] 376[1]	CFLN $78,090 CWKV $69,417
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acres	0	0
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands INVSPE-TERR-FED-AC	Acres	0	0
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions. S&W-RSRC-IMP - CFLN	Acres	47,629	CFLN $51,177
Acres of lake habitat restored or enhanced HBT-ENH-LAK	Acres	0	0
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	0	0
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	104,048	CFLN $476,378 CWKV $273,830 NFWF $2,392
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	0	0
Miles of high clearance system roads receiving maintenance RD-HC-MAIN	Miles	0	0
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	476	CFLN $128,890 CMRD $58,890
Miles of road decommissioned RD-DECOM	Miles	0	0
Miles of passenger car system roads improved RD-PC-IMP	Miles	0	0
Miles of high clearance system road improved RD-HC-IMP	Miles	0.5	CFLN $31,722

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Road Storage *While this isn't tracked in the USFS Agency database, please provide road storage miles completed if this work is in support of your CFLRP restoration strategy for tracking at the program level.*	Miles	0	0
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	0	0
Miles of system trail maintained to standard TL-MAINT-STD	Miles	0	0
Miles of system trail improved to standard TL-IMP-STD	Miles	0	0
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	0	0
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	4,077	No contracts involved
Volume of Timber Harvested TMBR-VOL-HVST*	CCF	36,842	No contracts involved
Volume of timber sold TMBR-VOL-SLD*-CFLN	CCF	33,527	$120,858
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG*	Green tons	2,091	(see TMBR-VOL-SLD above)
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acres	21,958	CFLN $25,792 NFWF $1,455
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	75,254	CFLN $86,348 NFWF $4,870
Acres mitigated FP-FUELS-ALL-MIT-NFS	Acres	51,050	(captured above)
Please also include the acres of prescribed fire accomplished[3]	Acres	103,863	(contract costs captured in WUI and non-WUI Fuels)
RD-HC-RCNSTR	Miles	0.5	See RD-HC-IMP
RD-PC-RCNSTR	Miles	17.3	See RD-PC-MAINT for integrated contract costs

Units accomplished should match the accomplishments recorded in the Databases of Record. For CFLRP projects under the CFLRP Common Monitoring Strategy, items marked with a * help to address the core CFLRP common monitoring strategy question, "Did CFLRP increase economic utilization of restoration byproducts?"

[1] *39 acres of release was accomplished but was not updated (accomplished) in FACTS, so on-the-ground total is 617 acres.*

[2] *See answer to Question #2 above.*

[3] Due to the complications of data entry and spatial inconsistencies, FACTS spatial puts the CFLN RX burn acres at 94,803.

7. The Washington Office (Enterprise Data Warehouse) will use spatial data provided in the databases of record to estimate a treatment footprint for each CFLRP project's review and verification. This information will be posted here on the internal SharePoint site for verification *after the databases of record close October 31*.

- **If the estimate is consistent and accurate, please confirm that below and skip this question.**
- **If the gPAS spatial information does NOT appear accurate, note the total acres treated below.**

The EDW posted acres were 212,903.425. This is well below the amount treated within the Shortleaf – Bluestem Community project area. As our GIS expertise and coverages become more complete, the estimated cumulative footprint given below reflects better and more complete data within our local systems.

Fiscal Year	**Footprint of Acres Treated** (without counting an acre of treatment on the land in more than one treatment category)
FY 2021	0[1]
Estimated Cumulative Footprint of Acres (CFLRP start year through 2021)	285,759

[1] *This year's footprint analysis updated legacy footprint calculations which increased significantly and detected no new unique acres treated within the CFLRP project for FY 2021.*

If you did not use the EDW estimate, please briefly describe how you arrived at the total number of footprint acres: what approach did you use to calculate the footprint*?*

Using the GI tool, opened up Facts Activity Polygon-EDW, then joined it to create FACTS Join Activities to Act V 160 RSW. This shapefile was clipped by the CFLRP polygon. Selected activities accomplished FY 2012-2021 for all years, then "dissolved" for final footprint. The same process was followed for activities accomplished in FY 2021.

All of the FY 2021 activities, totaling 100,988 acres, have been on acres treated previously (FY 2012-2020). There were 908 acres of timber sales sold in FY 2021 in untreated areas, but not harvested in 2021.

8. Describe any reasons that the FY 2021 annual report does not reflect your project proposal, previously reported planned accomplishments, or work plan. Did you face any unexpected challenges this year that caused you to change what was outlined in your proposal?

Figure 6. Wildlife Biologist Jason Garrett cuts out a cavity for an artificial insert in a shortleaf pine for the Endangered Red-Cockaded Woodpecker in 2021.

As detailed in Question 2, the Forest thought it had burned over 100,000 acres within the project area, meeting the CFLRP target for our project area for the first time, and in the final year of the project. This number was recorded at the Arkansas Oklahoma Interagency Command Center as each prescribed burn took place throughout the fiscal year.
Timber sale volume remained lower than the first five years; however, the volume accomplished has long since met the 10-year target set by the proposal. Timber sale area treated (or "completed") came up to 4,077 acres this year, still lower than the target in the proposal, but commensurate with the 36,842 harvested, which is significantly lower than the average volume accomplished over the nine previous years.

The table below displays the accomplishments of the three main treatments to achieve a restored shortleaf pine – bluestem grass condition in forest communities.

Fiscal Year	Timber Sales			Non-Commercial Thinning – WSI, TSI (ac)	Prescribed Burning (ac)
	Volume Awarded (ccf)	Harvest Accomplished (ac)	Harvest Completed (ac)		
2012	69,206	5,066	160	3,660	44,805
2013	71,700	4,673	2,465	7,021	54,461
2014	79,828	8,801	4,195	5,416	43,532
2015	55,237	4,456	3,137	4,947	25,678
2016	59,153	5,870	3,521	1,707	71,033
2017	64,117	5,294	3,182	2,715	52,290
2018	27,401	2,458	6,429	1,324	58,603
2019	36,559	2,941	2,225	1,338	27,865
2020	21,119	3,166	657	5,855	38,221
2021	33,527	2,348	4,077	7,201	103,863
Total	517,847	45,073	30,048	41,184	520,351
10-year Target	415,000	58,000	58,000	48,000	955,000
% of 10-year Target	**125%**	**78%**	**52%**	**86%**	**54%**

FY 2021 Additional accomplishment narrative – If desired, please use this space to describe additional accomplishments the CFLRP project participants are proud of from FY21 *not already described elsewhere* in this report.

Brown-Headed Nuthatch Translocation: In August 2021, conservation partners from the Missouri Department of Conservation, US Forest Service Northern Research Station, University of Missouri, Missouri River Bird Observatory, Tall Timbers Research Station, and the Ozark-St. Francis National Forest joined together to trap Brown-headed Nuthatches for translocation from the Ouachita National Forest to the Mark Twain National Forest as the second year of a two-year species restoration effort to Missouri. The birds were extirpated in the state after pine woodlands were removed in the late 1800s/early 1900s, and the pine woodland habitat regenerated into predominately oak-hickory forest. Two decades of pine woodland restoration by the Mark Twain National Forest has created the habitat that these birds needed to bring them back to the state. A total of 102 Brown-headed Nuthatches were translocated from the Ouachita NF in two efforts in fall 2020 and fall 2021.

Additional Red-Cockaded Woodpeckers: Populations of the Endangered Red-Cockaded Woodpecker continue to grow. In 2021, active territories were discovered on the Mena-Oden Ranger District in two locations. One location, near Tin Top Road, was very close to active RCW clusters on the southern edge of the main population on the Poteau-Cold Springs Ranger District near Waldron, Arkansas. Another active territory has been confirmed about 50 miles from the main Arkansas population in the Hatfield vicinity.

Figure 7. Two Red-Cockaded Woodpeckers forage on a shortleaf pine with the Shortleaf - Bluestem Community project area in 2021. Active territories of these Endangered birds continue to grow with the restored habitat.

Production of Three Videos on Restoration: Short videos on pine – bluestem restoration, glade restoration, and overall restoration on the Ouachita and Ozark-St. Francis National Forests were produced in 2021 by Fauna Creative. The pine-bluestem video displays footage from actual 2021 prescribed burning, timber sale operations, and midstory reduction treatments, as well as interview segments from former Integrated Resources Staff Officer Larry Hedrick; Southern Research Station Research Silviculturist Jim Guldin; and many others. The premier for the three videos will be in January, and the productions will be placed on various social media sites as well as on the websites for both Forests.

FOR INTERNAL USE: The following responses are directed towards feedback on *internal* bottlenecks or issues that may impact your project. Please use this space to raise awareness on key internal issues, or opportunities to improve processes moving forward. Responses will be included in an internal document. What are the limiting factors to success or more success of the CFLR? How can the National Forest and its collaborators operate in a more integrated and synergized way?

Budget Modernization has had the immediate effect of limiting personnel hiring; therefore, reducing our capacity to get work accomplished. All our "big 3" treatments, including timber sales, midstory reduction and prescribed burning require knowledgeable Forest Service employees to carry out important steps in project planning and implementation for this project. "Militia," a term describing non-fire personnel that help substantially in laying out and executing prescribed burns, are one important cog in the wheel that is being reduced little by little as Budget Modernization becomes a long-term reality. While contracts and agreements can be used to do significant portions of the on-the-ground treatments, well-versed Forest Service employees are needed to plan, coordinate, lay out, and inspect field work getting done by either contractors or partners involved in agreements.

Without this level of governmental workers, Forest Plan direction, quality assurance checks, and fiscal responsibilities will be sacrificed.

Budget Modernization also limits the incentive for off-Forest detailers to come help with ***Shortleaf – Bluestem Community*** efforts. Detailers are now paid out of the originating Forest NFSE or WFSE account, reducing the incentive for off-forest leadership to send detailers to the Ouachita for this important effort, especially during our main burning season of February through April. In addition, overtime has become an issue for on-forest employees due to continual and deep deficits in NFSE.

9. Planned FY 2022 Accomplishments (for CFLRP projects with known ongoing funding in FY22)[5]
Unfortunately, we have yet to hear if the project extension will be funded, so this question is not applicable at present.

10. Planned accomplishment narrative and justification if planned FY 2022 accomplishments and/or funding differs from CFLRP project work plan (**for CFLRP projects with known ongoing funding in FY22**):

Not applicable at present time.

11. Please include an up to date list of the members of your collaborative if it has changed from previous years. If the information is available online, you can simply include the hyperlink here. If you have engaged new collaborative members this year, please provide a brief description of their engagement.[6]

The collaborative has seen changes in the timber purchaser community over the last decade, and during the development of our extension document, we have added the following the purchasers to our partners list:

- Anthony Timberlands, Inc.
- Bell Timber, Inc.
- West Fraser, Inc.
- Alan Titsworth Logging
- Huber Engineered Woods, LLC

Figure 8. Skidding, decking and loading operation on a log deck of a timber sale on the Ouachita in 2021.

A timber purchaser meeting was held in November 2021, at Petit Jean State Park. This meeting was sponsored by the Arkansas Department of Agriculture Forestry Division and organized and carried out by the Forestry Division and the Ouachita National Forest. There were 45 attendees, and all parties involved are looking to redevelop this important group of collaborators as an active player within the shared stewardship leadership of forest management in Arkansas and Oklahoma.

[5] Projects funded beginning in FY21, or extensions of 5 years or more, will be following the new Common Monitoring Strategy and will be asked to provide information on invasives, wildlife habitat, and reduction in fuels that go beyond acre tallies. Please work with your Regional CFLRP Coordinator as these are implemented.

[6] For CFLRP projects under the CFLRP Common Monitoring Strategy, this table addresses the core CFLRP common monitoring strategy question, "Who is involved in the collaborative and if/how does that change over time?"

***(OPTIONAL)* Media recap. Please share with us any hyperlinks to videos, newspaper articles, press releases, scholarly works, and photos of your project that you have available. You are welcome to include links or to copy/paste.**

Brown-headed nuthatch sings once more in Missouri:
https://www.fs.usda.gov/inside-fs/delivering-mission/sustain/brown-headed-nuthatch-sings-once-more-missouri

Missouri Department of Conservation, partners begin round two of Brown-headed Nuthatch reintroduction:
https://mdc.mo.gov/newsroom/mdc-partners-begin-round-two-brown-headed-nuthatch-reintroduction

Restoration Videos from Fauna Creative, with a premiere scheduled on January 11, 2022 during public meetings on TEAMS:

Glade Restoration:
https://vimeo.com/618254526/de45f9ec31

Shortleaf Pine-bluestem restoration:
https://vimeo.com/617144629/f9cc52f5ca

Restoration Overview:
https://vimeo.com/648689169/a04619c16f

Figure 9. Buffalo Creek crossing within the Shortleaf – Bluestem Community CFLRP project area in Oklahoma, finished in 2021. This project was funded with non-CFLRP dollars in a previous fiscal year, and contribute stable access to a large part of the project area allowing timber, fire, and wildlife treatments, and also making aquatic organism passage possible.

<u>For CFLRP Projects in the final year of their initial 10 year funding plans</u>. Please use this space to provide any key reflections on lessons learned and opportunities for improvement for CFLRP moving forward – this could be bullets, a few brief paragraphs, or links to reports you would like to share on this topic.

Lessons learned within the CFLRP environment working within the ***Shortleaf – Bluestem Community*** project on the Ouachita National Forest:

- Turnover in leadership needs to be seriously considered with proposals for this and other multi-year grants. Our project proposed to hire 12-24 term or temporary positions to help implement treatments across the landscape, and we were never able to realize any of this hiring, creating what some employees may have felt were extra collateral duties and targets. This hiring in temporary or term positions was also supposed to provide accumulation of experience and training for entry-level positions, creating a pool of qualified candidates for permanent positions into the future. This could have helped a decade ago as well as right now.

- There was also an important lesson in turnover in leadership within the fire organization and the commitment to prescribed burning. The Ouachita and Ozark-St. Francis share a Forest Fire Management Officer position, and that position went through four people, not counting several people in Acting FFMO roles. Moving into the FFMO position for three Forests (Ouachita, Ozark, and St. Francis) is daunting, and then adding in CFLRP project management, especially in the prescribed burning realm, adding on another huge responsibility. The lesson here is to write and obtain a commitment from Forest leadership for serious focus on the CFLRP objectives for the long term (10 years).

- Collaboration, with all the time and energy considerations, is well worth the money. The loose collaborative existing in Arkansas and Oklahoma is so strong and dedicated today and seems to be stronger and more diverse than a decade ago. Part of this is the inclusion of the NRCS with Joint Chiefs' projects, and part is the closer association with timber-related partners. Over the past year, the Ouachita has been heavily involved in a CFLRP Partner's Meeting, an Arkansas Game and Fish Commission Co-op Meeting, and an Arkansas/Oklahoma Timber Purchaser Meeting, all extremely well attended and with high levels of participation.

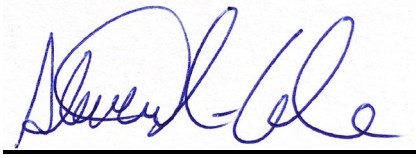
- Specific to the restoration program for shortleaf pine – bluestem grass habitat, it has and continues to be difficult work, but this important management also keeps providing important biological surprises that make it all seem worthwhile. Most recently, examples include the opportunity to be the source for Brown-Headed Nuthatches for re-introduction into Missouri forests. Others include the increased habitat for pollinators, including the monarch; the project area becoming a hot spot for bobwhite quail populations, and the continual increase in red-cockaded woodpecker populations.

Signatures:

Recommended by (Project Coordinator(s)):

Kathryn Duncan
Forest Silviculturist
Ouachita National Forest

Approved by (Forest Supervisor(s)):



Steve Cole
Acting Forest Supervisor
Ouachita National Forest

Draft reviewed by (collaborative chair or representative):

MCREE ANDERSON
Director, Interior Highlands and Fire Restoration Programs
The Nature Conservancy