CFLRP Project Name (CFLR23): Longleaf Pine Restoration and Hazardous Fuels Reduction

National Forest(s): De Soto Ranger District, National Forests in Mississippi

1. Executive Summary

Briefly summarize the top ecological, social, and economic accomplishments your CFLRP project participants are most proud of from FY23 and any key monitoring results. This is a space for key take-home points (< 500 words).

Our top ecological goal this year was the reestablishment of bogs on our forest. Bogs are a natural part of the longleaf pine ecosystem, with unique characteristics such as very moist soils, open overstory (approximately 20 dbh), and the presence of unique plants in the understory, such as pitcher plants. Due to the heavy drought conditions that we've experienced this summer, previous management activities were able to be accomplished. In years past, we have not been able to restore our bogs due to heavy rains, which made soils too wet to enter with logging equipment. With the combined dry weather and stewardship agreement with the National Deer Association (NDA), we were able to treat them this year. Another thing we've experienced this year more than any other year was the emergence of the southern pine beetle. Drought conditions and overstocked stands of timber led to the southern pine beetle, attacking, and spreading throughout timber more than ever we have experienced in the recent years. Thanks to CFLRP we were able to get a contract in place and attack the most affected and most active areas first and remove timber to stop the spread of the SPB.

Our most visible social accomplishment this year was a MeatEater volunteer day within the Leaf Wildlife Management Area in conjunction with the NDA. This event drew approximately 100 volunteers, including local hunters and conservationists, partners from multiple agencies, and Forest Service personnel to work together to plant native mast-producing trees to enhance deer and turkey habitat. The event was a big success, and it was enjoyed by everyone involved.

Through collaboration efforts, partners we were able to reach across state lines and have a supplemental partnership agreement with NDA. This year a stewardship agreement was established to administer a timber sale and provide service work for mutual benefits as the non-profit organization develops more partnerships and expands their portfolio. The current and future stewardship projects may deliver approximately 10 years of stable work, ultimately providing more jobs and more revenue to the local communities. We were able to utilize several contracts using CFRLP funds in preparation for FY24 timber sales.

2. Funding

CFLRP and Forest Service Match Expenditures

Fund Source: CFLN and/or CFIX Funds Expended	Total Funds Expended in Fiscal Year 2023
CFLN (2023)	$850,876*
CFLN (2021)	$132,253
CFLN (2020)	$2,291
TOTAL	**$985,420**

*The amount of CFLN (2023) funds expended does not match the official database. The official total was $134,544.96. Some line items were not marked correctly as CFLRP expenditures in FMMI.

This amount should match the amount of CFLN/CFIX 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.

Fund Source: Forest Service Salary and Expense Match Expended	Total Funds Expended in Fiscal Year 2023
NFSE	$134,545*

*The official total in the FMMI CFLRP expenditure report for Salary and Expenses was $0. Match was not marked correctly as CFLRP expenditures in FMMI. Staff time spent on CFLRP proposal implementation and monitoring may be counted as CFLRP match – see Program Funding Guidance.

Fund Source: Forest Service Discretionary Matching Funds	Total Funds Expended in Fiscal Year 2023
CMRD	$193,800
NFHF	$25,000
CWKV	$41,700
NFTM	$19,000
FSOS	$7,091
FSLM	$27,873
WFPR	$12,000
TOTAL	**$326,464***

*These fund sources did not match the amounts in the FMMI because they were not tagged as CFLN expenditures in the upward reporting databases as CFLN match. The official total was $0.

Partner Match Contributions[1]

Fund Source: Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY23	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
DOD/Camp Shelby	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$181,325**	Feral Pig Eradication 7,253 acres	☒ National Forest System Lands ☒ Other lands within CFLRP landscape: Tribal Lands
DOD/Camp Shelby	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$8,000**	32 Acres in Longleaf Establishment	☒ National Forest System Lands ☒ Other lands within CFLRP landscape:

DOD/ Camp Shelby	☒ In-kind contribution ☐ Funding	**$130,250**	521 Acres in Longleaf gained through Silviculture	☒ National Forest System Lands

[1] Addresses Core Monitoring Question #13

Fund Source: Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY23	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
	Budget Line Item, if relevant:			☒ Other lands within CFLRP landscape:
DOD/ Camp Shelby	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$101,425**	4057 Acres in Prescribed Burning	☒ National Forest System Lands ☒ Other lands within CFLRP landscape:
DOD/ Camp Shelby	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$129,250**	517 Longleaf Pine Maintenance Activities	☒ National Forest System Lands ☒ Other lands within CFLRP landscape:
MS Forestry Commission	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$24,019**	Cogongrass eradication 118 acres	☒ National Forest System Lands ☒ Other lands within CFLRP landscape:
MS Department of Wildlife, Fisheries, & Parks (MDWFP)	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$43,075**	1,723 Acres in Prescribed Burning	☒ National Forest System Lands ☒ Other lands within CFLRP landscape:
MDWFP	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$1,250**	5 Longleaf Pine Maintenance Activities	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
NRCS	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$838,000**	3,352 Acres in Longleaf Establishment	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
NRCS	☒ In-kind contribution	**$362,825**	14,513 Acres in Prescribed Burning	☒ National Forest System Lands

Fund Source: Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY23	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
	☐ Funding Budget Line Item, if relevant:			☒ Other lands within CFLRP landscape
NRCS	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$54,093**	2,847 Longleaf Pine Maintenance Activities	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
USFWS	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$7,809**	411 Acres in Longleaf Establishment	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
USFWS	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$9,063**	477 Acres in Prescribed Burning	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
USFWS	☒ In-kind contribution ☐ Funding Budget Line Item, if relevant:	**$20,000**	80 Longleaf Pine Maintenance Activities	☒ National Forest System Lands ☒ Other lands within CFLRP landscape
TOTALS	Total In-Kind Contributions: Total Funding:	**$1,910,384**		

Total partner in-kind contributions for implementation and monitoring of a CFLR project across all lands within the CFLRP landscape.

Goods for Services Match

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY23)	Totals
Total revised non-monetary credit limit for contracts awarded in FY23	$14,289.69
Revenue generated through Good Neighbor Agreements	Totals

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY23)	Totals
	$0

"Revised non-monetary credit limit" should be the amount in the "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements" as of September 30. Additional information on the Progress Reports available in CFLR Annual Report Instructions. "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 proposal and work plan.

3. Activities on the Ground

FY 2023 Agency Performance Measure Accomplishments[2] - Units accomplished should match the accomplishments recorded in the Databases of Record. Please note any discrepancies.

Core Restoration Treatments	Agency Performance Measure	**NFS Acres**	Non-NFS Acres	Total Acres
Hazardous Fuels Reduction (acres) in the Wildland Urban Interface	FP-FUELS-WUI (reported in FACTS)[3]	45,109		45,109
Hazardous Fuels Reduction (acres) in the Wildland Urban Interface - COMPLETED	FP-FUELS-WUI-CMPLT (reported in FACTS)[4]	44,015		44,015
Hazardous Fuels Reduction (acres) outside the Wildland Urban Interface	FP-FUELS-NON-WUI (reported in FACTS) [3]	0 (24,557)		24,557
Hazardous Fuels Reduction (acres) outside the Wildland Urban Interface - COMPLETED	FP-FUELS-NON-WUI-CMPLT (reported in FACTS) [4]	0 (24,557)		24,557
Wildfire Risk Mitigation Outcomes - Acres treated to mitigate wildfire risk	FP-FUELS-ALL-MIT-NFS (reported in FACTS – *NOTE: this performance measure will not show up in the CFLRP gPAS report, please report totals directly from FACTS*)	40,575 (44,201)		40,575 (44,201)
Prescribed Fire (acres)	Activity component of FP-FUELS-ALL (reported in FACTS - *NOTE: this performance measure will not show up in the CFLRP gPAS report, please report totals directly from FACTS*)	44,201		44,201
Invasive Species Treatments (acres) - Noxious weeds and invasive plants	INVPLT-NXWD-FED-AC (reported in FACTS)[3]	298 (578.5)		298 (578.5)
Invasive Species Treatments (acres) - Noxious weeds and invasive plants - COMPLETED	INVPLT-NXWD-FED-AC-CMPLT (reported in FACTS)[4]	207 (585.7)		207 (585.7)

The numbers listed in parentheses were reported but not tagged as CFLR.

[2] This question helps track progress towards the CFLRP projects lifetime goals outlined in your CFLRP Proposal & Work Plan. Adapt table as needed.

[3] For service contracts, the date accomplished is the date of contract award. For Force Account, the date accomplished is the date the work is completed

[4] New Agency measure reported in FACTS when completed

Core Restoration Treatments	Agency Performance Measure	**NFS Acres**	Non-NFS Acres	Total Acres
Invasive Species Treatments (acres) - Terrestrial and aquatic species	INVSPE-TERR-FED-AC (reported in FACTS)[3]	0 (7253)		0 (7253)
Invasive Species Treatments (acres) - Terrestrial and aquatic species - COMPLETED	INVSPE-TERR-FED-AC- CMPLT (reported in FACTS)[4]	0 (7253)		0 (7253)
Road Decommissioning (Unauthorized Road) (miles)	RD-DECOM-NON-SYS (Roads reporting)	0		0
Road Decommissioning (National Forest System Road) (miles)	RD-DECOM-SYS (Roads reporting)	0		0
Road Improvement (High Clearance) (miles)	RD-HC-IMP-MI (Roads reporting)	0		0
Road Improvement (Passenger Car System) (miles)	RD-PC-IMP-MI (Roads reporting)	0		0
Road Maintenance (High Clearance) (miles)	RD-HC-MAINT-MI (Roads reporting)	0 (127)		0 (127)
Road Maintenance (Passenger Car System) (miles)	RD-PC-MAINT-MI (Roads reporting)	0 (127)		0 (127)
Trail Improvement (miles)	TL-IMP-STD (Trails reporting)	0		0
Trail Maintenance (miles)	TL-MAINT-STD (Trails reporting)	0		0
Wildlife Habitat Restoration (acres)	HBT-ENH-TERR (reported in WIT)	55,544		55,544
Stream Crossings Mitigated (i.e. AOPs) (number)	STRM-CROS-MITG-STD (reported in WIT)			
Stream Habitat Enhanced (miles)	HBT-ENH-STRM (reported in WIT)	33.4		33.4
Lake Habitat Enhanced (acres)	HBT-ENH-LAK (reported in WIT)	2.7		2.7
Water or Soil Resources Protected, Maintained, or Improved (acres)	S&W-RSRC-IMP (reported in WIT)	7253		7253
Stand Improvement (acres)	FOR-VEG-IMP (reported in FACTS)	420		420
Reforestation and revegetation (acres)	FOR-VEG-EST (reported in FACTS)	17		17
Forests treated using timber sales (acres)	TMBR-SALES-TRT-AC (reported in FACTS)	0		0
Rangeland Vegetation Improvement (acres)	RG-VEG-IMP (reported in FACTS)	0		0

- Is there any background or context you would like to provide regarding the information reported in the table above?

The numbers listed in parentheses were reported but not tagged as CFLR.

[3] For service contracts, the date accomplished is the date of contract award. For Force Account, the date accomplished is the date the work is completed

[4] New Agency measure reported in FACTS when completed

Reflecting on treatments implemented in FY23, if/how has your CFLRP project aligned with other efforts to accomplish work at landscape scales?

There is ongoing and extensive collaboration across land ownership to encourage the restoration of longleaf pine on lands under non-FS ownership. This planning incorporates the local Longleaf Implementation Team (LIT), neighboring landowners, etc. We regularly burn in conjunction with the MS Army National Guard, as there are multiple blocks of DoD lands within the designated boundary of the De Soto Ranger District. These areas tend to be small areas of DoD lands incorporated into our prescribed fires, or slivers of FS lands incorporated into their burns, which allow for increased firefighter safety by burning to the nearest existing firelines or other barriers (creeks and roads). We regularly burn with the Mississippi Forestry Commission as well, particularly when burning through the 16th Section lands found within the De Soto Ranger District. We also incorporate other agencies and non-government organizations into our fires to enhance fire training throughout the state and beyond, as well as recruiting and training new fire professionals as they first enter the field of fire management. This enhances the existing fire community and perpetuates the knowledge and skills that are found in abundance on a district that burns as much as the De Soto Ranger District has for decades.

This year in particular had an extreme drought throughout the state, so by June, we had shifted gears from prescribed burning into a response to a very large number of wildfires, which continued well into November.

4. Restoring Fire-Adapted Landscapes and Reducing Hazardous Fuels

Narrative Overview of <u>Treatments Completed in FY23</u> to restore fire-adapted landscapes and reduce hazardous fuels, 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?

The De Soto Ranger District is a Wildland Urban Interface (WUI) area with communities and homes intermixed with the Forest. Prescribed fire treatment accomplishments were similar to those in FY22as a result of severe drought and later a statewide burn ban that lasted from June until late November. Despite this, we were able to get fire on the ground in January in most of the areas available to us, i.e., areas with Section 106 clearance, which is archeology clearance by State and/or Tribal partners. We were able to accomplish 41,293 acres last year with burning from January into early June. The availability of a drone resource helped with prescribed burning ignitions and getting harder-to-reach areas burned.

These burns were in our high priority areas focused on endangered species habitat improvement and longleaf pine restoration. Using an interdisciplinary approach, the district has developed a plan for yearly and daily prioritization of burn units. Specific locations for each burn unit, by year, cannot be specifically identified, so the district selects and clears approximately 100,000 acres of potential burns each year, and moves daily activities to the areas in which priorities are high and weather is within burn parameters for implementation. The average number of days available for prescribed fire on the De Soto Ranger District is about 35-40 per year. Each day is utilized for maximum benefit. After a burn season is complete, we produce a map showing accomplished burn areas and the departure from desired return interval in unburned areas. We aim for an overall goal of 84,000 acres of burning per year. During the last 5 years, there has been a high level of turnover in fire-qualified staffing, so the district has been training and rebuilding a new cohort of firefighters. We are currently staffed at approximately 2/3 of the desired level; it's a tribute to the level of skills and experience on the district that with this reduced staffing, our combined prescribed fire and wildfire acres add up to 3/4 of the desired target. We are training and recruiting heavily, with the goal of reaching full staffing in the next 2 years.

The following summarizes the classification criteria utilized by the Interdisciplinary Team (IDT) to develop the plan.

CLASSIFICATION CRITERIA

1) Purple – Low Priority, 8-15+ Year Return Interval

a. Close to major highways, especially up drainage from highways. From our safety engagement training, "the benefits of the work task are not worth the associated risks".

b. Ecological significance. North slopes. Steep hardwood ridges. Mesic slopes. Generally, soils and vegetation that do not require frequent fire to maintain the ecosystem. And/or, intense fire may damage the desired ecosystem.

c. Small, labor intensive, inefficient areas. Or, another phrase from the safety engagement sessions, "the juice is NOT worth the squeeze".

d. These areas that are low priority and/or low frequency for prescribed fire may in turn be high priority for other fuels treatments such as mechanical or herbicides.

2) Magenta - Very High Priority, 18 – 24-month Return Interval

a. Critical T&E habitat

i. Gopher frog pond area

ii. Buttercup flats

iii. Large areas of gopher tortoise priority soils, with gopher tortoises.

iv. Within RCW HMAs and gopher tortoise present.

v. Proposed sandhill crane habitat.

b. Critical hazardous fuels areas. (high fire occurrence, WUI, etc.)

3) Orange - High Priority, 3-4 Year Return Interval

a. The remaining parts of RCW HMAs and priority soils areas

b. Some selected longleaf dominated areas of the district that have been well maintained and should continue to be maintained by fire.

c. Some critical longleaf restoration sites

d. High density of pitcher plant bogs

e. Camp Shelby burrowing crayfish

f. Important hazardous fuels areas

4) Green - Moderate Priority, 4-7 Year Return Interval - everything else.

The following table and map utilize the above rationale, separating the burnable areas of the district into four desired return interval classifications, or “priorities”.

YEARLY PRESCRIBED FIRE GOALS BY RETURN INTERVAL CLASS

MAP COLOR	BURN PRIORITY *	AVERAGE RETURN INTERVAL GOALS (YEARS)	BURNABLE ACRES	ESTIMATED BURN ROTATION (YEARS)	GOAL ACRES PER YEAR
PURPLE	LOW	8 – 15+	80,000	11	7000
GREEN	MODERATE	4-7-Apr	103,000	6	17,000

ORANGE	**HIGH**	**3-4-Mar**	**96,000**	**3**	**32,000**
MAGENTA	**VERY HIGH**	**1 – 2**	**37,000**	**2**	**19,000**
		TOTALS	**316,000**		**84,000***

*NFMS Land and Resource Management Plan has an annual goal to accomplish 84,000 acres of prescribed burning to on the De Soto Ranger District. There's a difference in the sum of the De Soto's burn prioritization acres because each is a stand-alone priority and is subject to change due to uncontrollable climatic factors. Annually, more than 100,000+ acres in burn plans are prepared to have the flexibility to make necessary adjustments when facing unforeseen obstacles. Yet, the overall goal remains to accomplish 84,000 acres of prescribed burns on the De Soto RD.

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

- FROM FTEM (can be copied/summarized): Did the wildfire behavior change after the fire entered the treatment? *Yes, the treatments had an overall positive benefit due to the reduction of fuels.*
- FROM FTEM (can be copied/summarized): Did the treatment contribute to the control and/or management of the wildfire? *Yes, the treatments had an overall positive benefit due to the reduction of fuels.*
- FROM FTEM (can be copied/summarized): Was the treatment strategically located to affect the behavior of a future wildfire? *Yes, with most of the district in the WUI all treatment will affect fire behavior one way or another.*
- Please describe if/how partners or community members engaged in the planning or implementation of the relevant fuels treatment. Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands? *Partners are engaged in the planning phase on an annual basis at planning and collaboration meetings. Such partners are Camp Shelby JFTC, Mississippi Forestry Commission, Mississippi Department of Wildlife, Fisheries, and Parks, University of Southern Mississippi as well as CFLRP community meetings with the public at large.*
- What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns? *First priority was life and property with secondary benefit to Threatened and Endangered Species as well as restoring the Longleaf Ecosystem. Yes, by providing a reduction in hazardous fuels.*
- How are planned treatments affected by the fire over the rest of the project? Was there any resource benefit from the fire that was accomplished within the CFLRP footprint or is complementary to planned activities? *The fire reduced the fuels in that part of the project making another entry and reducing fuels even more. They will benefit the resource by getting it back to desired conditions faster.*
- What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future? *Continue to promote prescribed fire upon the landscape.*

FY23 Wildfire/Hazardous Fuels Expenditures

Category	$
FY23 Wildfire Preparedness*	$7,350 *(A)
FY23 Wildfire Suppression**	$227,000 *(B)
FY23 Hazardous Fuels Treatment Costs (CFLN, CFIX)	*(C)
FY23 Hazardous Fuels Treatment Costs (other BLIs)	$1,032,325 *(D)

*(A) Wildfire preparedness funds were reduced this year due to budget modernization and overspend the year before.

*(B) Wildfire suppression actual costs may differ than report estimates. The 10-year average for suppression until controlled is as follows, Type 134 fires cost $500-$1,000 per day, Type 4 fires cost $1,500-$2,500 per day. There were no Type 3,2, or 1 fires on the district this year.
*(C) No wildfires were managed for resource benefit. However, all wildfires were suppressed utilizing appropriate management response tactics.
*(D) Costs were estimated at $25 per acre with 41,293 acres accomplished which includes mechanical acreage as well.

* 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).
** Include emergency fire suppression and BAER within the project landscape.

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. (If not relevant for this year, note "N/A")

Wildfire occurrence on the De Soto in FY 2023 was 134 wildfires for a total of 20,538 acres. Most were contained in the initial attack phase. Fifteen (15) wildfire occurrences were in a location that had been prescribed burned in the previous 3 years, and we saw a reduction in effort to control the wildfire. Ease of suppression effort will equal a reduction in costs but quantifying that would be problematic.

Wildfire Preparedness costs are down at the local unit, primarily due to the local units no longer paying directly for fixed costs under the unified budget. Fixed costs for preparedness with salary and equipment are now covered at the regional level.
Although no wildfires were managed for resource benefits, almost all the fires produced desirable outcomes by reducing fuel loads, and maintaining a longleaf ecosystem, or by changing the ecology to move more towards a longleaf favorable condition.
No BAER requests were made for any of these wildfires.

In addition to cost reduction and reduced fire behavior within treated areas, treatments also provided better conditions for firefighters alongside treated areas. Despite extreme drought conditions, few of the fires spotted across firelines and out into treated areas. So even when wildfires were not directly within treated areas, the treatments improved the success of suppression efforts nearby.

5. Additional Ecological Goals

Narrative Overview of <u>Treatments Completed in FY23</u> to achieve ecological goals outlined in your CFLRP proposal and work plan. This may include, and isn't limited to, activities related to habitat enhancement, invasives, and watershed condition.
While not one of our ecological goals, one thing we did encounter this year was an uptick in SPB infected areas. This presented a new challenge for our district which has not been known for its southern pine beetle outbreaks due to the strong long leaf pine ecosystem. Given the severe drought we've had, hundreds of acres of stressed trees, both mature, and young stands of timber were killed by SPB attacks within our district. Utilizing CFLRP dollars, we were able to get cut and removal contracts in place in a timely fashion to combat our worst areas and slow the spread of the southern pine beetle.

One of our biggest ecological goals this year has been bog restorations. Taking advantage of the unusual drought that we encountered this year, NDA was able to commence logging operations in these areas that are prone to holding a lot of water (i.e., pitcher plant bogs). Given the three-month drought that we had, they were able to cut out several units before the next upcoming rain season. Not only did this help us come closer to our original goal of bog restoration, but overall ecological and ecosystem restoration as well.

6. Socioeconomic Goals

Narrative overview of activities completed in FY23 to achieve socioeconomic goals outlined in your CFLRP proposal and work plan.

- Examples may include activities related to community wildfire protection, contribution to the local recreation/tourism economy, volunteer and outreach opportunities, job training, expanding market access, public input and involvement, cultural heritage, subsistence uses, etc.

Through collaboration efforts, partners we were able to reach across state lines and have a supplemental partnership agreement with the National Deer Association (NDA This year a stewardship agreement was established to administer a timber sale and provide service work for mutual benefits as the non-profit organization develops more partnerships and expands their portfolio. The current and future stewardship projects may deliver approximately 10 years of stable work, ultimately providing more jobs and more revenue to the local communities. We were able to utilize several contracts using CFRLP funds in preparation for FY24 timber sales.

Results from the Treatment for Restoration Economic Analysis Toolkit (TREAT). For guidance, training, and resources, see materials on Restoration Economics SharePoint.[7] After submitting your data entry form to the Forest Service Washington Office Economist Team, they will provide the analysis results needed to respond to the following prompts.

Percent of funding that stayed within the local impact area: 100%

See "Full Project Details" tab cell D13. If you have the % of funding through agreements that stayed local, please note.

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

Description	Project Percent
Equipment intensive work	15%
Labor-intensive work	45%
Material-intensive work	10%
Technical services	10%
Professional services	5%
Contracted Monitoring	15%
TOTALS:	100%

Modelled Jobs Supported/Maintained (CFLRP and matching funding):

[9] Addresses Core Monitoring Question #10

Jobs Supported/Maintained in FY 2023	Direct Jobs (Full & Part-Time)	Total Jobs (Full & Part-Time)	Direct Labor Income	Total Labor Income
Timber harvesting component	**30**	**37**	**1,798,367**	**2,187,969**
Forest and watershed restoration component	**1**	**1**	**34,800**	**49,424**
Mill processing component	**52**	**105**	**3,405,903**	**6,088,082**
Implementation and monitoring	**1**	**1**	**17,751**	**24,458**
Other Project Activities	**0**	**0**	**8,368**	**10,764**
TOTALS:	**84**	**144**	**5,265,189**	**8,360,697**

- **Were there any assumptions you needed to make in your TREAT data entry you would like to note here? To what extent do the TREAT results align with your observations or other monitoring on the ground**?
  No assumptions

Please provide a brief description of the local businesses that benefited from CFLRP related contracts and agreements, including characteristics such as tribally-owned firms, veteran-owned firms, women-owned firms, minority-owned firms, and business size.[8] For resources, see materials here (external Box folder).

- Please describe (with as much quantitative detail as possible) the number and characteristics of entities successfully receiving contracts and/or agreements for CFLRP implementation and/or monitoring.

The National Deer Association (NDA – a non-government organization) has signed another Stewardship Agreement with us to further facilitate a 10-year project in ecosystem restoration and management. The work outline in the agreement includes harvesting over 2,200 acres and over 35,000 CCF in timber volume. NDA is currently contracting thinning activities and bog restoration to a local logging business, James R. Fincher Timber Co., Inc in Wilmer, Alabama. Future years will involve additional contracting for additional thinning and bogs, tree planting, NNIS treatments, etc.

7. Wood Products Utilization

Timber & Biomass Volume Table[9]

Performance Measure	Unit of measure	Total Units Accomplished
Volume of Timber Harvested TMBR-VOL-HVST	CCF	16,500
Volume of timber sold TMBR-VOL-SLD	CCF	37,123
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	0 (11,247)

- Reviewing the data above, do you have additional data sources or description to add in terms of wood product utilization (for example, work on non-National Forest System lands not included in the table)?
- The official report number of Green tons are 0, the number in parentheses has not been tagged in CFLN.

We are utilizing more weight scale timber sales for our district. In recent years, the timber market has not been favorable for large scale and conventional sales due in large part of the value of timber. We are opting to use more stewardship instruments and long-term contracts and projects. This also benefits the fire program; with reduced

[10] Addresses Core Monitoring Question #11

marking of trees, the district is able to maintain prescribed burning through timber sale areas. This prevents areas from backsliding into poorer condition if the timber sale extends repeatedly (due to weather, pandemic, etc.). Conventional leave-tree or removal marking has meant that a sale area cannot be burned for as long as ten years in some cases.

[8] Addresses Core Monitoring Question #8

8. Collaboration

Please include an up-to-date list of the core members of your collaborative if it has changed from your proposal/work plan or last annual report (if it has not changed, note below).[10] For detailed guidance and resources, see materials here. Please document changes using the template from the CFLRP proposal and upload to Box. Briefly summarize and describe changes below.

No Changes

9. Monitoring Process

Briefly describe your current status in terms of developing, refining, implementing, and/or reevaluating your CFLRP monitoring plan and multiparty monitoring process.

Extensive collaboration with partners, other agencies, and the public was conducted during the process of completing our Healthy Forest Restoration Act (HFRA) EA for Longleaf Pine Ecosystem Restoration and Hazardous Fuels Reduction (2020). This EA authorizes most of the CFLRP and high priority accelerated ecosystem restoration activities. Many of the same collaborators were involved in the CFLRP proposal process. We strongly value our relationship with our collaborators and provide open access to our projects at any phase of development or implementation. Some of these relationships and associated monitoring are discussed in the answers to questions below.

Informal multi-party monitoring has been conducted on an annual basis by hosting collaborative team field trips to view actual on the ground successes and challenges. When possible, partners, congressional staffers, researchers, members of the public, and representatives from our sister agencies join De Soto Ranger District specialists on site visits to ecosystem restoration areas to have open honest dialogue and discussion about site selection, design criteria for resource protection, restoration methodologies, and expected versus actual results. Sometimes these field outings are addressing specific needs about threatened and endangered species habitat restoration techniques as part of overall collaboration and responsiveness to working factions of the collaborative group. During these field expositions, input is gathered both verbally and in writing via open conversation and survey/comment forms for site locations and types. Seeing is believing, and we find this collaborative approach to reviewing and planning our work gives the best opportunity for gathering information pertinent to attainable and sustainable restoration practices. Formal monitoring is also a topic of conversation during these field excursions and inputs and outputs are discussed throughout the day. Formal monitoring is discussed below.

The University of Southern Mississippi, The Nature Conservancy, Mississippi Army National Guard, and USGS are

[10] Addresses Core Monitoring Question #11

involved in formal monitoring protocols.

[10] Addresses Core Monitoring Question #11

The Nature Conservancy (TNC) and Camp Shelby

The De Soto Ranger District and the Mississippi Army National Guard (a member of our collaborative team) have a long history of working together to ensure protection of the Forest on the 117,000 acres of land utilized under special use permit for training troops. Collaboration between agencies has provided valuable data on federally threatened and endangered species as well as Forest Service sensitive species on the De Soto Ranger District. The Nature Conservancy Camp Shelby Conservation Program provides rare species and habitat monitoring services for the Mississippi Army National Guard on Forest Service, Department of Defense and State of Mississippi lands included within the Camp Shelby Joint Forces Training Center boundaries.

The Nature Conservancy monitoring focuses on the following species and their habitat: Louisiana quillwort (federally listed as endangered), gopher tortoise (federally listed as threatened), black pine snake (federally listed as threatened), Camp Shelby burrowing crayfish (lives in pitcher plant bogs - monitoring required as part of US Fish and Wildlife Service agreement to remove from candidate status), and cogon grass and kudzu (invasive species). This monitoring is funded by the Department of Defense National Guard Bureau and annual reports are provided to the De Soto Ranger District. Because the areas monitoring includes activities associated with accelerated restoration (prescribed fire, thinning, hazardous fuel reduction, etc.), this information is valuable for assessing effects of various treatments on a large portion of our landscape.

Forest Service Monitoring across the Landscape of De Soto Ranger District

The De Soto Ranger District monitors RCW populations on our Forest. We also collect and review annual bird point data. Every 5 years, a district wide gopher tortoise survey on gopher tortoise priority soils is conducted via contract. We also collect data on fuel loading and fuel reduction associated with prescribed burning. The De Soto also began a black pine snake monitoring program with TNC on the southern portion of the District this year. A catalog of species caught in the traps is maintained by District Personnel. Many species of snakes, rodents, frogs, lizards, and salamanders were cataloged. A description of our overall management and treatment effectiveness on the landscape can be extrapolated when all the data from partners, contractors, and Forest Service work are gathered and reviewed.

University of Southern Mississippi

The University of Southern Mississippi (USM) has entered into 2 Challenge Cost Share Agreements with the De Soto Ranger District. These agreements utilize the skill and expertise of this nearby institution to monitor and study the effects of specific restoration efforts identified in our CFLR Proposal. Several departments at USM were part of the collaborative team for the De Soto CFLR proposal and now play a greater role in monitoring effects on the landscape. The monitoring of CFLR and high priority accelerated ecosystem restoration activities in these agreements has been designed to provide descriptive data for tracking and analyses of project effectiveness. A past agreement incorporated dendrochronology research to help inform current prescribed burning management practices. Results of this dendrochronological fire scar study are available at this link below:

https://aquila.usm.edu/cgi/viewcontent.cgi?article=1142&amp=&context=masters_theses&amp=&sei-redir=1&referer=https%253A%252F%252Fwww.bing.com%252Fsearch%253Fq%253Ddendrochronolgoy%252Bde%252Bsoto%252Bnational%252Bforest%2526src%253DIE-SearchBox%2526FORM%253DIESR4N#search=%22dendrochronolgoy%20de%20soto%20national%20forest%22

Currently, USM biology and geology staff are collecting data from shared monitoring points on the De Soto Ranger District. These monitoring points are in areas planned for or currently experiencing CFLR and high priority accelerated ecosystem restoration activities. USM is collecting soil samples to conduct and provide analyses for organic matter, total nitrogen, extractable phosphorus, pH, moisture content, particle size, fungi, microorganisms, and other parameters requested by the Forest Service as the project progresses.

USM is also collecting and analyzing data from monitoring sites regarding vegetation structure and composition including but not limited to species identification, species diversity, species richness, canopy cover, litter type and depth, stem counts, pollinator diversity and herbaceous understory cover in treated and untreated areas. Photo points are also utilized as part of the monitoring process.

Results of this monitoring will be used to support or modify current and future treatments on the landscape based on observable changes through the longleaf ecosystem restoration process and associated hazardous fuel reduction. Results are still being analyzed with only a couple of years of post-treatment data in most cases.

Air Quality

Local Sources of Technical Information
The Southern Research Station and Harrison Experimental Forest are conducting research related to Longleaf Pine Restoration, Carbon Sequestration, and Long-Term Climate Change. The De Soto has facilitated timber sales, site preparations, and reforestation efforts for this project. Although these studies are not specifically monitoring our restoration efforts, the information provided from these local studies may inform decision making and management on the De Soto Ranger District. This type of expertise is beneficial to have on our Forest.

Monitoring sites are spread out across the district. Treatment implementation cycles take time. Actual measured and potentially significant results of monitoring will paint a picture of treatment effectiveness, but this is a long-term project. We are implementing treatments and conducting monitoring and awaiting results patiently.

10. Conclusion

Describe any reasons that the FY 2023 annual report does not reflect your proposal or work plan. Are there expected changes to your FY 2023 plans you would like to highlight?

We do not expect big changes, but the late arrival of funds coming to us in the FY put us in a bind to get contracts out in time. We've experienced heavy drought, which slowed down a lot of production in some areas, namely our prescribed burn program. This also affected the timetable from which the contracts can get out and get started to meet their deadlines, but we made the most of it and we're hoping to continue our work and being successful in reestablishing and improving the health of our long leaf pine ecosystem.

Signatures

Recommended by (Project Coordinator(s)): /s/Antoine L. Bonner

Approved by (Forest Supervisor(s)):

Shannon B. Kelardy Digitally signed by SHANNON KELARDY Date: 2023.12.14 19:04:52 -06'00'

Draft reviewed by (collaborative representative):

TAMARA CAMPBELL Digitally signed by TAMARA CAMPBELL Date: 2023.12.15 10:42:30 -06'00'