Zuni Mountains CFLRP (CFLR012)

Cibola 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
CFLN20	*$ 59,096.00*
CFLN21	*$518,709.00*
TOTAL	***$577,805.00***[1]

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.

Fund Source – (Forest Service Salary and Expense Match Expended)	Total Funds Expended in Fiscal Year 2021
NFSE21	*$498,081.00*[2]
TOTAL	**$**

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
NFHF	*$1,500,000.00*
CFTM	*$ 300,195.00*
TOTAL	***$1,800,195.00***[1]

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
Forest Health Initiative – Private Lands Forest Conservation Treatments	☒ **In-kind contribution** ☐ **Funding**	**$19,961**	***Two properties in McKinley County between Fort Wingate and Ramah***	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape: Private lands**

[1] CFLN Funds Expended and FS Discretionary Matching Funds totals come from the Cibola NF 2021 Workplan: !CFLN012 Zuni Mountain 3. Project Implementation

[2] FS Salary and expense match comes from an internal analysis of personnel time used in support of implementing projects on the Zuni Mountain CFLR 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
Mount Taylor Manufacturing	☐ **In-kind contribution** ☒ **Funding** Budget Line Item, if relevant: [1]	***$120,000***	***1/3 of 3-year 2021 CFRP Utilization Grant for equipment at its Milan processing site***	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Forest Stewards Youth Corps – Mt. Taylor Summer Crew	☒ **In-kind contribution** ☐ **Funding**	***$35,000***	***9 weeks of conservation projects (fire line, tree marking, trails, recreation, etc.) in the landscape***	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Forest Stewards Youth Corps – Mt. Taylor Summer Crew	☒ **In-kind contribution** ☐ **Funding**	***$35,000***	***9 weeks of conservation projects (fire line, tree marking, trails, recreation, etc.) in the landscape***	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Forest and Watershed Restoration Act	☒ **In-kind contribution** ☐ **Funding**	***$500,000***	***500 acres of treatments on private lands through thinning and mastication to support MTM and K&B Timberworks***	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape: Private lands**
NWTF – Unclaimed overhead as match	☒ **In-kind contribution** ☐ **Funding**	***$848,282***	***Negotiated reduction in NICRA to pay for treatments on the ground.***	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
TOTALS	**Total In-Kind Contributions:** ***$1,523,243*** **Total Funding:** ***$4,399,324***			

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
Timber Stand Improvement	*$19,000*
Revenue generated through Good Neighbor Agreements	**Totals**
N/A	$

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 FY2021, 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.*

The Zuni Mountain Landscape (ZML) was identified as one of 10 Shared Stewardship Priority Landscapes (Focal Areas) identified in New Mexico. This designation will help to secure state funding made available through the New Mexico Forest and Watershed Restoration Act (FAWRA). An agreement has been executed to perform 164 acres of thinning in FY22 where material will be made available to the public for fuelwood. It is expected that FAWRA will continue to fund similar treatments annually for the next 5-10 years.

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**.

FY2021 Overview

FY21 Activity Description (Agency performance measures)	**Acres**
Number of acres treated by prescribed fire	*1,700*
Number of acres treated by mechanical thinning	*782*
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	*0*
Number of acres mitigated to reduce fire risk	*2,482*

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?

After being completely shut down on NFS lands in FY20 due to the Mexican spotted owl (MSO) injunction, harvesting operations resumed in December of 2020. Two ponderosa pine units (McQue 1 & 2), totaling 782 acres were harvested and accepted in FY21 (Figure 1). In addition, approximately 1,700 previously thinned acres were prescribe burned to reduce activity fuels and reintroduce low-intensity surface fire back into the landscape (Figure 2). Ecologically the burn was a low intensity second entry burn that recycled nutrients, was at an appropriate return interval for ponderosa pine, retained seedlings and saplings, retained old and large trees, and both left and created ecologically important large standing and down woody debris, and tree torching (Copperton Fire Effects Monitoring Report, Krasilovsky & Leslie 2021).

The pace and scale of restoration has expanded over time since 2012. One key enabling factor has been the 10-year stewardship agreement (renewed in 2017) with the National Wild Turkey Federation, which has provided an instrument to accept year-end dollars and create a pipeline of acres for future treatment. Production increased from 2020 once the injunction was lifted, but effects from the pandemic lingered in the form of difficulty hiring or rehiring key personnel working in the woods and on the manufacturing side. Mechanically treated acres are expected to ramp back up to 1,000-1,500 acres in FY22.

Figure 1. McQue Unit 1 Thinning – utilizing group selection silvicultural method to move from even- toward desired uneven-aged future conditions (December 2020).

- **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.

  Areas to be treated are all under approved NEPA Decisions (Bluewater EIS and Puerco EA). In the Zuni Mountain Landscape, restoration treatment areas (thinning and burning) are selected through a collaborative process with the Forest/District interdisciplinary team, considering forest structure, condition, fire history, departure, and access. The McQue units were selected for treatment in FY21 when the MSO Injunction was lifted in late October 2020 because of their easy, year-round access. We will continue working with our partners to select economically feasible areas for treatment within priority watersheds and habitats using a shared stewardship approach. Treatments align with both Cibola and McKinley County CWPP priorities.

  In general, prescribed burning is performed within 3-5 years after commercial treatment, which is the primary way in which prescribed burning has been prioritized for the ZML. Prescribed burning, like the mechanical treatments, are progressing from east to west across the CFLRP footprint. The 2021 Copperton prescribed burn utilized aerial ignitions to cover a larger area while still achieving desired

fire effects. Use of aerial ignitions has allowed the fire program to catch up with mechanical treatments to the point where they are only 2-3 years behind initial treatment and public fuelwood gathering.

Figure 2. Copperton Prescribed Burn – 2nd entry low intensity surface fire (2021).

- **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.?

All scheduled treatments within the Zuni Mountain CFLRP occur within moderate wildfire hazard areas, according to the 2020 Wildfire hazard Potential Map. The McQue and Copperton restoration treatments both occur within WUI and are directly adjacent to private inholdings within the Forest (Figure 3).

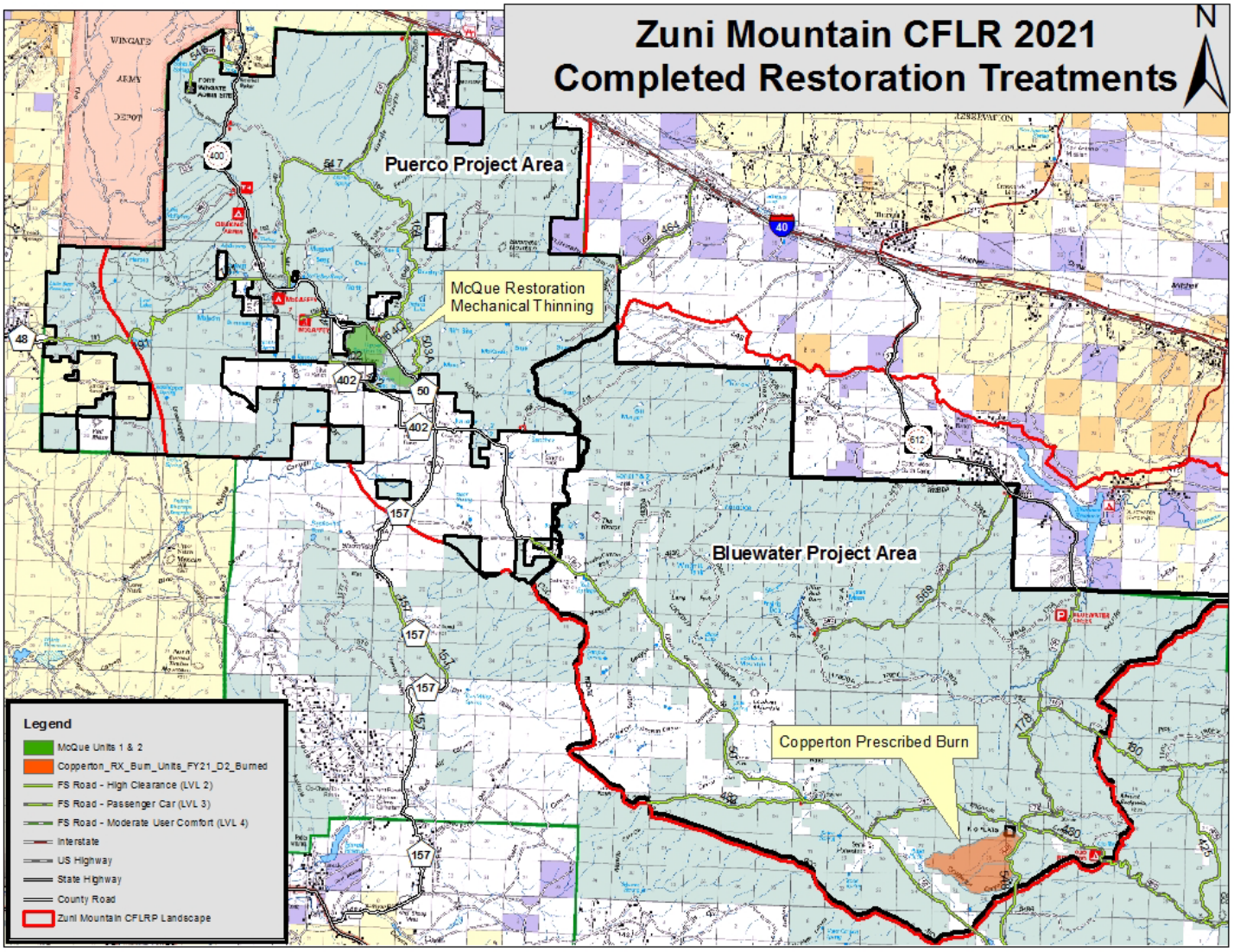


Figure 3. McQue Thinning and Copperton Rx Burn Units (private land shown in white).

- **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.

Costs tend to decrease as the project scale increases, which is especially true for prescribed burning. The use of aerial ignitions has reduced overall costs through the ability to treat significantly larger areas in less time. This has dramatically reduced the backlog and the exposure time for fire fighters actively involved in ignition operations. As treatments have progressed to the east, farther away from the mill, and transportation costs have increased we modified the stewardship agreement to account for the additional costs in 2019. Prioritizing mechanical treatments by proximity to the mill served to keep costs down, but it was inevitable that treatment costs would increase over time and distance. One benefit that was realized from the McQue Units was that logs could be hauled over paved roads most of the way, decreasing wear and tear on the trucks. Although the travel distance increased, the haul time was slightly reduced and the cost for road maintenance on NFS roads also decreased.

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.

Expenditures

Category	**$**
FY21 Wildfire Preparedness[3]	*$334,909*
FY21 Wildfire Suppression[4]	*$196,625*
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	*n/a*
FY21 Hazardous Fuels Treatment Costs (CFLN)	*0*
FY21 Hazardous Fuels Treatment Costs (other BLIs)	*$198,560**

* 2,482 acres at an average cost of $80/acre

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.

All the mechanical restoration treatments in ponderosa pine reduce density, canopy cover, and alter the arrangement of trees to more historical levels that reduces crown fire potential and supports low-intensity surface fire. When a fire does occur within a treated area, it is much easier to contain and control. Although the effectiveness of most forest restoration treatments in the ZML have not been truly "tested" by wildfire, a 2018 wildfire burned through a 500-acre fuel reduction treatment (Salitre Mesa) and the fire dropped to the surface without severe fire effects[5]. See the link below to view a photo series of postfire pictures. It is reasonable to assume that similar effects can be expected in treated areas across the landscape, which reduces the cost of suppression and provides greater ability to manage wildfire for resource benefits.

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 report **Economic Impacts from the USDA Forest Service's Collaborative Forest Restoration Program (CFRP) 2001-2016** came out in 2021. This report quantifies the CFRP's contribution to the state's economy. It provides an in-depth overview of the economic outcomes and impacts from 200 CFRP awards initiated during the 2001- 2016 fiscal year period. The primary purpose of the report is to determine what resulted from the Forest Service's investment of $60,874,032 in funding that was provided to four types of entities: private companies, non-profit organizations, tribes, and quasi-governmental agencies.*
https://foreststewardsguild.org/wp-content/uploads/2021/08/CFRP_EconomicReport_2021_Final.pdf

Most of the years covered by this report pre-date the 2012 CFLRP award, but there were several CFRP grants that were awarded to the Forest Steward's Guild (non-profit) and Mount Taylor Manufacturing (Private company) that accomplished work on the ground within the ZML and purchased equipment which allowed for increased production and more efficient processing of material coming out of the ZML. These investments

[3] 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).

[4] 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.

[5] Postfire_Photo_Series_Bluewater_Fire_Salitre_4_26_2018_sm.pdf (squarespace.com)

directly support fuels and restoration treatments that allow for the reintroduction of low-intensity surface fire which reduces overall suppression costs.

National Forest	*Grant Money Received*	*Total Leveraged Amount*	*Direct*	*Indirect*	*Induced*	*IMPLAN Output Totals*	*Multiplier*
Cibola	*$8,195,893*	*$64,449,339*	*$64,443,658*	*$25,386,932*	*$16,865,513*	*$106,696,103*	*13.02*

Forest Service CFRP county impacts by National Forest.

County	*Grant Money Received*	*Total Leveraged Amount*	*Direct*	*Indirect*	*Induced*	*IMPLAN Output Totals*	*Multiplier*
Cibola	*$1,076,400*	*$30,893,975*	*$30,523,646*	*$10,068,575*	*$2,698,730*	*$43,290,950*	*40.22*
McKinley	*$1,077,479*	*$1,981,980*	*$2,002,968*	*$9,535,774*	*$1,344,100*	*$12,882,443*	*11.96*

USFS CFRP county impacts.

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.

- Include expenses in wildfire preparedness and suppression, where relevant
- Include summary of BAER requests and authorized levels within the project landscape, where relevant

There were a total of 5 ignitions within the ZML, totaling almost 16 acres. Because of COVID-19 restrictions, all fires were promptly suppressed and not considered for managing for resource benefit. Costs are included in the Expenditures Table above.

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.*
- *Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands within or adjacent to the CFLR landscape?*
- *What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns?*
- *Did the treatments do what you expected them to do? Did they have the intended effect on fire behavior or outcomes?*
- *What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future?*

No fires interacted with previously treated areas in 2021 within the CFLR boundary.

If a wildfire occurred within the CFLR landscape on an area planned for treatment but not yet treated:

- 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.*

No wildfires occurred within the CFLR landscape on an area planned for treatment but not yet treated in 2021. The 16 acres that burned in wildfires were all outside of planned treatment areas.

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.[6]

The Cibola National Forest, the Forest Stewards Guild, and project partners continued to collect socioeconomic data for TREAT as well as for the additional socioeconomic monitoring that occurs every project year. In gathering the numbers and percentages for use in TREAT, the Guild contacted all available relevant entities and asked for direct and specific information. Due to the Mexican Spotted Owl injunction ending on October 28th, 2020, treatments on State and private land played an important role in the early part of FY 2021 and were essential to maintaining employment and financial stability of local mills. To capture the social and economic effects of treatments on private land, we interviewed additional project partners. The data gathering and associated interviews were consistent with previous year's methods. Data collected in interviews was shared with Forest Service Economists as "local economic data" as per TREAT instructions.
Treatments completed on private lands within the Zuni Mountain CFLR boundary were funded through the Forest and Watershed Restoration Act, administered by New Mexico State Forestry. In fiscal year 2021, over 500 acres were completed. Wood supplied through these treatments on private land stabilized approximately 16 jobs at the Keller Lumber Company and 32 jobs at Mount Taylor Millworks.

Project Details" Tab, what percent of funding was used for contracts within the local impact area? (**see cell D13**).[7] 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	46%
Labor-intensive work	46%
Material-intensive work	1%
Technical services	6%
Professional services	
Contracted Monitoring	1%
TOTALS:	**100%**

[6] *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?

[7] 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.

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.[8]

Mount Taylor Manufacturing (MTM) (https://www.mttaylormanufacturing.com/) receives all the commercial timber produced from the ZML. MTM consists of a sawmill located in Milan, NM and a wood processing and manufacturing plant based out of Albuquerque that produces wood pellets, garden mulch, animal bedding, playground chips, and smoker pellets. The CFLRP landscape provides employment to Navajo communities surrounding the project landscape. Approximately 72% of the Mt. Taylor Millworks workforce is Navajo.

The woods operations are handled by Forest Fitness (http://www.forestfitness.com/about.html), a New Mexico based landscape scale restoration company that specializes in applied restoration and regulatory planning services. Both employ all local people, many of which live in adjacent tribal communities. Both companies buy locally and utilize local businesses for supplies and services to keep their operations going.

Maintaining and creating restoration related jobs through thinning operations and wood processing at MTM that will continue to provide sustainable well-paying jobs to surrounding local communities. Local natural resource crews that have trained and gained experience through work implemented in the ZML, such as Alamo and Ramah Navajo, will continue to be prioritized for non-commercial thinning operations and commercial fuelwood permits. Additional opportunities with the Breadsprings Chapter of Navajo Nation will be initiated on adjacent lands included within the expanded CFLR footprint.

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	28	74	$617,920	$2,862,849
Forest and watershed restoration component	23	36	$916,137	$1,439,020
Mill processing component	35	60	$1,057,222	$3,152,855
Implementation and monitoring	5	6	$142,078	$164,270
Other Project Activities	0	0	$16,532	$23,096
TOTALS:	**90**	**176**	**$2,749,888**	**$7,642,089**

According to 2020 employment numbers for Cibola County, (Bureau of Labor Statistics, Dec 2020) there were 7,172 people employed and the Zuni Mountain CFLRP employs about 1.25% of them directly. This is equivalent to 3,875 people in Bernalillo County, the largest county in New Mexico. Even though the numbers seem small these jobs have a huge impact in the local area. (https://www.bls.gov/regions/southwest/news-release/countyemploymentandwages_newmexico.htm)

[8] This information is publicly available through usaspending.gov, there are other firm characteristics that may be more relevant for your CFLRP project or important for tracking over time.

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.

In addition to TREAT, the Forest Stewards Guild also track jobs directly through surveys and interviews with contractors and other employers working on restoration in the landscape. Full time equivalent (FTE) does not always tell the whole story regarding jobs and economic impact. With a single FTE multiple people may have benefited from the wages and training that one FTE represents. The Forest Stewards Youth Corps (FSYC) is a good example of this. While the program only accounted for .7 FTE due to its seasonal nature, four young people were employed and gained skills and experience working in the Zuni Mountains CLFR landscape that will help them find employment in the future. Furthermore, this .7 FTE is supported by leveraged funding from the state of New Mexico and private foundations.

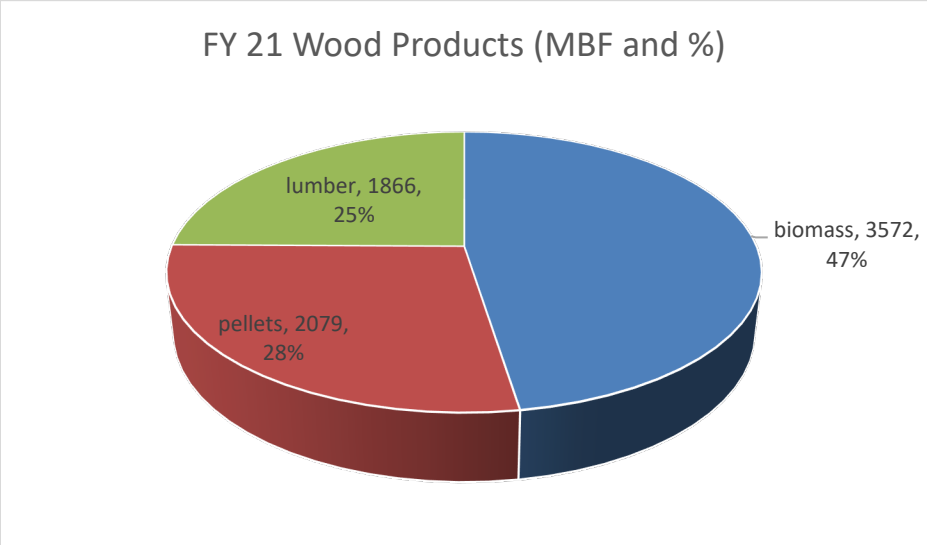
When you compare the total FTE accounted for in surveys and interviews in the table below, in many sectors there were more than four times as many people as there are indicated by the FTE. It is also encouraging that the ratio of FTE to individuals employed is the highest for the mill processing and harvesting & trucking sectors. This indicates that those jobs are closer to full time as opposed to seasonal, which provides more stable employment and better economic conditions for local workers. Furthermore, "individuals employed" does not consider staff turnover meaning that if the ratio were calculated using FTE to positions the ratio would likely be higher and further indicate more stable employment in those sectors.

FY 2021 Jobs and Wages				
Employment Sector	Full-Time Equivalent	Wages	Number of People Employed	Ratio of Jobs to FTE
Harvesting and Trucking	4.8	$214,066.00	22	0.22
Youth	0.7	$14,760.00	4	0.17
Mill Processing	27.0	$803,349.00	33	0.82
Monitoring	0.57	$30,773	6	0.10
Total	**33.1**	**$1,062,948.00**	**65**	**0.51**

The Zuni Mountains CFLRP continued to provide important training and workforce development opportunities in FY 2021. As stated above, the Forest Stewards Youth Corps (FSYC) on the Mt. Taylor Ranger District provides natural resource management training to youth between the ages of 15-19 as well as a valuable workforce to projects within the Zuni Mtns. landscape. In addition to the FSYC crew, in 2021, the Guild administered a 4-person marking crew as part of their work on the Zuni Mountains CFRP. This crew works within the project landscape and leverages CFRP funding toward the goals of the CFLRP. In 2021, this crew helped prepare 100s of acres for prescribed fire within the project landscape while receiving valuable skills, including tree planting

training. Following the marking crew, funding leveraged from the Zuni Mtns. CFRP supported the continued employment of 10 Administratively Determined (AD) employees during the shoulder season. This continued employment during the shoulder season made these employees available for prescribed fire implementation and increased the restoration capacity across the forest. This 10-person AD crew supported over a thousand acres of prescribed fire across the forest.

The efficient and creative use of small diameter wood in the Zuni Mountains continued in FY 2021. Each of these divisions is supported by and in turn supports utilization of woody biomass generated by restoration work in the CFLR. The pie chart below provides a breakdown of the types of products being created.



The network of partnerships and collaboration developed through the Zuni Mountains CFLRP helps to fill capacity gaps within the project landscape by connecting the right resources at the right places and times to keep project implementation on track. Increased communication and cooperation amongst local agency representatives and organizations is a valuable improvement to the socioeconomic conditions surrounding the Zuni Mountain project area. In FY 2021, one example of a partnership supported by the Zuni Mountains CFLRP was the Native Plant Society's contribution to monitoring understory plant diversity. Two representatives of the Native Plant Society volunteered 3 days of their time to conduct understory monitoring at 7 permanent plots within the project landscape. The Native Plant Society's contribution in 2021 represents a decade-long relationship between the Native Plant Society and project partners and the strong multiparty monitoring process within the Zuni Mountains Collaborative.

The collaborative met during FY 2021 to complete an extension application for the Zuni Mtns. project. Project partners provided testimonials about how they perceive the impact of the project. Members offered the following perceptions:

- *"The Zuni Mountains CFLR has helped native plant species to thrive." -Sue Small, NM Native Plant Society, Conservation Committee Chair*
- *"Living alongside the Zuni Mountains in the Timberlake subdivision, I really appreciate the improvements to the forest including wildfire protection and improved habitat for wildlife. The Zuni*

Mountains CFLR has provided much needed job opportunities for the local community." -Ron Schali, Teacher and Resident in the landscape.

- *"This is one of the top 10 landscapes identified in the recently published New Mexico Forest Action Plan. This is receiving much more attention than simply Federal Funding. The State of NM has committed a high amount of funding to augment projects in this critical watershed." -Todd Haines, District Forester, Bernalillo District, NMSFD.*
- *"The collaborative process associated with the Zuni Mountains project has provided a forum for a diverse group of stakeholders to connect. This is a huge investment toward future partnerships and the relationships that are essential to solving all kinds of climate-related problems including catastrophic wildfire." -Gabe Kohler, Forest Steward's Guild.*

*In addition to the relationship building opportunities within the ZMC, the Zuni Mtns. CFLRP webpage provides an important online platform for sharing information across the project landscape, including: job opportunities, field tour announcements, project updates, and more. In FY 2021, over 800 people visited the collaborative's webpage (*Zuni Mountains Collaborative*).*

Community Benefits	**How CFLR and related activities have benefitted ZML community(ies) from a social and/or economic standpoint**	**Links to reports or other published materials (if available)**
Contributions to the local recreation/tourism economy	*Mt. Biking continues to become an important source of recreation and tourism dollars in the Zuni Mountains, benefitting Cibola and McKinley County, as well as the Cities of Grants and Gallup. Events such as the 24-hours in the enchanted forest, the Quartz Crusher, and the Zuni Mountain 100 draw cyclists from around the Southwest to the Zuni Mountains. Trail improvements, realignments, and new signage continue on the Puerco side of the CFLR. It is often beneficial to complete restoration work before trail improvements to minimize mitigation and rehabilitation, and better fit them into the newly restored landscape*	*The 1st article is from 2017 but the work described for the Zuni Mountains Trails Project is ongoing through partnerships with local cities, governments, and user groups.* https://www.abqjournal.com/1024514/zuni-mountain-network-aims-to-become-the-ultimate.html https://www.mtbproject.com/trail/532931/zuni-mountain-100-route https://www.cibolatrails.org/zuni-mountain-trails
Relationship building/collaborative work	*In 2021, partnerships supported through the Zuni Mountain CFLR contributed to improve social and economic condition in the project landscape. While treatments on federal land were stalled due to the Mexican Spotted Owl injunction in 2020, New Mexico State Forestry worked quickly with local contractors to stabilize wood processing infrastructure through treatments on private lands in the Zuni Mountain project boundary using funding through the state's Forest and Watershed Restoration Act. Cottonwood Gulch and an organization called Chizh for Cheii continue to partner and provide food and fuelwood to Navajo Nation elders. Cottonwood Gulch has partnered with Fire Adapted Communities New*	*This blog post shares more information about New Mexico State Forestry's role in stabilizing wood processing jobs in the Zuni Mountain landscape:* http://www.zunimountainscollaborative.org/blog/2020/1/14/successful-collaboration-and-brave-use-of-a-new-authority-securing-a-future-for-mt-taylor-millworks *This newsletter shares more information about Cottonwood Gulch's partnership with Chizh for Cheii and the Navajo and Hopi Families Covid-19 relief effort to provide food and fuel wood to Navajo communities*

Community Benefits	How CFLR and related activities have benefitted ZML community(ies) from a social and/or economic standpoint	Links to reports or other published materials (if available)
	Mexico to host a learning exchange for Gallup/Grants forestry and fire professionals and community leaders about landscape wildfire risk reduction treatments in the project landscape.	*within the Zuni Mountain landscape:* https://www.cottonwoodgulch.org/partnerships-that-meet-community-needs/ *This blog post shares more information about the Fire Adapted Communities learning exchange that The Forest Stewards Guild hosted in partnership with Cottonwood Gulch to provide an opportunity for peer-learning about wildfire adaptation amongst organizations, agencies, and private landowners in the Zuni Mountains landscape:* https://facnm.org/news/2019/12/2/the-western-jemez-and-gallup-grants-learning-exchanges-a-review-9blrx

5. Based on your project monitoring plan, **describe the multiparty monitoring process.** *Consider:*
   - *What parties (who) are involved in monitoring, and how?*
   - *What is being monitored? Please briefly share key broad monitoring results and how results received to date are informing subsequent management activities (e.g. adaptive management), if at all. What are the major positive and negative ecological, social and economic shifts observed through monitoring? Any modifications of subsequent treatment prescriptions and methods in response to these shifts?*
   - *What are the current weaknesses or shortcomings of the monitoring process? How might the CFLRP monitoring process be improved? (Please limit answer to one page.).*
   - *Please provide a link to your most up-to-date multi-party monitoring plan and any available monitoring results from FY21.*

The multiparty monitoring process within the Zuni Mountains CFLRP is led by the Forest Stewards Guild and includes, Cibola National Forest, the Native Plant Society, Great Old Broads for Wilderness, New Mexico Forest and Watershed Restoration Institute, New Mexico Environment Department, New Mexico Department of Game and Fish, the New Mexico chapter of The Nature Conservancy, Zuni Pueblo Environment Department, Fish and Wildlife Service, Stream Stewardship Institute, United States Geological Survey, and the National Oceanic and Atmosphere Administration. The Guild coordinates annual meetings each year that include a review and update of project monitoring components. Capacity for certain monitoring components changes from year to year and annual meetings are important for catching and adapting to these changes.

Monitoring categories include: the National Forest Foundation's outcomes and indicators, hydrology and climate, vegetation, fish and wildlife habitat, wildfire effects, wood utilization, wildfire suppression cost savings, livestock grazing, cultural resource protection, restoration business stabilization, job sustainability, training and outreach, ecosystem services, recreation, and tourism.

The most recent monitoring documents include the 2012 draft monitoring plan and the 2013 monitoring plan gap assessment, which is a companion to the 2012 draft monitoring plan. The draft monitoring plan and the 2013 gap assessment were reviewed by the multiparty monitoring group in a 2019 meeting (see notes). The

*current monitoring plan could be improved by synthesizing the 2012 draft monitoring plan, the 2013 monitoring gap assessment, and the notes from the 2019 meeting. This synthesis will be used in combination with the recent Common Monitoring Strategy to update the multiparty monitoring plan with input from project partners. These documents are all available at: (*Project documents — Zuni Mountains Collaborative*).*

There have been numerous reports and assessments of monitoring data over the years. A 2016 PhD dissertation by Rebecca Jane Frus, a former PhD. candidate from the University of New Mexico, provided a deeper understanding of the sources of desert springs and their effects on biodiversity. A 2020 vegetation monitoring report by Chris Guitarman, PhD. in Natural Resource Studies from University of Arizona, showed that stand densities are within the resilience envelope for bark beetle outbreak, crown fire, and drought; average tree diameter increased across the landscape, signaling the protection of large and old trees; and canopy bulk density decreased indicating decreased potential for uncharacteristic crown fire. The Spring Stewardship Institute has added water quality monitoring data to their databases. Mexican Spotted Owl surveys were completed between March and August of 2021 to identify Protected Activity Centers (PACs). Consistent and ongoing socioeconomic monitoring by the Forest Stewards Guild provides valuable institutional knowledge about collaborative participation from year-to-year, contracts awarded, training and capacity development opportunities, and more. In July 2021, more than two-dozen partners of the Zuni Mountains Collaborative, including members of the multiparty monitoring group, convened for a site visit of the Zuni Mountains CFLRP. Participants had the opportunity to view and discuss completed and ongoing project work within the Zuni Mountains CFLR landscape. At four different sites within the landscape, resource specialists shared their work and spoke about how project implementation has affected specific resources, touching on timber, wildlife, vegetation, recreation, prescribed burning, roads, and hydrology. In 2021, the Native Plants Society contributed their expertise of New Mexico's native plants to the monitoring process. Two representatives volunteered their time to monitor understory plants on a subset of 7 plots from the permanent plots.

Mexican spotted owl habitat and occupation surveys were conducted across the ZML in FY21. There were 6,251 acres resurveyed in the Bluewater project area, as well as 3,320 new acres surveyed, with no MSO detected in the survey area(s). Additionally, Enterprise surveyed only the PACs in the Puerco project area and found MSO present in Milk Ranch, Brennan Springs, Foster, and Agua Remora Protected Activity Centers.

The Zuni Fleabane, Erigeron rhizomatous, was federally listed in 1985 as a Threatened plant under the Endangered Species Act. The original Recovery Plan was written in 1988, and an amendment was completed in 2019, which altered the recovery criteria for the species. The amended Recovery Plan calls for the "permanent withdrawal from mineral entry for Zuni Fleabane occupied habitat on Forest Service lands." The species occurs within 2 portions of the Cibola National Forest – the Datil Mountains on the Magdalena Ranger District and the Zuni Mountains on the Mt. Taylor Ranger District. The two known subpopulations within the Zuni population were both occupied but the population has declined according to recent surveys.

Surface mining remains the major threat to Zuni Fleabane as it could result in permanent habitat loss and extirpation of subpopulations. Efforts are currently underway to withdraw a portion of the known population from mineral entry on Forest Service lands managed by the Cibola National Forest. Habitat suitability modeling is currently underway to aid an interagency team in determining the most important Forest Service managed

portion of the population to withdraw. The mapping product(s) produced will help inform the effort as well as help other jurisdictional agencies identify new populations of the species and areas to focus recovery efforts.

Partners in this effort include the Cibola National Forest, Bureau of Land Management, U.S. Fish and Wildlife Service, New Mexico State Forestry Energy Minerals and Natural Resources Department, Natural Heritage New Mexico, and Navajo Nation Department of Fish & Wildlife. Next steps for the habitat suitability modeling effort include finalizing and field-validating the resulting map product(s). It is expected that new populations can then be identified, and the area to be withdrawn from mineral entry can be finalized. The amended recovery criteria also call for continued population monitoring to continue until such time as data can demonstrate a stable or increasing trend in abundance across the main populations including the Zuni Mountains population.

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	Acres	*1,703*	*This is an integrated target from FP-FUELS-WUI*
Acres of forest vegetation improved FOR-VEG-IMP	Acres	*1,491*	*$1,490,100*
Acres of non-timber vegetation established NT-VEG-EST	Acres	*3,324*	*$332,400*
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	*0*	
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands INVSPE-TERR-FED-AC	Acres	*0*	
Acres of water or soil resources protected, maintained, or improved to achieve desired watershed conditions. S&W-RSRC-IMP	Acres	*2,640*	*Integrated target from acres of forestlands treated (FOR-VEG_IMP & FP-FUELS-WUI)*
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	*2,473*	*Integrated target from acres of forestlands treated (FOR-VEG_IMP & FP-FUELS-WUI)*
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	*1,864*	*Integrated target from acres of forestlands treated (FOR-VEG_IMP & FP-FUELS-WUI)*
Miles of high clearance system roads receiving maintenance RD-HC-MAIN	Miles	*12.4*	*$4,340*

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	*30.3*	*$15,150*
Miles of road decommissioned RD-DECOM	Miles	*0*	
Miles of passenger car system roads reconstructed RD-PC-RCNSTR	Miles	*30.3*	*$15,150*
Miles of high clearance system road reconstructed RD-HC-RCNSTR	Miles	*12.4*	*$4,340*
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		
Miles of system trail maintained to standard TL-MAINT-STD	Miles		
Miles of system trail improved to standard TL-IMP-STD	Miles		
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	*0*	
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	*3,324*	*$2,814,000*[9]
Volume of Timber Harvested TMBR-VOL-HVST*	CCF		
Volume of timber sold TMBR-VOL-SLD*	CCF	*15,905*	*Volume was generated from fuelwood sales and acres funded through the NWTF Stewardship Agreement at $1,000/acre*
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG*	Green tons	*23,671* (from NRM database: 22,825.47 BioEnery + 845.33 BioBased Products)	*Volume (Green tons) was generated from fuelwood sales and acres funded through the NWTF Stewardship Agreement at $1,000/acre*
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	*1,864*	*$93,200*
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	*1,700*	*$85,000*
Acres mitigated FP-FUELS-ALL-MIT-NFS	Acres	*2,482*	
Please also include the acres of prescribed fire accomplished	Acres	*1,700*	*$85,000*

[9] Includes acres that were funded and completed in prior years that were lumped when accomplished in FACTS. The last acres were treated in 2021 and claimed as completed in FACTS (assumed 782 acres @ $1000/acre and 2,542 acres @ $800/acre).

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
(Optional) Other performance measure not listed above	*Acres*		

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?"

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.

Fiscal Year	**Footprint of Acres Treated** (without counting an acre of treatment on the land in more than one treatment category)
FY 2021	*5,918*
Estimated Cumulative Footprint of Acres (CFLRP start year through 2021)	*128 acres Aspen enhancement,* *9,947 acres ponderosa pine thinning,* *7,200 acres Rx burning (most occurred in thinned acres),* *1,260 acres of Wildlife Habitat Improvement via road decommissioning* *20 acres of invasive species treatment.* *187 miles passenger car road maintenance* *149 miles of high clearance road maintained/improved* *25 miles of road decommissioned* *15,437 acres of water or soil resources protected, maintained, or improved to achieve desired watershed conditions* *10,518 Acres of Terrestrial habitat restored or enhanced*

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?

The EDW estimate aligned well with our footprint of acres treated.

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?

9. Planned FY 2022 Accomplishments (for CFLRP projects with **known** ongoing funding in FY22)[10]

Performance Measure Code	Unit of measure	Planned Accomplishment for 2022 (National Forest System)	*Planned Accomplishment on non-NFS lands within the CFLRP landscape*[11]
Acres of forest vegetation improved FOR-VEG-IMP	Acres	*1,500*	*500*
Acres of forest vegetation established FOR-VEG-EST	Acres	*1,500*	
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	*5*	
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	*0*	
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	*2,000*	
Miles of road decommissioned RD-DECOM	Miles	*5*	
Miles of passenger car system roads improved RD-PC-IMP	Miles	*10*	
Miles of high clearance system road improved RD-HC-IMP	Miles	*40*	
Volume of timber sold TMBR-VOL-SLD	CCF	*15,000*	*5,000*
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	*20,000*	
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	*1,500*	
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	*1,500*	

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2021 is available.

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):

The Zuni Mountain CFLRP was the highest rated 2012 extension proposal in 2021 and expects to receive FY22 CFLRP funding. At the time that this report was prepared, we are under a continuing resolution and can only assume that the Secretary of Agriculture will approve the FACA Committee recommendations. If funds from the new Infrastructure Bill are made available, the CFLRP footprint could see an increase in accomplishments, not only in traditional mechanical and prescribed fire treatments, but also in watershed restoration, wildlife habitat and road improvements.

[10] 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.

[11] If relevant for your project area, please provide estimates for planned work on non-NFS lands within the CFLRP areas for work that generally corresponds with the Agency performance measure to the left and supports the CFLRP landscape strategy

The 500 acres planned for non-NFS lands in currently in flux since the largest private landowner in the CFLRP area recently sold all his property. Negotiations are currently in process to continue the restoration work begun there in 2020.

11. **Please include an up to date list of the members of your collaborative <u>if</u> 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.[12]

The Zuni Mountain Collaborative includes 53 individuals representing a wide array of entities and interests. The member list submitted with our CFLRP extension proposal in May 2021 has remained unchanged.

(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.

The Forest Stewards Guild worked with the New Mexico chapter of The Nature Conservancy to bring a PBS documentary crew to observe the Copperton RX Burn this fall. The crew got great footage and interviewed Forest Service staff and partners that are deeply involved in the CFLRP. We look forward to seeing the footage in 2022.

(OPTIONAL) **<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.

Because of lack of industry in west-central New Mexico and many no-bid timber sale offerings in the early 2000's, the Forest had to find other ways to accomplish forest restoration. The main tool for the ZML turned out to be the development of a 10-year stewardship agreement with the National Wild Turkey Federation (NWTF). The NWTF agreement was renewed for another 10 years in 2017, which will be in effect through the end of fiscal year 2027. This agreement has allowed the forest to add in acres for implementation through modifications as funding is received through the CFLR Program, end of year funds, or through partner contributions. There are currently about 7,500 untreated acres paid for in the agreement, which will allow for restoration treatments to continue for another 3-5 years or more. The agreement can also be used as a vehicle to improve roads and restore watershed and wildlife habitat values.

The Zuni Mountains were heavily railroad logged in the early 1900's and as a result there are few large and old trees remaining across the landscape. In response to public concerns over the cutting of some large and old trees in 2015, the Forest Supervisor convened a Collaborative meeting to discuss concerns and options. Rather than a single arbitrary diameter cutting limit, we agreed on a combination that would account for retaining trees with "old" characteristics and large trees that were critical for wildlife habitat across the ZML[13]. This addressed public concerns while retaining enough flexibility to address forest health issues.

The escaped Bluewater-Diener Prescribed Fire in 2018 could have been a publicity nightmare that damaged our relationship with the Zuni Mountain Collaborative Group and surrounding communities. The Forest/District

[12] 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?"

[13] Large and Old Tree Retention Strategy: Project documents — Zuni Mountains Collaborative

showed strong leadership in scheduling a public meeting and full investigation within a week of the escape. The Bluewater fire, which burned into a treated area and dropped to the surface, turned out to be human caused and was later determined to be arson. In the end, no social license was lost and support from the surrounding communities and Zuni Mountain Collaborative remained intact, in large part, because of the early transparency, accountability, and involvement of our public(s).

Signatures:

Recommended by (Project Coordinator(s)): _____

Approved by (Forest Supervisor(s)): STEVEN HATTENBACH Digitally signed by STEVEN HATTENBACH Date: 2021.12.13 16:39:03 -07'00'

Draft reviewed by (collaborative chair or representative): _____