CFLR Project (Name/Number): Colorado Front Range Project/CFLR004

National Forest(s): Arapaho & Roosevelt and Pike & San Isabel National Forests

1. Match and Leveraged Funds:

a. FY17 Matching Funds Documentation

Fund Source – (CFLN/CFLR Funds Expended)	Total Funds Expended in Fiscal Year 2017
CFLN16	$372,776.26
CFLN17	$1,840,555.25

This amount should match the amount of CFLR/CFLN dollars obligated in the PAS expenditure report. Include prior year CFLN dollars expended in this Fiscal Year.

Fund Source – (Funds expended from Washington Office funds (in addition to CFLR/CFLN) (please include a new row for each BLI))	Total Funds Expended in Fiscal Year 2017
WFHF	$2,163,901.22

This value (aka carryover funds or WO unobligated funds) should reflect the amount expended of the allocated funds as indicated in the program direction, but does not necessarily need to be in the same BLIs or budget fiscal year as indicated in the program direction.

Fund Source – (FS Matching Funds (please include a new row for each BLI)	Total Funds Expended in Fiscal Year 2017
CMRD	$38,789.87
NFTM	$255,718.04
NFVW	$291,299.03
NFWF	$62,289.13
RTRT	$307,206.74
SSSS	$604,190.36

This amount should match the amount of matching funds obligated in the gPAS expenditure report, minus the Washington Office funds listed in the box above and any partner funds contributed through agreements (such as NFEX, SPEX, WFEX, CMEX, and CWFS) listed in the box below.

Fund Source – (Funds contributed through agreements)	Total Funds Expended in Fiscal Year 2017
CWFS (Colorado Springs Utilities)	$519,559.70
NFXN (Denver Water)	$254,252.81
NFXN (Arbor Day Foundation)	$70,000.00
WFXN (Denver Water)	$143,794.58

Please document any partner contributions to implementation and monitoring of the CFLR project through an income funds agreement (this should include partner funds captured through the gPAS job reports such as

NFEX, SPEX, WFEX, CMEX, and CWFS). Please list the partner organizations involved in the agreement. Partner contributions for Fish, Wildlife, Watershed work can be found in WIT database.

Fund Source – (Partner In-Kind Contributions)	**Total Funds Expended in Fiscal Year 2017**
Colorado Forest Restoration Institute	$50,000
Front Range Roundtable (CFLR Monitoring Team and UMC)	$25,000
Coalition for the Upper South Platte	$5,000

Total partner in-kind contributions for implementation and monitoring of a CFLR project. Please list the partner organizations that provided in-kind contributions.

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY17)	**Totals**
ARP, Elkhorn IRSC	$757.00
ARP, Horse Creek IRSC	$936.00
ARP, Matoons	$0
ARP, Elkhorn Manual	$0
PSICC, Round Mountain	$8,060.55
PSICC, Little Morrison	$2,340.00
PSICC, Payne Gulch Modification	$0
PSICC, Skelton	$0

Revised non-monetary credit limits for contracts awarded prior to FY17 were captured in previous reports. This should be the amount in contract's "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements" in cell J46, the "Revised Non-Monetary Credit Limit," as of September 30. Additional information on the Progress Reports is available in CFLR Annual Report Instructions document.

b. Please provide a narrative or table describing leveraged funds in your landscape in FY2017 (one page maximum). Leveraged funds refer to funds or in-kind services that help the project achieve proposed objectives but do not meet match qualifications. Examples include but are not limited to: investments within landscape on non-NFS lands, investments in restoration equipment, worker training for implementation and monitoring, research conducted that helps project achieve proposed objectives, and purchase of equipment for wood processing that will use restoration by-products from CFLR projects. See "Instructions" document for additional information.

Description of item	Where activity/item is located or impacted area	Estimated total amount	Forest Service or Partner Funds?	Source of funds
Restoration / Hazardous Fuels Reduction	Non USFS within CFLRP Boundary El Paso County (230 acres)	$366,000	Partner Funds	Colorado Springs Utilities
Restoration / Hazardous Fuels Reduction	Non USFS within CFLRP Boundary El Paso County (71 acres)	$127,800	Partner Funds	CUSP
Restoration / Hazardous Fuels Reduction	Non USFS within CFLRP Boundary Jefferson County (41 acres)	$73,800	Partner Funds	CUSP
Restoration / Hazardous Fuels Reduction	Non USFS within CFLRP Boundary Teller County (30 acres)	$54,000	Partner Funds	CUSP
Hazardous Fuels Reduction	Non USFS within CFLRP Boundary Bureau of Reclamation (57 acres)	$60,000	Partner Funds	BOR
Restoration / Hazardous Fuels Reduction-prescribed burn	Non USFS within CFLRP Boundary Ben Delatour Scout Ranch (154 acres)	154,000	Partner Funds	TNC/Corporate Donations
Restoration / Hazardous Fuels Reduction-hand thin	Non USFS within CFLRP Boundary Ben Delatour Scout Ranch (20 acres)	30,000	Partner Funds	TNC/Corporate Donations
Restoration / Hazardous Fuels Reduction-hand thin	Non USFS within CFLRP Boundary Upper South Platte Parntership (115 acres)	230,000	Partner Funds	TNC/Corporate Donations

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 the wildland fire goals in the *10-Year Comprehensive Strategy Implementation Plan***.

The Colorado Front Range Project aims to restore lower montane forest structure and function by reducing forest densities, creating diverse patterns of forest structure at stand and landscape-scales, and reducing the potential for uncharacteristically severe wildfire. Approximately 32,000 acres were identified for treatment under the CFLR project from the Pike-San Isabel National Forest (PSICC) in the southern Front Range to the Arapaho-Roosevelt National Forest (ARP) in the northern Front Range. The change in stand structure brought about by treatments has resulted in favorable changes in modeled fire behavior. Despite these favorable changes, treatments have generally increased surface fuel loads as material leftover from removal, mastication, or lop and scatter treatments is redistributed to the forest floor.

In general, monitoring and analysis has indicated that project treatments have created forest structure that more closely resembles historical forest structure. However, post-treatment monitoring has shown that there are a few differences between post treatment forest structure and historical stand structures. Post treatment stands were characterized by a higher abundance of Douglas-fir, a reduction of structural variability, fewer large openings, and small and medium groups of retained trees appeared to be under represented. Despite these conclusions, the landscape restoration and monitoring team felt that progress was being made in moving stand conditions closer to restored conditions.

There were no occurrences in 2017 of wildfires burning through treated or planned treatment areas within the Colorado Front Range CFLRP boundary.

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 inputs and assumptions available here.

- Many of the projects produce little or no forest products.
- The Front Range of Colorado has very little forest products infrastructure.
- There are limited markets for forest products on the Front Range.
- The cost of transporting forest biomass is a limiting factor.

FY 2017 Jobs Supported/Maintained (FY17 CFLR/CFLN/ WO carryover funding):

FY 2017 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	4	6	$202,677	$345,770
Forest and watershed restoration component	17	20	$149,420	$343,385
Mill processing component	6	17	$198,163	$574,956
Implementation and monitoring	13	20	$1,146,631	$1,414,944

FY 2017 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Other Project Activities	0.14	0.18	$2,553	$4,647
TOTALS:	41	63	$1,699,445	$2,683,702

FY 2017 Jobs Supported/Maintained (FY16 CFLR/CFLN/ WO carryover and matching funding):

FY 2017 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	5	7	$244,487	$417,099
Forest and watershed restoration component	18	22	$194,489	$421,941
Mill processing component	6	17	$201,199	$582,765
Implementation and monitoring	18	31	$2,301,081	$2,839,537
Other Project Activities	1	2	$60,340	$98,138
TOTALS:	49	79	$3,001,596	$4,359,480

4. **Describe other community benefits achieved and the methods used to gather information about these benefits**. **How has CFLR and related activities benefitted your community from a social and/or economic standpoint?** (Please limit answer to two pages).

Colorado's Front Range landscape holds tremendous social, economic, and ecological value for the communities and individuals that live, work, and play in this diverse landscape. The Colorado Front Range-Collaborative Forest Landscape Restoration Project's (CFR-CFLRP) goals include protecting these values through forest restoration activities in key locations. The FR-CFLRP is supported and monitored by the Front Range Roundtable (FRR), a longstanding forest collaborative, in conjunction with the Arapaho & Roosevelt and Pike & San Isabel National Forests. The monitoring team has designed protocols for achieving the goals designed to promote the resource values that support the social and economic values.

A key component of the CFR-CFLRP proposal was to measure the socioeconomic impacts associated with the Front Range project. The socioeconomic monitoring component of the FR-CFLRP project was further developed through a multi-party monitoring effort after the proposal was accepted. The initial multi-party monitoring plan identified five potential key goals of the socioeconomic monitoring: 1) enhance community sustainability; 2) improve local restoration business and workforce skills; 3) improve or maintain local quality of life; 4) improve capacity for collaboration; and 5) build support for forest restoration. Objectives related to these goals were later refined by the multi-party monitoring team to further develop the goals and indicators previously outlined. Implementation of the socioeconomic monitoring has been conducted by a collaborative team from the Forest Service's Rocky Mountain Regional Office and Washington Office and the Colorado Forest Restoration Institute.

Community benefits measured on a project and annual basis are not significant and should be viewed over a longer period of time. The project-level assessment summarizes the funding and accomplishments for the fiscal year (FY) 2017 annual report, and identifies the local economic contributions and wood utilization associated with the CFR-CFLRP projects awarded in the current year.

One of the other key community benefits is in the protection of water quality for municipal and agricultural purposes. Many, if not all, restoration treatments are located in critical watersheds and/or adjacent to reservoirs. Many of these projects are supported and funded by partnerships with water provider organizations and coalition groups. Their support can be directly related to the emphasis on restoration and the CFR-CFLR project.

The opportunity to create jobs and support local economies is a high priority for the CFR-CFLRP. In previous years, a detailed analysis of the contract-level economic contributions has been conducted to identify the extent these economic goals had been met. This economic analysis is based on expenditure and operational information collected from contractors who implemented task orders funded through the CFLN Forest Service budget line item or in lieu of funds. Project implementation has been slow to get going after the recent bankruptcy of the primary contractor. Gaps in information still exist.

For FY17, eight contracts were awarded in the CFR-CFLRP project area funded by the primary and matching funds to support project objectives. The economic effects of implementing these projects are felt locally with a small number of direct jobs created by the implementation contractors and the through support to the local business that process and distribute the by-products. The FR-CFLRP supported the local economy by supplying 2,771 CCF of forest products. Other jobs were created or supported through the implementation of hazardous fuels acres that resulted in approximately 4,154 acres treated for community and watershed protection.

Another significant community benefit resulting from the FR-CFLR project are the numerous partnerships that contribute funds to the support of the CFLRP goals. Significant contributors with funding and/or in-kind support include Denver Water, Bureau of Reclamation, Colorado State Forest Service, Coalition for the Upper South Platte, Northern Water Conservancy District, Coalition for the Poudre River Watershed, and Colorado Springs Utilities.

Indicator	**Brief Description of Impacts, Successes, and Challenges**	**Links to reports or other published materials (if available)**
Project partnership composition	Partnerships associated with the FR-CFLRP have been instrumental in accomplishing additional acres of treatment by giving us the opportunity to leverage appropriated funds to increase effectiveness across larger scales.	Not available
Relationship building/collaborative work	The Landscape Restoration Team and Monitoring Group has been instrumental in influencing the design and implementation	Not available

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	of restoration treatments and the success of the FR-CFLR Project.	
Community support for relevant initiatives	Projects have given us the opportunity to build community support for projects and treatments. The public has gained a new understanding of projects and processes.	Not available

5. Based on your project monitoring plan, **describe the multiparty monitoring process. 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 current weaknesses or shortcomings of the monitoring process? (Please limit answer to two pages. Include a link to your monitoring plan if it is available).

MULTI-PARTY MONITORING PROCESS

At the beginning of the Colorado Front Range CFLRP in 2010, a subgroup of the Front Range Roundtable (FRRT), the Landscape Restoration Team (LRT) was tasked with the creation of a CFLR project monitoring plan. The initial monitoring plan was successfully completed in June 2011 and has been updated almost annually with the latest in 2017. The CFLR project monitoring plan was the result of intense multiple stakeholder learning and deliberations by the LR Team. The multiple stakeholder group consisted of members of both the Pike and San Isabel and Arapaho and Roosevelt National Forests, USFS R2-Regional Office, Colorado State Forest Service, US Geological Survey, Colorado Parks and Wildlife, Natural Resource Conservation Service, The Nature Conservancy, The Wilderness Society, Rocky Mountain Research Station, Colorado Forest Restoration Institute at Colorado State University, and the Tree Ring Laboratory at Colorado State University.

Multi-Party Monitoring Field Trip, August 2017

KEY MONITORING FINDINGS/RECOMMMENDATIONS (from 2017 Monitoring Plan)

- *Forest Structure, Composition and Spatial*
    - The most recent monitoring analysis shows after treatments forest composition and structure were moving towards desired conditions, but several apparent differences existed between post-treatment and historical conditions. For example, the relative abundance of Douglas-fir, post-treatment, was still considerably higher than historical levels.
    - Spatial analysis indicated that while treatments are creating appropriate levels of open canopy, more of the resulting openings apparently occurred near the canopy edge rather than as part of larger openings.
    - Spatially, treatments also altered tree group size to better reflect historical conditions, but isolated trees and very large groups were over-represented while moderate sized groups were under-represented relative to historical stand conditions. Although this represented a relatively small analysis (only two sites), the LRT agreed that the monitoring protocols currently in place can help inform forest management recommendations given additional analysis of currently collected monitoring data. A more comprehensive report including a wider range of CFLR projects and more robust analyses is currently in preparation by LRT members.
- *Understory Botany*
    - Questions for understory plant monitoring are generally tied to native plant abundancy and diversity.
    - Recent monitoring design-There were 207 plots total: seven treatment areas; 18 treatment/control unit pairs; and three treatment types (mechanical thinning, hand thinning, and prescribed fire).
    - The pre-treatment findings demonstrate no change in richness or cover values. However, a business plan will be developed to return to collect post-treatment data one to two years from now.
    - Monitoring data was collected in 2017 for future analysis.
    - The next steps for 2018, and 2019 are to collect one- to two-year post-treatment data and report on the short-term effects of treatments. It is also important to opportunistically add new sites, especially in areas scheduled for prescribed fire.
- Wildlife
    - Wildlife monitoring on the Colorado Front Range Project began in 2011 and has included representatives from the US Fish and Wildlife Service (FWS), Colorado Parks and Wildlife (CPW), US Geological Survey (USGS) and the US Forest Service (FS).
    - Pilot study to evaluate general patterns of wildlife use found no significant differences in fresh sign from ungulates or tree squirrels on treated vs. untreated plots one year post-treatment, but concluded that these methods did not provide enough detail on patterns of habitat use or population status and trends to merit adoption for a diverse suite of species or longer time frames.
    - Integrated monitoring in bird conservation regions (IMBCR) is a partner-based approach coordinated by the Bird Conservancy of the Rockies. The Wildlife Team worked with the Bird

Conservancy to look at control and treated sites at a landscape scale and developed a "pseudo BACI design." It was agreed that the Bird Conservancy would manage the data.

- The Rocky Mountain Avian Data Center has project summaries, protocols, datasheets, searchable data/results, and reports available on the website.
- As of spring 2017, two full seasons of monitoring Tier 1 wildlife have been completed by BCR via a USFS contract at 120 sites across the CFLR landscape (2014 and 2016) and two pilot seasons of camera trapping have been completed by CPW and USFS personnel at a subset of 40 sites (2014 and 2015).

Watershed Health

- The Forest Service and LRT initiated an effort to develop a watershed health monitoring protocol at the end of fiscal year 2016. The initial watershed health monitoring subgroup includes representatives from the City of Aurora, the Colorado Forest Restoration Institute, and the Nature Conservancy.
- The monitoring protocol has been slow to develop. The expertise and time commitment needed to run complicated fire behavior and hydrological models has been a major obstacle in developing useful watershed health metrics.
- The importance of monitoring impacts of forest management on water quality is still a priority, and the LRT is continuing to work on this.

- Fire Effects
  - Leaders from the AR and PSI National Forests have expressed an interest to use more prescribed fire and would like to standardize monitoring protocols.
  - The LRT has initiated the formation of a sub-team to develop desired conditions and protocols for monitoring fire effects.
  - The USFS has good metrics and sound methods but is not measuring plots at a high enough intensity. The recommendation is to develop CSE protocols not just on mechanical treatments but on prescribed fires as well. This would allow for standardized protocols.
  - The anticipation is that in the later years of CFLRP there will be more broadcast burning, and a fire monitoring team will support the USFS in their efforts to return fire to the Front Range landscape.
- Social and Economic
  - Monitoring in 2013 focused on Funding and Accomplishments, Economic Contributions, and Wood Utilization. Levels of Collaboration was last monitored in 2011-2012.
  - A total of $3.3 million were funded for CFLRP projects in 2013 with a total of 2,978 acres treated. Additionally, about $3.9 million in matching funds for 2013, coming from USFS matching funds.
  - The CFLRP also leveraged roughly $35.8 million in funds in non-Forest Service System lands projects areas associated with the CFLRP project area from the Colorado State Forest Service, The Coalition for the Upper South Platte, Denver Water, Colorado Springs Utilities, NRCS, and The Waldo Recovery Group.

- Six contracts were associated with the Front Range CFLRP in 2013. 2012 CFLR projects resulted in nearly 15 full or part time jobs, $276,760 in labor income, and $524,672 in GDP to the local economy.
- A total of 1,811 acres were treated under the Front Range CFLRP in 2013 (718 in the PSI and 1,093 on the AR). 66% of the forest products removed on the PSI were done mechanically, whereas 77% of the AR was completed manually. Three businesses purchased harvested material from Front Range CFLRP treatments, all of which were from Colorado. A large portion of the biomass from both forests went to wood chips used for post-fire rehabilitation efforts. All of the biomass material was sold as sawtimber and is assumed to have been processed into dimensional lumber.
- Public Outreach- In response to a literature review conducted in 2011, considerable effort was given towards identifying public outreach mechanisms in 2012. Four focus group meetings with public outreach experts yielded recommendations for the FRRT to support outreach across the Front Range. These are detailed in the 2017 monitoring plan.

Current Monitoring Plan at:

2017 Monitoring plan

6. **FY 2017 accomplishments**

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Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Acres of forest vegetation established FOR-VEG-EST	Acres	934	$192,000
Acres of forest vegetation improved FOR-VEG-IMP	Acres	2,516	See FP-FUELS-WUI
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	1,534	$24,000
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands INVSPE-TERR-FED-AC	Acres	*	*
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions. S&W-RSRC-IMP	Acres	2,820	See FP-FUELS-WUI
Acres of lake habitat restored or enhanced HBT-ENH-LAK	Acres	*	*
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	1	*
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	3,568	See FP-FUELS-WUI
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	*	*

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Miles of high clearance system roads receiving maintenance RD-HC-MAIN	Miles	*	*
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	*	*
Miles of road decommissioned RD-DECOM	Miles	3.91	*
Miles of passenger car system roads improved RD-PC-IMP	Miles	*	*
Miles of high clearance system road improved RD-HC-IMP	Miles	*	*
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	*	*
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	*	*
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	995	*
Volume of Timber Harvested TMBR-VOL-HVST	CCF	*	*
Volume of timber sold TMBR-VOL-SLD	CCF	2,771	See FP-FUELS-WUI
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	*	*
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	171	Force acct
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	3,946	$2,679,251
Number of priority acres treated annually for invasive species on Federal lands SP-INVSPE-FED-AC	Acres	*	*
Number of priority acres treated annually for native pests on Federal lands SP-NATIVE-FED-AC	Acres	*	*
Acres mitigated FP-FUELS-ALL-MIT-NFS *(note: this performance measure will not show up in the WO gPAS reports – please use your own records)*	Acres	*	*

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Please also include the acres of prescribed fire accomplished *(note: this performance measure will not show up in the WO gPAS reports – please use your own records)*	Acres	*	*

Units accomplished should match the accomplishments recorded in the Databases of Record.

7. **FY 2017 accomplishment narrative** – Summarize key accomplishments and evaluate project progress not already described elsewhere in this report. (Please limit answer to three pages.)

ARAPAHO AND ROOSEVELT NATIONAL FORESTS

The Colorado Front Range Project continues to make progress on restoration in lower montane, ponderosa pine and mixed conifer forested stand conditions in the project area. After more than a year of implementation delay in 2015 due to the reduced commitment of the Front Range Long Term Stewardship Contract, we have been able to move forward awarding new contracts and implementing new projects. For FY17, the Colorado Front Range Project completed over 4,000 acres of restoration work. Treatments continue to evolve and are influenced by the post-treatment monitoring and analysis conducted by the Monitoring Team. Prescribed burning on larger scales has begun to take on a significant role in landscape restoration. Broadcast burning took place on over 1,500 acres on the project area.

On the Arapaho-Roosevelt NF, challenges still exist in planning and implementing some projects due to neighbor concerns over treatment goals, locations, and intensity. Progress in negotiation and collaboration is being made and treatments in those areas are expected to begin in 2018. The Forest, with the help of the Colorado Forest Restoration Institute, have initiated a local multi-party monitoring group with concerned citizens to participate in project planning, implementation and monitoring. The idea is to spend a little extra time during the early stages of implementation so that there is project support into the future.

The Arapaho and Roosevelt National Forests awarded four CFLRP contracts in 2017 totaling 870 acres of restoration focused vegetation management treatments. One of the challenges that has emerged since the loss of the Front Range Long Term Stewardship Contract is that the cost of treatments has risen significantly. Service contract treatment costs have exceeded $2,200 per acre and continues to climb. This will limit the number of acres treated as budgets decline and as we approach the end of CFLR project funding.

The Forest also completed fuel reduction treatments by pile burning and prescribed broadcast burning on over 1,500 acres in CFLRP treatment stands. The fire crew continues broadcast burning operations in the Red Feather North/Pingree Hill Project area. This successful burn will begin the restoration process on critical acres in the CFLRP project area in the Poudre Canyon. Public support of the burn has been mixed based on fear of wildfire and smoke concerns. Below are several photos that show the before, during and after sequence of the burning operation. The end result is that these stands have begun to move towards a restored condition. The stage is being set for future use of prescribed fire on a larger scale across the landscape.

PIKE AND SAN ISABEL NATIONAL FORESTS

The PSICC was able to complete 2,070 of acres of restoration and WUI fuels treatments in the CFLRP area. Timber volume was sold on two stewardship contracts that totaled 2,771 CCF of sawtimber and other products. Reforestation efforts in the Hayman burn area continued with over 900 acres planted with ponderosa pine seedlings, funded in part through an ongoing partnership with the Arbor Day Foundation and other partners.

The PSICC awarded two stewardship and one service contract totaling 1,246 acres of restoration/fuels reduction, within the CFLRP area. The objectives of these projects primarily emphasis the retention of older trees in the ponderosa pine and dry mixed conifer types, opening up densely closed stands of mid to late seral classes, creating a more open forest environment and improving shrub and grass diversity, and increasing resilience to disturbances such as wildfire.

Partnerships continue to contribute significantly to matching treatments within the CFLRP area in 2017. With a little over 900 acres of reforestation being partially funded by partnership funds, and over 700 acres of fuels reduction, partnership contributions are an important component in being able to fund activities within the CFLRP area. The combined contribution of partnership funds in FY17 to fund treatments on NFS lands was a little over $8 million. Partners provided approximately 50 percent of the total matching funds.

Also, an emphasis on the use of prescribed fire to accomplish restoration and WUI fuels reduction activities was continued in FY17. In November of 2016, two prescribed burns within the CFLRP were completed that resulted in about 600 acres of restoration/fuels reduction accomplished. Given the challenges of completing a prescribed burn in areas along the Colorado Front Range it was considered a huge success and the PSICC will continue to emphasize use of prescribed fire to complete this work.

UPPER MONUMENT CREEK

On August 14, 2017, the Record of Decision was signed for the 67,000-acre Upper Monument Creek Landscape EIS, within the Pike National Forest. This was a planning project in an area identified as a CFLRP area of concern by the Forest Service because of its location in a high fire risk area in close proximity to previously analyzed and treated CFLRP project areas, including the Trout West and Catamount Projects. This project was collaboratively planned and a large part of the success of the signing is due to collaboration efforts during the Upper Monument Creek (UMC) Landscape Restoration Initiative period that resulted in a Summary of Collaborative Recommendations report. This report identified collaboratively designed desired conditions for restoring this landscape. A diverse suite of agencies, organizations and individuals, collaborated in an effort to accelerate the pace of urgently needed forest restoration recommendations that are science-based and collaboratively agreed to.

The FRRT Landscape Restoration team continues to work collaboratively within the Upper Monument project area, identifying treatment types and locations, defining desired conditions for the vegetation types that occur within the project area, recommending project design criteria, and providing other management recommendations. The ROD and FEIS is posted on the web at The rod and FEIS.

Red Feather North Prescribed Fire, Arapaho and Roosevelt National Forests – Before, During, and After

WILDLIFE MONITORING PROGRAM

Wildlife monitoring on the Colorado Front Range Project began in 2011 with a preliminary assessment of possible monitoring options for wildlife species that might be affected by the treatments done in the CFLR Project Area. In November of 2012, a second effort at developing a broader-scale wildlife monitoring plan was launched and the Wildlife Working Team (WWT) was formed as a sub-team of the LR Team. The WWT is made up of biologists and ecologists from the US Forest Service, Colorado Parks and Wildlife (formally CDOW), and US Geological Survey (USGS). Several members of the WWT are also members of the LR team so communication between teams is frequent and updates are provided to ensure transparency and solicit feedback.

The team determined and defined Tier 1 and Tier 2 species monitoring. Tier 1 species monitoring will be accomplished using CFLR funds and will likely occur on a rotational basis (not every species every year) based on priority and funding. For the Tier 2 species/groups - bats and carabid beetles - monitoring will be conducted based on the availability of interested partners and supplemental funding opportunities. Additional monitoring will be conducted on Abert's squirrel as determined by the WWT.

2017 Progress for Wildlife Working Team (WWT):

- The Bird Conservancy of the Rockies analyzing data
- WWT meetings continue to be held to discuss on-going and future monitoring and data management needs as well as WWT role in the FRCFLP and associated teams.

Winter 2017/2018

- Refine overall data analysis objectives, roles, and finalize schedule with BCR

Spring 2018

- Complete analysis
- Wildlife Team discuss results, structure, content, and delivery of final report

Summer/Fall 2018

- BCR prepare draft final report

Fall/Winter 2018:

- Deliver final report

UNDERSTORY MONITORING PROGRAM

Progress is being made toward evaluating how CFLR treatments impact understory plant communities. Progress toward this goal includes refining the desired conditions related to understory plants into seven testable monitoring hypotheses. Currently, the understory monitoring team is awaiting project implementation in several pre-treatment data collection areas to assess how treatments alter the abundance and diversity of (1) native species, (2) functional groups, (3) early seral species, (4) exotic plants, (5) key native species (i.e., threatened/endangered), (6) noxious weeds, and (7) spatial heterogeneity of herb communities (i.e., beta diversity). The seven treatment areas span the Front Range and include a total of 18 treatment and control pairs and three different treatment types (mechanical thinning, hand thinning, and prescribed fire).

The team continues to explore ways to make other inferences from the data such as relating overstory and understory data while remaining treatments are completed.

8. **The WO will use spatial data provided in the databases of record close to estimate a treatment footprint for your review and verification**.

- **If the estimate is consistent and accurate**, please confirm that below and skip this question.
- **If the gPAS spatial information does NOT appear accurate**, describe the total acres treated in the course of the CFLR project below (cumulative footprint acres; not a cumulative total of performance accomplishments). What was the total number of acres treated?

FY17 CFLRP Funded Projects.

Total Footprint of Acres Treated from start year through FY 17.

Forest	Project	Acres
ARP	Elkhorn IRSC	165
ARP	Elkhorn Manual	245
ARP	Matoons	325
ARP	Horse Creek IRSC	135
ARP	Redfeather RX Burn	1,513
PSICC	Little Morrison	197
PSICC	Round Mountain	250
PSICC	Skelton	368
PSICC	Payne Gulch	431
PSICC	Wilson RX Burn	359
PSICC	Trout Creek RX Burn	166

Footprint Acres Treated
(Without counting an acre of treatment on the land in more than one treatment category)

Fiscal Year	Acres
FY 10 through FY 17	22,360 acres[1]
FY 10	988 acres
FY 11	4,147 acres
FY 12	2,799 acres
FY13	2,978 acres
FY14	2,808 acres
FY 15	784 acres
FY 16	3,702 acres
FY 17	4,154 acres

[1]Adjustments were made to the total annual acres for FYs 11, 12, and 14. Net acres FY10-17 were reduced by 32 acres.

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 footprint acres were derived from projects (awarded stewardship and service contracts and the prescribed burns on both forests that were funded with CFLRP program funds (CFLN/R and "in lieu of funds").* means blank cell

FOREST	PROJECT	FY	TOTAL ACRES	FOREST	PROJECT	FY	TOTAL ACRES	TOTALS BY FY
PSICC	Phantom #1 LTSC TO	2010	597	ARP	Taylor	2010	391	988
PSICC	Ryan Quinlan #1 LTSC TO	2011	356	ARP	Estes Valley-Walker Black	2011	903	*
PSICC	Phantom #2 LTSC TO	2011	871	ARP	Walker Red	2011	682	*
PSICC	Phantom #3 LTSC TO	2011	656	ARP	Thompson River 2	2011	679	4,147
PSICC	Phantom #4 LTSC TO	2012	507	ARP	West Mag	2012	286	*
PSICC	Catamount 1 LTSC TO	2012	351	ARP	Redfeather 1	2012	586	*
PSICC	Long John LTSC TO	2012	304	ARP	Boulder Heights	2012	115	*
PSICC	Buffalo Creek LTSC 1 TO	2012	478	ARP	Kelly Dahl	2012	172	2,799
PSICC	Messenger Gulch LTSC 2 TO	2013	425	ARP	Gold Hill	2013	50	*
PSICC	Broken Wheel LTSC TO	2013	406	ARP	Redfeather 2	2013	1,456	*
PSICC	Crystal Creek TO	2013	412	ARP	*	*	*	*
PSICC	Ponderosa #1 TO	2013	229	ARP	*	*	*	*
*	*	*	*	*	*	*	*	2,978
PSICC	Big Elk TO	2014	221	ARP	Creedmore	2014	167	
PSICC	Ridge TO	2014	745	ARP	Ward Jam	2014	406	*
PSICC	Little Scraggy TO	2014	425	ARP	Gross	2014	450	*
*	*	*	*	ARP	Magic Sky	2014	394	2,808
PSICC	717 Service Contract	2015	784	ARP	(no sales)	2015	0	784
PSICC	PPRD Rx Burn (force acct)	2016	301	ARP	Deobligated Greenridge	2016	*	*
PSICC	Deobligated-Little Scraggy	2016	-425	ARP	Deobligated Gold Hill	2016	-50	*
PSICC	Painted Rocks IRSC	2016	151	ARP	Redfeather 3	2016	609	*
PSICC	Phantom 5 IRSC	2016	246	ARP	Redfeather 4	2016	1,105	*
PSICC	Hybrook IRSC	2016	537	ARP	Ridge (RFB)	2016	205	*
PSICC	Eco Beaver IRSC	2016	582	ARP	Burnt-Blue Creek	2016	220	*
PSICC	Tornado IRSC	2016	221	ARP	*	*	*	3,702
PSICC	Little Morrison	2017	197	ARP	Elkhorn IRSC	2017	165	*
PSICC	Round Mountain	2017	250	ARP	Elkhorn Manual	2017	245	*
PSICC	Skelton	2017	368	ARP	Matoons	2017	325	*

FOREST	PROJECT	FY	TOTAL ACRES	FOREST	PROJECT	FY	TOTAL ACRES	TOTALS BY FY
PSICC	Payne Gulch	2017	431	ARP	Horse Creek IRSC	2017	135	*
PSICC	Wilson RX Burn	2017	359	ARP	Redfeather RX Burn	2017	1,513	*
PSICC	Trout Creek RX Burn	2017	166	ARP	*	*	*	4,154
*	*	*	11,151	*	*	*	11,209	22,360

9. **Describe any reasons that the FY 2017 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? (Please limit answer to two pages). * means empty cell

Colorado Front Range CFLRP cumulative accomplishments 2010-2017 per annual reports.

Performance Measure	Code	2010	2011	2012	2013	2014	2015	2016	2017	TOTALS	PROJECT EXPECTED OUTPUTS	% ACCOMP-LISHED
CFLR/N funded acres (mechanical or manual fuels reduction)	None	988	4,147	2,799	2,978	2,808	784	3,702	4,154	**22,360**	**31,600**	**71%**
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production	BIO-NRG	5,514	1,128	459	260	*	*	*	*	**7,361**	**24,000**	**31%**
Acres of forest vegetation established	FOR-VEG-EST		1,047	1,100	1,564	1,199	996	1,347	934	**8,187**	**10,000**	**82%**
Acres of forest vegetation improved	FOR-VEG-IMP		5,562	2,181	5,758	5,414	3,095	4,105	2,516	**28,631**	**41,300**	**69%**
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire	FP-FUELS-WUI	3,224	6,922	5,506	9,625	6,530	2,438	9,994	3,946	48,185	*	*
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire	FP-FUELS-NON-WUI	*	*	*	*	*	*	*	171	171	*	*
Number of acres treated to reduce the risk of catastrophic wildland fire	FP-FUELS-ALL	3,224	6,922	5,506	9,625	6,530	2,438	9,994	4,117	**48,356**	**63,800**	**76%**
Miles of stream habitat restored or enhanced	HBT-ENH-STRM	*	*	*	*	5	*	*	1	6	**N/A**	**N/A**
Acres of terrestrial habitat restored or enhanced	HBT-ENH-TERR	*	1,402	6,615	1,414	4,163	4,540	10,198	3,568	**31,900**	**11,666**	**273%**

Performance Measure	Code	2010	2011	2012	2013	2014	2015	2016	2017	TOTALS	PROJECT EXPECTED OUTPUTS	% ACCOMP-LISHED
Manage noxious weeds and invasive plants	INVPLT-NXWD-FED-AC	100	*	625	429	477	529	7,570	1,534	**11,264**	**5,600**	**201%**
Miles of property line marked/maintained to standard	LND-BL-RK-MAINT	*	21	*	*	*	*	*	*	**21**	**21.25**	**99%**
Miles of unauthorized road decommissioned	RD-DECOM	*	*	5	*	7	*	*	4	**16**	**5**	**318%**
Miles of closed and high clearance system roads receiving maintenance	RD-HC-MAINT	*	2	33	8	69	*	*	*	**112**	**36**	**311%**
Miles of passenger car system roads improved	RD-PC-IMP	*	*	1	*	*	*	*	*	**1**	**18**	**6%**
Miles of passenger car system roads receiving maintenance[1]	RD-PC-MAINT	*	9	52	*	243	*	*	*	**304**	**61**	**497%**
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions	S&W-RSRC-IMP	*	43	9,763	3,003	881	*	196	2,820	**16,706**	**9,805**	**170%**
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage	STRM-CROS-MTG-STD	*	*	1	*	*	*	*	*	**1**	**1**	**100%**
Miles of system trail maintained	TL-MAINT-STD	*	*	110	9	*	*	*	*	**119**	**113**	**105%**
Acres of forestlands treated using timber sales	TMBR-SALES-TRT-AC	*	*	20	256	*	*	*	995	**1,271**	*	*

[1] Expected miles of passenger car system roads improved should have been designated as passenger car system roads receiving maintenance (497%).

Performance Measure	Code	2010	2011	2012	2013	2014	2015	2016	2017	TOTALS	PROJECT EXPECTED OUTPUTS	% ACCOMP-LISHED
Volume of Timber sold (CCF)	TMBR-VOL-SLD	*	6,678	11,889	6,175	5,141	8,108	7,150	2,771	**40,762**	**62,000**	**66%**

Cumulative project accomplishment is compared with the 2013 project "lifetime" goals submission in the table above. Majority of the planned treatments for the 10 year period are on a trajectory to meet or have already exceeded expected cumulative outputs. Five performance outputs (see below) that are below the planned rate of progress (80% through FY2017) are associated with the decreased capacity of the Front Range Long Term Stewardship Contract (FRLTSC) in 2015. This contract was the primary contracting tool for implementing mechanical and manual fuels/restoration treatments on both forests from 2009-2014. The FRLTSC contractor filed for Bankruptcy in April 2015.

- CFLR/N funded acres (mechanical or manual fuels reduction): Expected project outputs can be met through increasing annual output from 3,200 to 4,600 acres per year, primarily via short term, stand-alone stewardship or service contracts. This may not be possible without full program funding in FY2019 and lower unit costs.
- FOR-VEG-IMP: CFLR/N funded projects typically treat pole sized material and biomass in conjunction with the removal of sawtimber. The capacity to implement these treatments also declined in 2015.
- FP-FUELS-ALL: Expected project outputs can be met through increasing annual output from 6,400 to 7,700 acres per year, primarily via short term, stand-alone stewardship, service contracts, or force account work. This will require designing future projects to treat more acres through manual chainsaw work, mastication, or broadcast burning in lieu of tractor logging with product removal.
- BIO-NRG & TMBR-VOL-SLD: The economical removal of biomass has been a challenge region-wide. From 2009 through 2014 commercial biomass was primarily produced via the FRLTSC for a seasonal landscaping material market. Markets along the Colorado Front Range generally do not support commercial timber sales in dry cover types.

10. **Planned FY 2019 Accomplishments**

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Performance Measure Code	Unit of measure	Work Plan 2019	Planned Accomplishment For 2019	Amount ($)
Acres of forest vegetation established FOR-VEG-EST	Acres	*	900	*
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	*	1,250	$250,000
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	*	*	*
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	*	*	*
Miles of road decommissioned RD-DECOM	Miles	*	*	*
Miles of passenger car system roads improved RD-PC-IMP	Miles	*	*	*
Miles of high clearance system road improved RD-HC-IMP	Miles	*	*	*
Volume of timber sold TMBR-VOL-SLD	CCF	*	4,500	*
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	*	*	*
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	*	*	*
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	*	4,400	$4,000,000

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2019 is available. Use actual planned funding if quantity is less than specified in CFLRP project work plan.

11. Planned accomplishment

Narrative and justification if planned FY 2018/19 accomplishments and/or funding differs from CFLRP project work plan (no more than 1 page):

The planned FY18/19 accomplishments are based upon full program funding. Contracts are generally advertised for competition, with less obligations going towards the Front Range 10-Year Stewardship Contract. Prices for service items are anticipated to rise, and forest product markets continue to be uncertain. However

we are optimistic that we can carry out expectations for a full program level and meet our commitments. FY18/19 accomplishments will continue to emphasize restoration treatments in ponderosa pine and dry mixed conifer ecosystems and hazardous fuels reduction in WUI utilizing mechanical, manual, and prescribed fire treatments. Partners continue to help fund hazardous fuels/restoration and noxious weed treatments within priority CFLRP areas.

On the ARP, 2018 treatments would occur on the Canyon Lakes District in the Red Feather Lakes area. A NEPA decision on for the Forsythe II project on the Boulder Ranger District was completed in July 2017. Implementation of Forsythe II is scheduled for 2019. The PSICC will start to implement projects in 2018 from the Upper Monument Creek EIS/ROD, which was signed in August 2017. Over 30,000 acres are be available for mechanical thinning with product removal, and use of prescribed fire to shift forest conditions on this landscape towards desired conditions.

Similar to the ARP, the PSICC is working with new contractors to secure services to complete work in the CFLRP area. Contracting efforts in FY16 indicated that treatment prices are increasing, partly because inexperienced contractors are not yet comfortable with assigning prices to this type of work. Depending on location and product type, projects with a significant amount of timber volume appear to more value in keeping prices lower.

Although improved, staffing continues to be a concern on the Pike NF. One key permanent vacancy on the implementation crew has caused slower prep times. Hiring has been slow in 2017, only recently has this positions gotten approval to move forward for recruitment, we anticipate having someone in place by the summer filed season. This will result in a need to bring in off-Forest prep crews to work on FY18 program projects. Some CFLRP funding will have to be used to bring in these crews, possible resulting in less available for accomplishment. Seasonal crews are uncertain, hiring has not been successful over recent years. The PSICC continues to look for ways to acquire help to complete CFLRP projects.

AQM due dates continue to cause concern for getting contracts awarded. Most CFLRP stewardship contracts are of high value, where the due dates are early in the calendar year. We expect to have some contracting ready by the due dates, but not all.

The PSICC is currently working on a new 5-year agreement with Colorado Springs Utilities who has been a previous partner for funding fuels reduction in their areas of concerns, within the CFLRP. These funds have been critical in matching CFLRP funds. An agreement is expected to be in place by April, 2018.

As both Forests move forward with the limited capacity of the FRLTSC, the uncertainty with respect to the cost of treatments will continue. The FRLTSC was a fixed price with known treatment rates. The cost of new contracts is unknown, but recent contracts are coming in much higher than expected. The high cost of new contracts could lower the number of acres that can be treated with funding that is comparable to prior years. The result could be fewer mechanical acres treated over the remaining life of the CFLRP project. There is an increased interest on both Forests to use prescribed fire as a primary tool to accomplish restoration projects. Prescribed fire acres could offset the expected decrease in mechanically treated acres.

Both forests are still working with new contractors following the modification of the Front Range Long Term Stewardship Contract in FY 2016. Maintaining or expanding the scale of treatments as contractor rates increase will be dependent upon our ability to increase the level of cost effective treatments such as manual chainsaw work, mastication, and broadcast burning while still achieving desired conditions. Both forests were able to successfully implement prescribed fire treatments in 2017. The future success of ecological restoration/fuels reduction work along the Colorado Front Range is largely be dependent on the expansion of these programs.

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

The primary collaborative group for the Colorado Front Range CFLR Project is the Front Range Roundtable. The Roundtable is a coalition of individuals from state and federal agencies, local governments, environmental and conservation organizations, the academic and scientific communities, and industry and user groups, all with a commitment to forest health and fire risk mitigation along Colorado's Front Range. The Roundtable's focus area encompasses 10 Front Range counties: Boulder, Clear Creek, Douglas, El Paso, Gilpin, Grand, Jefferson, Larimer, Park and Teller. There are over 300 members of the original collaborative with a core participating group of over 100 individuals.

Below is a list of the Landscape Restoration Team and their affiliation. This team is responsible for CFLR Project monitoring:

Rob Addington	The Nature Conservancy
Greg Aplet	The Wilderness Society
Kevin Barrett	Colorado State University, CFRI
Mike Battaglia	USFS, RMRS
Teagen Blakey	Little Thompson Watershed
Jenny Briggs	US Geological Survey
Peter Brown	Rocky Mtn. Tree-Ring Research
Evan Burks	USFS, PSICC
Jeff Cannon	Colorado State University, CFRI
Marin Chambers	Colorado State University, CFRI
Tony Cheng	Colorado State University, CFRI
Casey Cooley	Colorado Parks and Wildlife
Lynne Deibel	USFS, ARP
Carol Ekarius	CUSP
Jonas Feinstein	USDA NRCS
Paula Fornwalt	USFS, RMRS
Ben Gannon	Colorado State University, CFRI
Jim Gerleman	USFS, PSICC
Andy Hough	Douglas County
Chad Julian	Little Thompson Watershed
Brian Keating	USFS, R2
Jason Lawhon	The Nature Conservancy
Mark Martin	USFS, ARP
Kyle McCatty	Boulder County
Mike McHugh	Aurora Water
Patrick McLaughlin	Colorado Dept. of Public Health
Nick Stremel	Boulder County
Rick Truex	USFS, R2
Jeff Underhill	USFS, R2
Brett Wolk	Colorado State University, CFRI
Kevin Zimlinghaus	USFS, ARP

13. **Did you project try any new approaches to increasing partner match funding in FY2017** (both In-Kind contributions and through agreements)? (No more than one page):

- The PSICC received $70,000 from the Arbor Day Foundation. These funds paid for 100,000 seedlings that were planted in the Hayman burn area.
- In February, 2017, the US Forest Service-Rocky Mountain Region, with the CSFS and NRCS, renewed the Forest to Faucets Program with Denver Water by signing a new 5-year MOU. Under the 2017-2021 program, Denver Water is committed to investing $16.5 million in forest and watershed health projects within Denver Water's critical watersheds on NFS lands. Many of the projects will be located within the Colorado Front Range CFLR Project Area. The goals of this partnership include reducing the risk of catastrophic wildfires and restore forests impacted by wildfires surrounding reservoirs, as well as minimize erosion and sedimentation in reservoirs.

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

Press Releases

- Red Feather Prescribed Burn on the Canyon Lakes Ranger District

  Red Feather Prescribed Burn on the Canyon Lakes Ranger District

Scholarly Works

- The Rocky Mountain Research Station (RMRS) will soon be publishing a General Technical Report (GTR): **"**Principles and Practices for the Restoration of Ponderosa Pine and Dry Mixed-Conifer Forests of the Colorado Front Range". This was a joint effort by the Forest Service and several of the Colorado Front Range Landscape Restoration Project Landscape Restoration team members. This report presents a science-based framework for managers to develop place-based approaches to forest restoration of Front Range ponderosa pine and dry mixed-conifer forests.
- RMRS will also be publishing a companion GTR to Principles and Practices for the Restoration of Ponderosa Pine and Dry Mixed-Conifer Forests of the Colorado Front Range: "Visualization of Heterogeneous Forest Structures Following Treatment in the Southern Rocky Mountains". The central purpose of this tool is to link quantitative and visual descriptions of immediate posttreatment spatial forest structure to help communicate desired spatial structures at the stand level in dry forest types of the Rocky Mountains. This tool was developed by simulating four different treatments across four stands with varying productivity that had been identified as candidates for ecological restoration.

Signatures:

Recommended by (Project Coordinator(s)):_____

Approved by (Forest Supervisor(s)): _____

(OPTIONAL) Reviewed by (collaborative chair or representative): _____