CFLR Project (Name/Number): Uncompahgre Plateau/CFLR003

National Forest(s): Grand Mesa, Uncompahgre, and Gunnison National Forests

1. Match and Leveraged Funds:

a. FY18 Matching Funds Documentation

Fund Source – (CFLN/CFLR Funds Expended)	Total Funds Expended in Fiscal Year 2018
CFLN18	$353,066

This amount should match the amount of CFLR/CFLN dollars obligated in the FMMI CFLRP 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 2018
NFTM	$278,525**

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 2018
NFHF	$19,101
NFTM (CFTM0318)	$275,691
NFVW	$21,038
NFWF	$9,695
Total	$325,525

This amount should match the amount of matching funds obligated in the FMMI CFLRP 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 2018
Student Conservation Association	$62,467
Colorado Parks & Wildlife (OHV-Grand Valley and Ouray RDs)	$170,000
Mule Deer Foundation (Long Creek/Moore-Payne)	$33,327
Bird Conservancy of the Rockies (monitoring)	$5,785
Uncompahgre Partnership (coordination & monitoring)	$2,250
Colorado Forest Restoration Institute (monitoring)	$14,862
Southwest Conservation Corps (invasives)	$2,225
Mesa Youth Services (invasives)	$9,750
Total	$300,666

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 FMMI CFLRP 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.

** *Supplemental (in-lieu CFLN funding spent by the GMUG NF as NFTM0418.*

Fund Source – (Partner In-Kind Contributions)	Total Funds Expended in Fiscal Year 2018
Student Conservation Association (invasives)	$32,605
Southwest Conservation Corps (invasives)	$6,610
Uncompahgre Partnership (coordination and monitoring)	$2,900
Bird Conservancy of the Rockies (monitoring)	$940
Wildlands Restoration Volunteers (zeedyk)	$23,174
Mesa Youth Services (invasives)	$30,000
Total	$96,229

Total partner in-kind contributions for implementation and monitoring of a CFLR project on NFS lands. 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 FY18)	Totals
Total revised non-monetary credit limit for contracts awarded in FY18	$139,333

Revised non-monetary credit limits for contracts awarded prior to FY18 were captured in previous reports (FY16 and FY15). 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 fill in the table describing leveraged funds in your landscape in FY2018. Leveraged funds refer to funds or in-kind services that help the project achieve proposed objectives but do not meet match qualifications.

Description of item	Where activity/item is located or impacted area	Estimated total amount	Forest Service or Partner Funds?	Source of funds
Schedule A Road Maintenance Agreement	Road maintenance and improvements across the Uncompahgre Plateau	$560,000	Partner Funds	State of Colorado

(Optional) Additional narrative about leverage on the landscape if needed:

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***.

Fiscal Year 18 was a good year for prescribed fire and beneficial acres on the Uncompahgre Plateau CFLRP area. Several previous mechanical treatments were revisited with prescribed fire (Thunder Road, Iron Springs, Sawmill Mesa) in FY18. Additionally, four wildfires burned over 37,000 acres on the Uncompahgre Plateau. Many of these acres were beneficial, though only a relatively small amount of these acres will be claimed in FY18 due to fire containment and control overlapping into FY 2019.

These prescribed burn treatments, along with ongoing timber sales and stewardship contracts (Lockhart, Smokehouse, Horsefly), are dramatically increasing the resiliency of our ponderosa pine and dry mixed conifer stands in particular. Additionally, communities around Norwood have been further protected from wildfires by prescribed burning that occurred on the Thunder Road Mastication Project, originally implemented in FY 2016. We were able to utilize numerous cooperators to help implement these prescribed burns, including resources from 3 different volunteer fire departments and the Bureau of Land Management.

FY2018 Overview

FY18 Activity Description (Agency performance measures)	**Acres**
Number of acres treated by prescribed fire	3,861
Number of acres treated by mechanical thinning	790 (integrated accomplishment)
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	134 beneficial acres from two wildfires
Number of acres treated to restore fire-adapted ecosystems which are maintained in desired condition	1,463 acres (maintenance burn, 2nd burn entry, included above in RX acres)
Number of acres mitigated to reduce fire risk	3,995 (includes RX and natural ignition acres above)

Please provide a narrative overview of treatments completed in FY18, 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?

Six prescribed burns, totaling 3,861 acres were implemented in October and November of 2017, when conditions remained favorable for implementation well into the fall. Three of these burns were hand ignition and three were aerial ignition, with the bulk of the acres getting accomplished through aerial ignition. Our aerial ignition operations expanded in 2018 partly due to experience our firefighters obtained on prescribed burning assignments in Region 8 over the past 2-3 years. This improved skill set allowed us to rapidly implement these prescribed burning acres using relatively tight burn condition windows. During the spring and summer of 2018 we were unable to implement any prescribed burns due to severe drought and significant fire activity on the GMUG National Forests. However, we were able to utilize the beneficial wildfire acres process to analyze 2 wildfires for positive benefits. These were the Tarantula Fire (92 acres of 112 acres counted as beneficial) and the Tabeguache Fire (42 acres of 497 acres counted as beneficial). Significant effort was also put into suppressing and managing the 36,000+ acre Bull Draw Fire in FY18, though the beneficial acres for that incident will not be counted until FY19.

Nearly 1,500 acres of the aerial ignition burning were done in ponderosa pine stands that had been previously treated through commercial harvest (late 1990s) as well as prescribed burning (2004-2009). The fire effects look very good in these stands and it is clear they are becoming more 'fire influenced' and resilient to future disturbances.

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.

- Most of the treatments were in areas of Condition Class 2 and Fire Regimes I, II, and III. Treatment units consisted primarily of ponderosa pine and dry mixed-conifer stands that had not been managed for many decades. Additionally, some of these projects are in the wildland urban interface and were designed both as resiliency and wildfire risk reduction projects.

- **Please tell us whether these treatments were in "high or very high wildfire hazard area** from the "wildfire hazard potential map" (Firelab.org)
  - Were the treatments in **proximity to a highly valued resource** like a community, a WUI area, communications site, campground, etc.?
    - Approximately 80% of the prescribed burn acres were in high or very high wildfire hazard areas, while the remaining 20% were in low to moderate areas. The Thunder Road Project is immediately adjacent to private property with year around residences. The Horsefly Stewardship Project is adjacent to private property with year around residences in the Sanborn Park area.
- **What have you learned** about the interaction between treatment prioritization, scale, and cost reduction? What didn't work? Please provide data and further context here.
  - Lessons Learned: 1) We need to stay with our priorities through the life of the project (ie, we need to follow up our mechanical treatments with prescribed burns to 'complete' the project and obtain/meet all of the desired benefits/objectives. 2) We have bumped our prescribed burn unit size up by 50-100%, allowing more efficient implementation and the use of aerial ignition. 3) Aerial ignition allows us to take advantage of smaller, tighter burn windows and still get significant acreage burned. 4) Smoke needs to be managed carefully in this context since large acres and tight windows can result in smoke impacts as atmospheric conditions rapidly change (changes in wind direction, poorer dispersion, inversions). 5) Aerial ignition, though generally very effective, is very "broad-brush" and some of our burn objectives may not be fully met. This may be particularly significant in first entry burns where initial silvicultural prescriptions related to mortality and regeneration are important to meet to move the stand in the desired direction.

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 completed locally. You may copy and paste these below or provide a link to a website with these visuals.

Cottonwood Rx Aerial Ignition

Thunder Trails Rx

Link to map and descriptions: Link

Expenditures

Category	**$**
FY2018 Wildfire Preparedness[1]	$350,487
FY2018 Wildfire Suppression[2]	$16,070,661
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	NA
FY2018 Hazardous Fuels Treatment Costs (CFLN)	$308,876
FY2018 Hazardous Fuels Treatment Costs (other BLIs)	$266,175

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 of the prescribed burning and mechanical treatments theoretically should lower suppression costs over time. It will take decades of treatment and analysis to actually identify and realize this reduction based on the geographical location of future wildfire starts.

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:
No assessments have been completed that are directly related to wildfire cost reduction.

Economic Report Link

When a wildfire interacts with a previously treated area within the CFLR boundary:

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

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

If additional assessments have been completed since the FY2017 CFLRP annual report on fires within the CFLRP area, please note that and provide responses to the questions below.

The Tabeguache Fire (497 acres) burned into an older mechanical treatment that was followed up with prescribed fire 5-6 years ago. The FTEM entry is being done at this time and is not complete yet.

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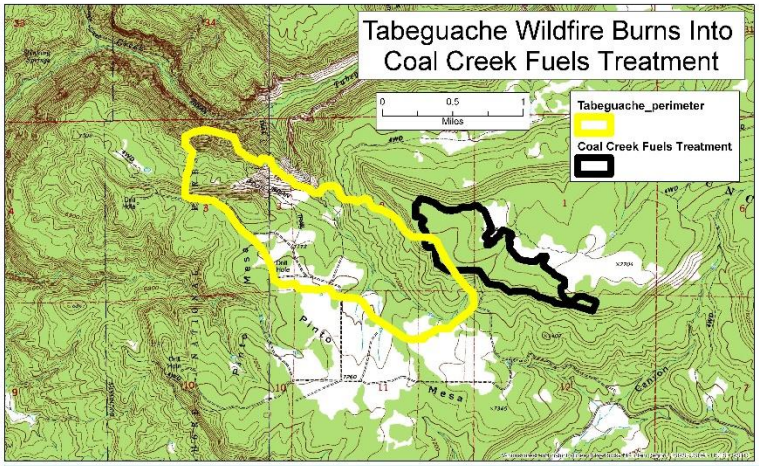
Tabeguache Wildfire Burns Into Coal Creek Fuels Treatment
0 0.5 1
Miles
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Coal Creek Fuels Treatment

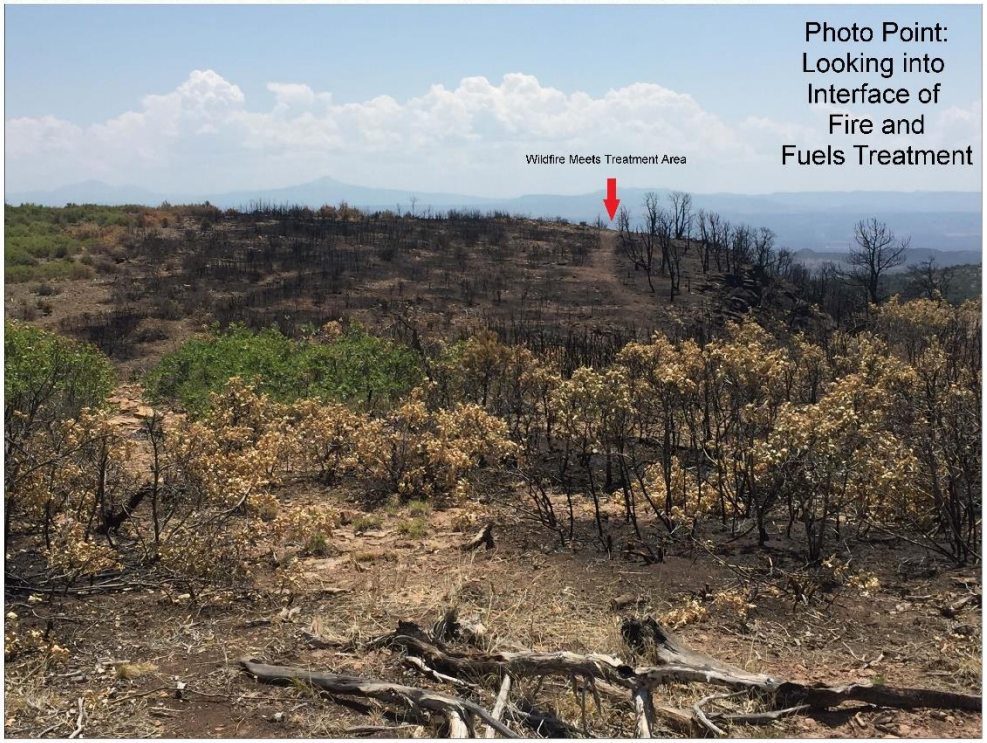
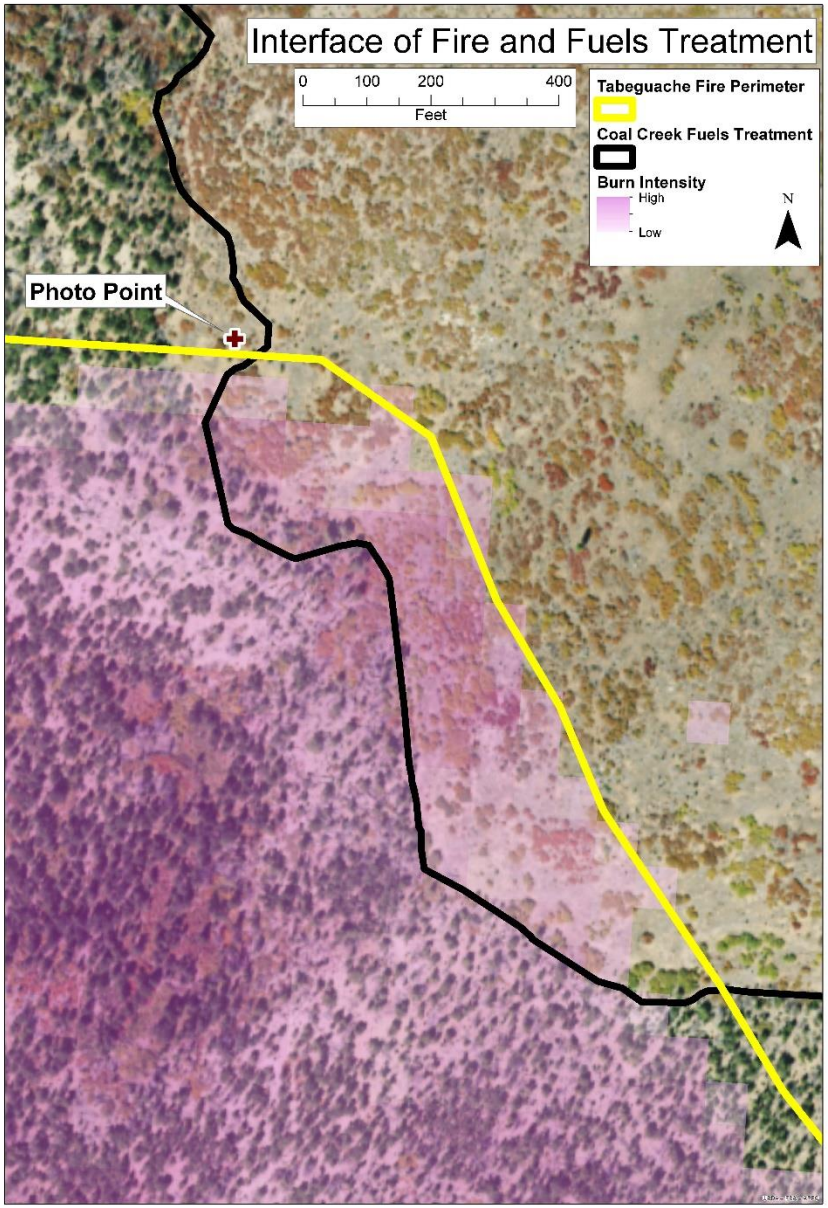


Photo Point: Looking into Interface of Fire and Fuels Treatment
Wildfire Meets Treatment Area


Interface of Fire and Fuels Treatment
0 100 200 400
Feet
Tabeguache Fire Perimeter
Coal Creek Fuels Treatment
Burn Intensity
High
Low
N
Photo Point

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.*
    - The Coal Creek Mechanical Treatment and Prescribed Burn was an older planning effort (CE category 6, 2001) that included nearby landowners, the BLM, Colorado Parks and Wildlife and county commissioners.
- *Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands within or adjacent to the CFLR landscape?*
    - No, Coal Canyon was independently planned and the mechanical treatment occurred pre-CFLRP. However, the treatment blends in nicely to a mosaic of CFLRP treatments on NFS lands, mechanical treatments on adjacent BLM lands and previous wildfire scars across the landscape.
- *What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns?*
    - The project was primarily designed to enhance wildlife habitat for deer and elk. Protecting private property to the west and southwest of the project area from wildfire was a secondary benefit. Both objectives were met.
- *Did the treatments do what you expected them to do? Did they have the intended effect on fire behavior or outcomes? Please include a brief description.*
    - Yes, one flank of the Tabeguache Fire burned up a steep slope and into the treatment unit and then travelled only 1-2 chains in before it stopped burning and was easily controlled at that location. Less than 5% of the perimeter of the Tabeguache Fire was influenced by this treatment however.
- *What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future?*
    - Previous treatments are valuable!
- *What <u>didn't</u> work as expected, and why? What was learned?*
    - More treated polygons across the landscape will create more fire management options in the future when dealing with large fire growth.
- *Please include the costs of the treatments listed in the fuels treatment effectiveness report: how much CFLR/CFLN was spent? How much in other BLI's were spent? If cost estimates are not available, please note and briefly explain.*
    - CFLN funds were not spent on the treatments because it was completed pre-CFLRP.
    - The Rx burning cost in FY 2008 was approximately $62/acre over 200 acres for a total of $12,400.
    - The mechanical treatment cost in FY 2004 was approximately $175/acre over 200 acres for a total of $35,000.

When a wildfire occurs within the CFLR landscape on an area <u>planned</u> for treatment but not yet treated:

- Not Applicable.

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
    - Twenty six fires originated on NFS lands within the CFLRP boundary.
        - Two of these fires escaped initial attack and required type 3 teams.
        - Acreage from these twenty six fires totaled 664 acres.

        - Fires that escaped initial attack included the Tabeguache fire at 497 acres, and the Love fire at 40 acres.
        - Suppression costs for fires initiating within in the CFLRP project boundary totaled $1,259,800.
    - One fire (Bull Draw) originated on adjacent BLM lands and burned onto NFS lands within the CFLRP boundary.
        - This was fire started by lightning on July 29 and was not contained until October 12. The fire actively burned several weeks and required multiple type 2 & 3 teams to manage it.
        - Acreage from the Bull Draw fire totaled 36,520.
        - Suppression costs for the Bull Draw fire totaled $14,800,000 across BLM and NFS lands.
    - Preparedness funds for the West and North Zones of the GMUG that includes the Uncompahgre Plateau Project area totaled $ 1,030,843 for FY 2018. The Uncompahgre Plateau Project area covers approximately 34% of the fire zones acreage for an estimated total preparedness cost of $350,487.
- Include summary of BAER requests and authorized levels within the project landscape, where relevant
    - The cost (personnel time) to conduct the BAER assessment for the Bull Draw fire (in sept 2018) was $10,861.
    - We have requested $174,085 to the region for road/trail treatments and invasive weed surveys and treatments in FY 2019.

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.

FY 2018 Jobs Supported/Maintained (FY18 CFLR/CFLN/ WO carryover funding):

FY 2018 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	33	53	1,480,131	2,481,890
Forest and watershed restoration component	2	3	48,016	72,028
Mill processing component	15	49	477,284	1,428,181
Implementation and monitoring	3	4	95,038	119,091
Other Project Activities	7	8	49,051	105,705
TOTALS:	60	117	2,149,520	4,206,895

FY 2018 Jobs Supported/Maintained (FY18 CFLR/CFLN/ WO carryover and matching funding):

FY 2018 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	33	53	1,480,131	2,481,890
Forest and watershed restoration component	3	3	53,327	79,995
Mill processing component	15	49	477,284	1,428,181
Implementation and monitoring	9	13	534,390	669,641
Other Project Activities	7	8	49,051	105,705
TOTALS:	67	127	2,594,183	4,765,412

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).

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
Job training opportunities/per capita normalize	Youth engagement through 3rd party monitoring with local high school students continues to be a project highlight. Creation of three high school internship programs provides workforce training and job opportunities to local youth while garnering support for the collaborative, the US Forest Service, and the projects amongst the local community. In 2018 the Montrose Forestry Intern Program consisted of four students and a teacher mentor/supervisor. The crew was employed through a project partner and trained in ecological monitoring. The crew worked with oversight from CFRI to complete project monitoring. Additionally, two more local high schools (Delta & Norwood) were engaged with a 6 week intern program. These programs consisted of two students and a teacher/mentor each. Programs consisted of specialist job shadowing, monitoring, and a project report.	High School Internship
% Locally retained contracts	100% of the active stewardship contracts and small timber sales contracts continue to be with local contractors. This directly impacts the local community with jobs and forest products.	
Duration of jobs	Timber industry jobs associated with the project continue to last for several years. We have had active harvest associated with CFLRP since 2010 and expect that to continue for another 5-7 years until all related stewardship contracts are complete. The project supports jobs for loggers in	CFRI economic brief

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	the forest, truck drivers, and mill/firewood operators. There is also shorter duration support of jobs through stand exam and timber sale preparation contracts. Additionally, the project has supported full time and seasonal FS workers to help support implementation since inception.	
Relationship building/collaborative work	The local relationships developed through the CFLRP collaborative process over the past 10 years continue to thrive and help the project succeed. The Uncompahgre Plateau collaborative began its work before the start of funding in 2010 and was well poised to hit the ground running. Field trips and citizen science activities offered to the public through academic involvement provided learning opportunities and garnered support for the project and US Forest Service.	Westerncolc.org/ CFRI UP Project CFRI social brief
Community support for relevant initiatives	The relationships and trust forged through the CFLRP process has helped other forest-wide forest health and timber salvage projects succeed (such as Spruce Beetle Epidemic Aspen Decline Mgmt. Response EIS). Local relationships and trust is key to this project's success.	GMUG page Project page

5. Based on your project monitoring plan, **describe the multiparty monitoring process.**
   - **What parties (who) are involved in monitoring, and how?**
     - Multi-party monitoring continues to progress well on the Uncompahgre Plateau project. Colorado Forest Restoration Institute (CFRI), Western Colorado Landscape Collaborative and UncCom are the main drivers of the multi-party program. Ten percent of the FY 2018 CFLN funding was set aside for monitoring and prioritized out to specific monitoring efforts. We have an annual monitoring "jam session" with key stakeholders and the USFS. At this meeting we conduct an after action review (AAR) of the previous year's monitoring activities, discuss monitoring protocols, determine priorities for the next

year, and develop an annual monitoring program of work. There is uncertainty if UncCom will continue to operate as a 501 (c) (3) past 2019, which would make it more difficult to operate our high school intern programs. UncCom has been a key organization to handle grant funding that our external partners have been successful in obtaining. Discussions about post-2019 are on-going, but it will be very difficult for UncCom to continue to operate without future CFLN funds.

- **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?
    - **Ecological Impacts:**
        - Treatments have achieved desired conditions, increasing ecological resilience to wildfire, insects and disease, and drought.
        - The potential risk of high severity crown fire has been reduced.
        - Landscape-level fuel reduction benefits wildfire management.
        - Treatments have reduced tree canopy cover and increased meadows, enhancing resilience across the landscape.

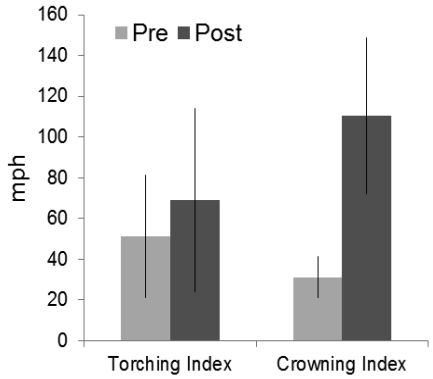
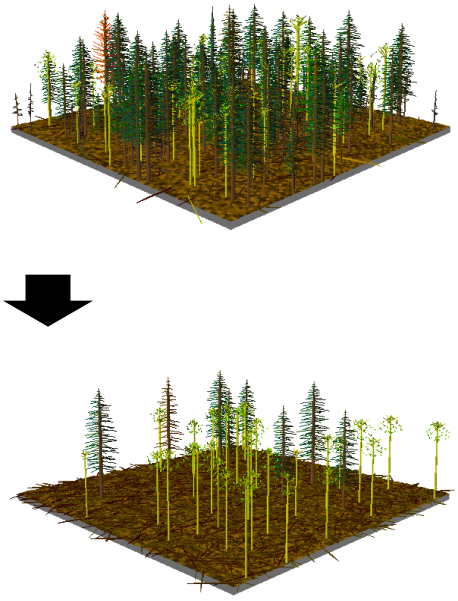


Figure 3. Mean (± standard deviation) Torching and Crowning Indices before and after treatment.



    - CFRI ecological brief
- **Social Impacts and Contributions:**
    - Lack of conflict or litigation with the US Forest Service regarding the projects due to public support for the Uncompahgre Plateau-CFLRP.
    - The collaborative process is viewed by stakeholders as legitimate, particularly due to the integration of science and the inclusion of monitoring efforts.
    - The collaborative process is viewed by participants to provide sufficient opportunities for involvement, including planning, monitoring, and adaptive management discussions.
    - Participants view the collaborative process as fair and transparent. Collaboration fosters timely communication, group learning, and conflict management. Monitoring was identified as creating a strong level of trust amongst all stakeholders, particularly between stakeholders and the US Forest Service.
    - Monitoring programs have provided opportunities for collaborative learning, actionable knowledge, and conflict resolution.
    - CFRI social brief

Colorado Forest Restoration Institute:

- Photo point monitoring continued in 2018 based on feedback from stakeholders. Post-burn monitoring data was collected in recently burned prescribed fire areas. Rapid assessment plots focused on stand composition and structure changes resulting from restoration harvest activities continued.
- CFRI provided direction and oversight to the Montrose Forestry Intern Program (FIP). The Montrose FIP crew consists of four local high school students and a teacher as a supervisor and mentor. The FIP crew implements the monitoring program as prioritized by the collaborative group and directed by CFRI.
- Established new tree planting study.
    - Changing climate has the potential to alter forest composition on the Uncompahgre Plateau (UP). Engelmann spruce is currently a major component of the forest on the UP, but at least one study suggests climate in this area may become unsuitable for this species in as little as 15 years (Rehfeldt et al. 2015). Conditions are expected to be more suitable for sympatric species that typically occur in warmer, drier locations, such as ponderosa pine.
      There is a clear need to develop reforestation approaches for the UP that are responsive to changing conditions. To this end, we installed a planting study in the footprint of the Smokehouse timber sale on the UP to evaluate the performance of candidate tree species for reforestation efforts: Engelmann spruce and ponderosa pine; as well as of the effectiveness of partial overstory retention and dead shade from coarse wood for ameliorating establishment conditions for seedlings.
    - Objectives
        - 1. Characterize differences in first year survival, root growth, and height growth among planted seedlings of Engelmann spruce and ponderosa pine;
        - 2. Evaluate the effect of partial overstory retention, dead shade, and their combination on the relative performance of the two tree species using the criteria outlined in objective 1.
        - 3. Monitor seedlings periodically for up to five years to describe multi-year trends in seedling mortality and height growth related to species, overstory, and microsite.
- Economic Monitoring
    - Annual surveys were continued in 2018 with current contractors to assess economic impacts.
- North Uncompahgre

- See link for 2018 initial results that were derived from 2017 measurements. Plots will be sampled again 2019.
- *CFRI Understory Summary*

UncCom/Uncompahgre Partnership

- Through an agreement with the USFS, UncCom and Uncompahgre Partnership provided the Montrose High school Forestry Intern Program crew. The crew consisted of a teacher and four students who worked closely with CFRI to complete monitoring across the Ouray Ranger District. The Uncompahgre Partnership also helped to facilitate our monitoring jam session, annual winter stakeholder meeting, annual stakeholder field tour and camp-out. UncCom operates as the 501C3 non-profit organization to handle finances for the Uncompahgre Partnership.
- Coordinated the Delta High School intern Program that consists of a teacher/mentor and two students. Students complete a 6 week program that includes job shadowing and a study/monitoring project report and presentation.
  - Students job shadowed various resource specialists including: timber, fire/fuels, wildlife, fisheries, surveying, and range. The students worked individually on ongoing monitoring on the Uncompahgre Plateau for sage-grouse habitat, and stream habitat for Colorado River Cutthroat Trout. Additionally, range practices in the riparian area were investigated and alternative management practices were proposed.
- Obtained a grant through the Telluride Foundation (telluridefoundation.org) to fund the Norwood High School intern program that consists of a teacher/mentor and two students. Students complete a 6 week program that includes job shadowing and a wildlife monitoring. Students complete a project report and presentation.

Results and feedback from multi-party monitoring positively influence the success of our project by helping us to adaptively manage the landscape. For example, we are able to fine tune silviculture prescriptions to achieve more desirable outcomes based on input from the monitoring program.

https://static1.squarespace.com/static/579fa8da1b631ba23175bd1b/t/5a035550e2c48332b1572b6f/1510167899240/Uncompahgre+Plateau--Fire+%28un%29desirable+condions+FINAL+2.pdf

- **What are the current weaknesses or shortcomings of the monitoring process?** (Please limit answer to one page. Include a link to your monitoring plan if it is available).

  The following response was written by CFRI:

  From the vantage point of being in the final year of monitoring, it is very clear to estimate some of the weakness of the monitoring process; however, this is only due to the advantage of having gone through the process. As a whole, our monitoring process has been incredibly effective and has been a crucial component of the success of the collaborative. The main weaknesses of the monitoring process is that the collaborative did not lay out a 15 year plan for monitoring and the adaptive management process has not been well documented.

  A clear vision for monitoring for the full 15 years of the CFLRP (10 years of funding plus the required 5 years of monitoring post-CFLRP) was not created at the beginning of the CFLRP. An approach that had a broad vision of 15 year monitoring would have been helpful to answer some long-term ecological questions about forest restoration and management in this area. In place of a long-term monitoring plan or vision, the collaborative has been more opportunistic in smaller monitoring projects and created a longer-term monitoring dataset (collected by the Forestry Internship Program interns) since 2009. However, this program did not have clearly defined long-term questions, objectives, or outcomes; despite that, the dataset can answer some long-term ecological questions. A clearly articulated long-term vision of monitoring would have provided stronger direction, and thus

had a stronger impact on the adaptive management process as well as the potential to provide scientific knowledge to scholarly literature. Additionally, because the monitoring process lacked a clear 15 year vision, the collaborative has not done an effective job at documenting the adaptive management process. Monitoring results have influenced manager decision making and have created "lessons learned" of how to better implement treatments during the process. However, we have not clearly demonstrated how monitoring results have influenced managers understanding of how to change or adjust implementation of restoration treatments, which would be valuable learning for other collaborative groups.

Please provide a link to your most up-to-date multi-party monitoring plan and any available monitoring results from FY18.

- **CFRI Multi Party Monitoring Plan**

6. FY 2018 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	3,121	Integrated with Rx fire and For-Veg-Imp
Acres of forest vegetation improved FOR-VEG-IMP	Acres	790.4	$260,000
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	1,577	$97,375
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	6,157	$156,060 Integrated with For-Veg-Imp, Rd-Decom, FP-Fuels, S&W-RSRC-Imp, Invplt-Nxwd-Fed-Ac
Miles of road decommissioned RD-DECOM	Miles	2.42	Integrated with HBT-ENH-TERR
Miles of system trail maintained to standard TL-MAINT-STD	Miles	113.2	$12,500
Miles of system trail improved to standard TL-IMP-STD	Miles	28.3	$12,500
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	1,631	NA
Volume of timber sold TMBR-VOL-SLD	CCF	8,652	$285,332
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	3,969	Integrated with Rx fire, Tmbr-Vol-Sld, Hbt-Enh-Terr and For-Veg-Imp
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	473	Integrated with Rx fire, Tmbr-Vol-Sld and For-Veg-Imp
Please also include the acres of prescribed fire accomplished	Acres	3,861	$289,575 ($75/ac)
Soils & Watershed Resource Improvement S&W-RSRC-IMP	Acres	2,958	Integrated from Fp-fuels, Hbt-Enh-Terr & Rd-Decom

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

7. **FY 2018 accomplishment narrative** – Summarize key accomplishments and evaluate project progress *not already described elsewhere* in this report. (Please limit answer to three pages.)

FY 2018 featured continued implementation of our landscape forest restoration treatments. Our timber volume offer was up in 2018 with the award of the Moore-Payne large stewardship project through agreement with the Mule Deer Foundation. Our local stewardship market continues to be saturated with only a few viable contractors willing and capable of successfully completing the stewardship timber harvest work, so the costs of implementing work has increased. The lack of market for non-saw material and certain tree species continues to be a challenge for our project. We have had five active logging operations completing restoration harvest in previously awarded projects, and are making good progress with implementation. We continued to implement large wildlife habitat improvement/fuels projects and some additional native seeding. Prescribed fire increased substantially this year with good fall burning windows.

Our forest restoration treatments from 2010-2018 are accumulating to make a significant impact on the vegetation across the Uncompahgre Plateau landscape. Our activities are resulting in forest conditions more resilient to increased disturbances in the wake of a changing climate, including: wildfire, insects, drought and disease. Completed forest restoration work is also providing more fire management options, which has led to more management of fire across the landscape for the ecological benefits to the resources, and safer conditions for firefighters and the public.

Our relationship with the Mule Deer Foundation continued in 2018 with a stewardship project added through our existing agreement. We worked very closely with the Colorado Forest Restoration Institute and the Uncompahgre Partnership – Western Colorado Landscape Collaborative in public outreach, coordination, scientific studies, and monitoring. Our local communities, partners and stakeholders continue to be involved and offer positive feedback on our on-going efforts with no controversy.

The following table provides a summary of accomplishments through 2018 as a comparison of the stated goal in the 2010 project proposal. Note that the numbers will not match gPAS report figures because many treatments are counted for more than one vegetation type. This table is important to our local stakeholder group and tracks our success compared to our 10 year project goals.

Table - Acres of treatment proposed in the Uncompahgre Project area from our 2010 proposal versus actual accomplishments by fiscal year.

Treatment Tracking by Type

Treatment Type	Mixed Conifer	Ponderosa Pine	Sage	Pinyon Juniper	Oak	Aspen	Spruce/ Fir	Riparian	Roads Decommi ss-ioned	Mech-anical Treat-ments	RX/ Managed Fire	Trail	Native Species	Invasive Weeds	Timber Volume Sold (CCF)	Power lines Treat-ments	Stream
Proposed treatment amounts	11,000	15,000	1,800	2,500	7,000	11,000	4,000	320	130	27,300	55,000	100	8,100	6,800	99,000	650	30
Unit of Measure	Acre	Acre	Acre	Acre	Acre	Acre	Acre	Acre	Mile	Acre	Acre	Mile	Acre	Acre	CCF	Acre	Miles
FY 10 Accomplishments	1,089	300	0	0	0	0	171	0	32.5	1,381	1,893	10	401	457	6,100	117	0
FY 11 Accomplishments	1,681	3,158	0	445	490	800	285	320	4	2,874	4,052	268	475	1,655	12,777	472	1
FY12 Accomplishment	487	511	322	494	0	86	141	50	30	1,494	0	48	201	222	5,115	482	2
FY13 Accomplishments	48	1,003	1,043	1,248	2,121	1,352	350	0	36	3,806	318	49	215	392	10,514	0	15
FY14 Accomplishments	668	554	749	554	1,371	66	1,063	0	13	3,012	1,071	84	0	745	5,028	133	0
FY15 Accomplishments	1,073	3,086	0	1,400	3,158	736	645	0	0	3,678	945	92	300	800	13,704	0	0
FY 16 Accomplishments	2,152	6,637	280	821	5,478	4,668	260	0	0	2,761	5,232	128	0	253	24,657	563	0
FY 17 Accomplishments	542	319	262	828	1,650	886	367	0	7.4	1,932	869	5	275	941	2,304	218	18
FY 18 Accomplishments	701	4,202	1,266	42	4,202	2,058	90	0	2.4	1,673	3,683	142	380	1,577	8,652	38	0
Treatment Total and Percent(%)	6,289 (57)	19,770 (132)	3,922 (218)	5,832 (233)	18,470 (264)	10,652 (97)	3,112 (78)	370 (116)	125.3 (96)	22,611 (83)	14,272 (26)	826 (826)	1,972 (24)	7,042 (104)	88,851 (90)	1,890 (291)	36 (120)

- Totals in this table will not match gPAS summary due to treatments being counted for multiple vegetation types. This table is primarily for local tracking with our stakeholders to measure implementation vs. local collaborative goals.

Update on Project goals and outcomes to date:

a) Restored and maintained forest conditions, with reduced tree density and fuels hazards, will enable broader use of prescribed fire and wildfire, providing more natural ecological functions and reduced fire-fighting cost with approximately 27,300 acres of mechanical treatment and 55,000 acres of broadcast burning planned.
   - Since 2010, the project has accomplished 22,573 acres of mechanical treatment and 14,272 acres of prescribed fire. This is 83% and 26% of the stated goal 90% of the way through the 10-year project.
   - Monitoring continues to indicate attainment of desired forest conditions and reducing tree density and fuel hazards. CFRI Ecological Brief
   - All of the prescribed fire and mechanical treatments were designed to accomplish multiple objectives for wildlife, reducing hazardous fuels, timber production and restoring ecological function. Wildlife species benefitting from the treatments include: Gunnison sage-grouse, mule deer, Rocky Mountain elk, numerous Forest Service sensitive and Management Indicator Species.
   - Partners continue to be a huge factor in attainment of project objectives with contributions made from Student Conservation Association, The Mule Deer Foundation, Montrose County, Uncompahgre Partnership, Colorado Forest Restoration Institute, Southwest Conservation Corps, Mesa Youth Services, Bird Conservancy of the Rockies, and Colorado Parks and Wildlife. These contributions total $300,666.
   - The Stewardship Agreement initiated in 2014 with the Mule Deer Foundation was expanded to include the Moore-Payne stewardship project.

b) Fuels treatments in the Wildland Urban Interface (WUI), including 650 acres of power line treatments, in coordination with Community Wildfire Protection Plans (CWPP).
   - Since 2010, approximately 10,119 acres of treatment has occurred in WUI. Of this amount, 1,890 acres were associated with power lines. We have completed 291% of our stated goal from 2010 for powerline treatments.
   - In 2018, approximately 473 acres were treated in WUI.

c) Water quality, water yield, and stream habitat enhancement within key Colorado River watersheds.
   - Since 2010, approximately 826 miles of trails have been maintained or improved. Our stated goal in 2010 was 100 miles, therefore we have far exceeded our stated goal.
   - 1.2 miles of road decommissioning occurred in 2018. The stated goal in 2010 was 130 miles. To date we have accomplished 124.1 miles which is 95% of our stated goal. Additional road decommissioning is scheduled for 2019.
   - Road maintenance continues to be completed though County Road Agreements and Force Account. Approximately 420 miles were maintained in 2018.
   - Maintenance to reduce erosion and sedimentation to nearby streams was completed on 142 miles of trail.

d) Weed treatments on over 6,800 acres and reseeding with native seed on 8,100 acres.
   - Since 2010, approximately 7,042 acres of noxious weed treatments have been completed. This is 104% of the stated goal, 90% the way through the project timeline. Approximately 1,577 acres of invasive weeds were treated in 2018.
   - Seeding was completed on 380 acres. To date our seeding accomplishment is far lower than our initial goal (24%) because seeding needs have turned out to be far lower than originally anticipated.

e) Collaborative multi party monitoring by collecting pre-treatment and post-treatment information to assess effectiveness of restoration over a 15-year period (establish historic conditions and range of variability; determine current baseline vegetation conditions).
   - A summary of monitoring highlights from 2018 is provided in Section 5 of this report.

f) Outcomes that benefit threatened, sensitive and endangered species, including Gunnison sage-grouse, desert bighorn sheep, and Colorado River cutthroat trout.
   - Since 2010, 44,435 acres of terrestrial habitat and 36 miles of stream habitat have been restored or enhanced. Improvements/restoration to terrestrial habitats has been accomplished through road

closures to create wildlife security areas, vent pipe caps on outhouses for bird protection, spring development, and mechanical and prescribed fire treatments to increase forest vegetation resiliency.

- In 2018, approximately 6,157 acres of terrestrial habitat were treated in mixed conifer, ponderosa pine, pinyon-juniper, sage, aspen and spruce-fir cover types.

g) Development and integration of climate change adaptation and mitigation strategies.
   - CRFI launched graduate student research involving tree regeneration of multiple species.
   - Planting of pine and Douglas-fir is planned in openings from spruce-fir group selection harvest next year.

h) Approximately 292,000 CCF of biomass will be created and projects will support the enlargement of biomass markets and sustain local timber mills.
   - A biomass market has yet to develop in Western Colorado. The Forest continues to be willing to work with any entity (private or public) to create such a market.
   - Only wood products that are used directly in a biomass market are counted in reporting. Therefore no accomplishment was reported in 2018.

i) Project implementation through stewardship contracting and other means will require hiring of field crews; over 750 part-time/seasonal jobs will be created.
   - Since 2010, the project has produced approximately 1,115 direct, indirect and Force Account jobs.
   - In 2018, 127 full-time and part time jobs were created.
   - One Stewardship Project (Moore-Payne) was awarded in 2018 through agreement. This project will treat spruce/fir/aspen and mixed-conifer/aspen stands.
   - Approximately 30 students and summer temporaries with Youth Services, Job Corps and local high schools worked on various projects on the Uncompahgre Plateau.

j) Local youth will be involved in projects, providing work, job skill training, and educational opportunities.
   - Youth Conservation and Job Corps crews worked on multiple projects on the Plateau. YCC crews continued work to rehabilitate and seed pile burn scars resulting from fuels treatment in the Old Guard project area.
   - Coordinated the Norwood High School intern program which consists of a teacher/mentor and two student/interns. Students complete a six week program which includes job shadowing and a study/project report and presentation.
     - Students set and rotated trail cameras and conducted birding with the Bird Conservancy of the Rockies. This monitoring is used to assess effects to wildlife as a result of the implementation of the restoration activities on the Plateau.
   - Coordinated the Delta High School intern program. The students job-shadowed various resource specialists including: timber, fire/fuels, wildlife, surveying, and range. The students also worked on an ongoing monitoring project on the Uncompahgre Plateau within the Escalante project area.
   - Since 2010, 71 high school students and ten teachers have participated in summer high school internship programs at Montrose, Delta and Norwood High Schools.

k) Strengthened partner relationships and collaboration among all involved parties with meetings, field trips, outreach and technology transfer.
   - Continued discussions and involvement of multiple collaborators and cooperators in planning efforts, studies, and monitoring activities. Held our annual monitoring jam session and mid-winter meeting that involved over 50 stakeholders. We also conducted a two day field trip and camp-out with stakeholders. Approximately 40 individuals participated in the summer field trips. We hosted an additional summer field trip with FS Washington Office Staff and the Office of Management and Budget. Approximately 30 people attended this field trip.
   - Through the Western Colorado Landscape Collaborative, an external website has also been maintained. The purpose of this site is keep stakeholders informed about the project throughout the year.
   - http://www.westerncolc.org/projects/#/cflrp/

l) Plateau Field Rangers engaged the recreating public.
   - 668 public contacts made.

- 67 campsites monitored.
- Trash removed from 5 NFS roads.
- 39 system route signs installed or maintained.
- 37 non-system route signs installed or maintained.
- OHV registration tags checked throughout.

8. **The WO (EDW) will use spatial data provided in the databases of record 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?

Fiscal Year	Footprint of Acres Treated (without counting an acre of treatment on the land in more than one treatment category)
FY 2018	8,736 acres
Estimated Cumulative Footprint of Acres (2010 or 2012 through 2018)	67,422 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?

N/A

9. **Describe any reasons that the FY 2018 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).
N/A

10. Planned FY 2019 Accomplishments

Performance Measure Code	Unit of measure	Work Plan 2019	Planned Accomplishment For 2019	Amount ($)
Acres of forest vegetation established FOR-VEG-EST	Acres	1,100	1,100	$20,000 + integrated from Rx fire
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	800	800	$55,000
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	1,500	1,500	$100,000
Volume of timber sold TMBR-VOL-SLD	CCF	2,200	2,200	$110,000
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	1,500	$80,000 + integrated from stewardship

Performance Measure Code	Unit of measure	Work Plan 2019	Planned Accomplishment For 2019	Amount ($)
Acres of forest vegetation improved FOR-VEG-IMP	Acres	500	350	$263,000

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 2019 accomplishments and/or funding differs from CFLRP project work plan** (no more than 1 page): If do want to compare lifetime goals to date, link here.

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.

No changes.

13. **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.
westerncolc.org/publications

cfri.colostate.edu/publications/

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD600647

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD599048

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD595801

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD588001

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD586681

www.fs.usda.gov/detail/gmug/news-events/?cid=FSEPRD578065

www.telluridenews.com/news/article_f13a760c-c2ae-11e8-a76f-63064ab38a0f.html

www.telluridenews.com/the_watch/news/article_44534c1c-a660-11e8-ac55-83fe627bd202.html

www.montrosepress.com/news/fire-growth-explodes-after-wind/article_c7481f70-9d29-11e8-981a-8fc28325cda6.html

Signatures:

Recommended by (Project Coordinator(s)):_____

Approved by (Forest Supervisor(s)): _____

Draft reviewed by (collaborative chair or representative): _____