



2017 Uncompaghre Plateau Collaborative Forest Landscape Restoration Project

Forestry Internship Program (FIP) Progress Summary

CFRI-1706

This report presents a summary of progress and data collected from the Uncompaghre Mesas project area in the summer of 2017. In 2017, members of the Montrose High School Forestry Internship Program (FIP) crew (shown below), led by Lyle Motley and managed and supported by the Colorado Forest Restoration Institute (CFRI), collected data on trees, surface fuels, forest floor and understory cover in post-harvest, pre-prescribed burn treatment areas on the Uncompaghre National Forest.

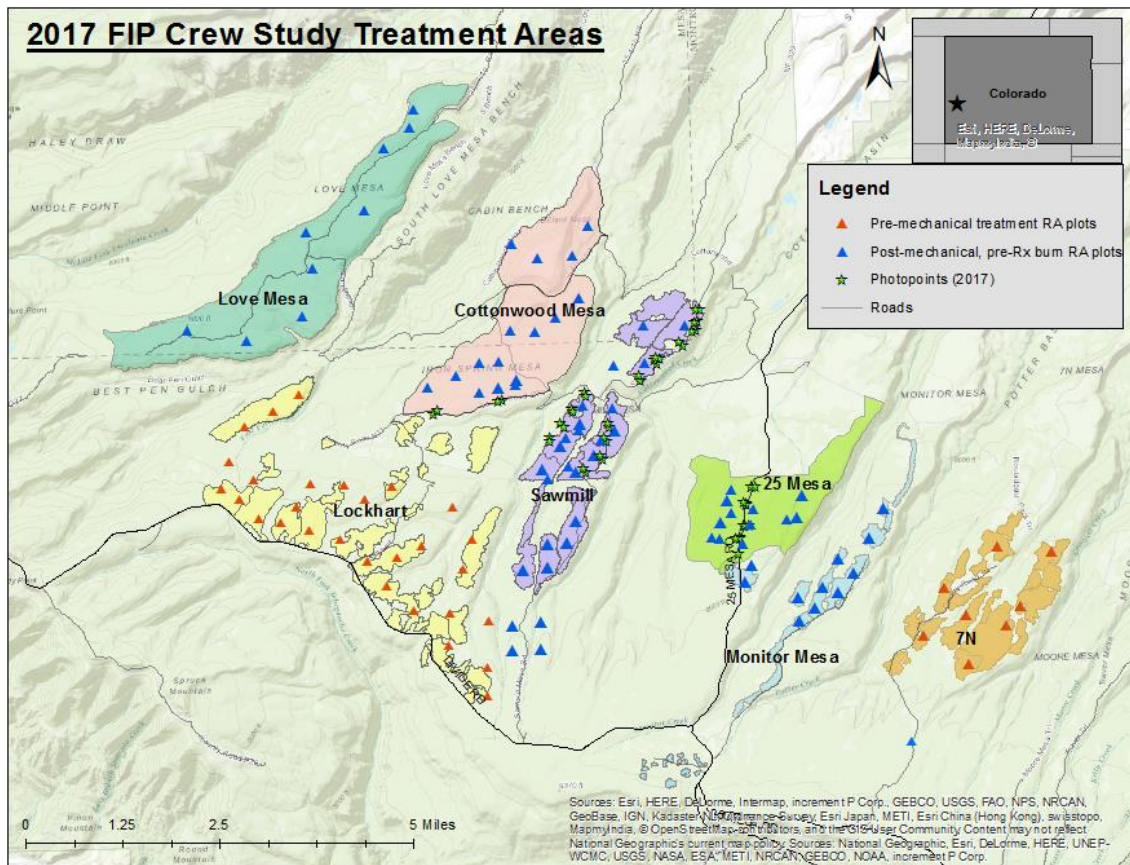
The majority of the 2017 FIP crew progress included collecting pre-treatment data in areas where prescribed fire will occur in the near future, potentially starting in fall 2017 (blue triangles on map, page 2). The FIP crew also took pre-treatment photo-points in several project areas where mechanical treatment or prescribed fire is planned but has not yet occurred to use as an important visual tool to evaluate forest change before and after treatment to supplement data collection in these areas (green stars on map, page 2).



The 2017 Forestry Internship Program (FIP) crew after a day in the field (from left): Grace Gerhard, Katelyn Rycenga, Emerald Spindler, Daniel Gutierrez, and Lyle Motley (crew leader).

2017 Accomplishments:

- 1) **Data collection in pre-prescribed burn treatment areas.** In 2016 and 2017, CFRI and the FIP crew implemented data collection in pre-prescribed burning treatment areas, where burning will take place starting in fall 2018. The FIP crew will return in 2018 to collect post-burn data if prescribed burns have been implemented.
 - a. **Sawmill Mesa prescribed burn area.** Data was collected in 12 plots in the Sawmill Mesas treatment area (blue triangles in area depicted in purple on map, page 2). The plots established in 2017 are intended compliment the 11 plots that had been previously established in the southern portion of this treatment area, and to increase the potential plots that may receive fire in the event of a prescribed burn.
 - b. **25 Mesa prescribed burn area.** Data was collected in 8 plots in the 25 Mesa area (blue triangles in area depicted in green on map, page 2). The plots established in 2017 are intended to compliment the 6 plots that had been previously established in this treatment area, and to increase the potential plots that may receive fire in the event of a prescribed burn.



Map (above) of UP-CFRLP treatment areas and 2017 data collection sites in the Unc Mesas project area, Uncompaghre National Forest, Colorado.

- c. **Cottonwood Mesa prescribed burn area.** Data was collected in 7 plots in the Cottonwood Mesa area (blue triangles in area depicted in pink on map, page 2). The plots established in 2017 are intended complement the 8 plots that had been previously established in 2016 in this treatment area, and to increase the potential plots that may receive fire in the event of a prescribed burn.
- 2) **Collection of pre-treatment area photo-points.** In 2017, CFRI and the FIP crew took nearly 50 photos at strategic points of post-mechanical treatment, pre-prescribed burn areas (green stars on map, page 2). These “photo-points” were strategically placed both along roads within or on the boundary of pre-treatment areas so as to be easily accessed again to take post-treatment photos. Additionally, photos were taken approximately 50-100 m into the treatment areas from the roads. Post-treatment photos will attempt to recreate each pre-treatment photo using landmarks, such as trail signs, unusual trees, or very large trees. Care was taken in marking photo-point locations with rock cairns and flagging, as well as recording point locations in GPS and photo-point notes to ease the relocation of photo-point locations. Photo-points will generally serve as a supplemental visual tool to evaluate changes pre- and post-prescribed burning in conjunction with data collection performed by the FIP crew and analysis performed by CFRI. Pre-prescribed burning photo-points were taken in the Sawmill Mesa, 25 Mesa, and Cottonwood Mesa treatment areas. These photo-points will also be useful stopping areas for UP-CFLRP field trips in the future, where attendees will see the post-treatment area, with the contrast of a copy of the pre-treatment photo in hand to understand what the area looked like prior to treatment.



Photo of a post-mechanical, pre-prescribed burn in the Sawmill Mesa treatment area. Surface and ladder fuels may be burned by prescribed fire.

Future Steps:

- 1) CFRI will present FIP crew progress at the Uncompaghre Plateau Collaborative Forest Landscape Restoration annual meeting in spring 2018.** This will include an update on the 2017 FIP crew progress.
- 2) Collect post-treatment data in remaining Lockhart and 7N treatment areas if treatments have been completed.** Pre-treatment data was collected in nearly 25 plots in 2015 in the Lockhart treatment area and in 8 plots in 2016 in the 7N treatment area (orange triangles on map, page 2). Marin Chambers (CFRI) and Todd Gardiner (USFS, Ouray and Norwood Ranger Districts) will communicate about the completion of treatments in these areas to determine monitoring plan for 2018.
- 3) Collect additional targeted pre-prescribed fire data in other areas of the Uncompaghre Plateau treatment areas.** Data collection could be prioritized in areas that are prioritized to be burned in the fall of 2018. Marin Chambers will consult with burn bosses to ensure the priority areas for pre-prescribed burning data collection to take place.
- 4) Revisit 2015 & 2016 Regeneration plots to collect regeneration data to gather additional tree recruitment data.** Dozens of regeneration plots were established in 2015-2016 in and around the Sawmill treatment area; these plots were located in uncut, cut, and cut and burned areas. Returning 2-3 years following initial data collection will enable tree recruitment monitoring in the first years following cutting or prescribed burning and will allow for the opportunity to collect post-mechanical



"Photo-point" taken in the Sawmill Mesa pre-prescribed burn treatment area. Photo is taken ~50 m from road within treatment area. Conjoined trees (center of photo) will be the landmark in the photo; future post-burn photo will attempt to recreate this same photo, illustrating post-burn conditions.

and pre-prescribed burning data in areas where prescribed burning will occur in 2017 or 2018. Additionally, Some GPS names and coordinates created in 2016 do not match plot names on datasheets. Tags were put in nearest tree to plot center, so we need to fix plot names using tags.

- 5) **Take post-treatment photos at photo-points in treatment areas where treatment has occurred.** Treatments may be complete in some areas of the Lockhart treatment area. Marin Chambers (CFRI) and Todd Gardiner (USFS, Ouray and Norwood Ranger Districts) will communicate about the completion of treatments in this and other areas. Additionally, if any areas have prescribed burning implemented, the FIP crew will return to take post-prescribed burn photos.

- 6) **Future possibilities: Collect additional pre-treatment data in the 7N treatment area if funding for UP-CFLRP may continue past 2019.** 8 plots were completed in 2016; several more could be added if deemed appropriate.

- 7) **Future possibilities: Establish control plots in untreated areas.** If deemed appropriate, CFRI will identify control areas, and FIP crew will collect data in control



Forest Internship Program (FIP) intern, Emerald Spindler, recording data that is being called to her by another intern. The two are acting as a team to assess the species, condition, DBH, and spatial location of trees in Rapid Assessment plots in forest

plots. Alternatively, photo-points could be added in untreated areas representative of larger monitoring area.



Forest Internship Program (FIP) interns participating in the Uncompaghre Plateau Collaborative Forest Landscape Restoration Program annual field trip in June 2017.

