

# What is the reduction in fuel hazard based on our treatments?



Representation of standardized forest plot photos.

## Intended monitoring:

Model fireline intensity and crown fire probability using the Interagency Fuels Treatment Decision Support System (IFTDSS), with annual updates based on completed treatments.

Forest plot measures of woody debris and ladder fuels pre- and post-treatment.

On all fires over 1000ac, calculate burn severity ratios between treated and untreated stands using Monitoring Trends in Burn Severity (MTBS) data.

Collate reports for all fires where Fire Effects Monitoring Officers (FEMOs) are present.

## Completed monitoring:

IFTDSS report of predicted flame lengths and crown fire probability class using LANDFIRE 2022 data (all disturbances through 2021) and average 97th percentile weather conditions (based on 8 RAWS stations in CFLR).

Installed 72 plots across four forests of CFLR. Woody debris tonnage binned by visual estimate. Measured avg. crown base ht of dominant trees and shrub/sapling abundance and ht class.

No monitoring occurred in 2023 - waiting for fire summaries.

No monitoring occurred in 2023 - need system for collecting reports.



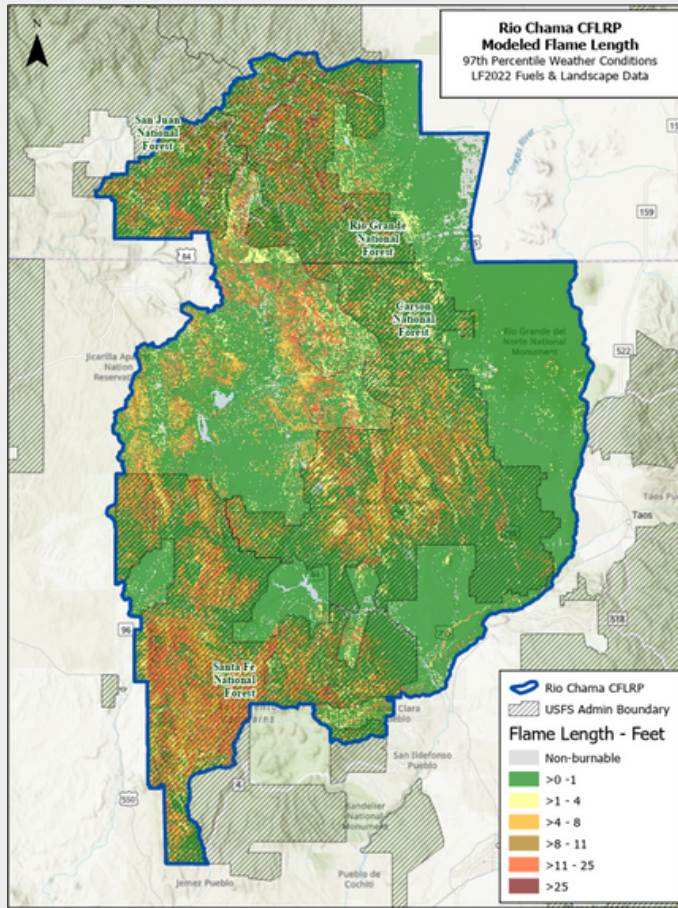
## 2-3-2 Cohesive Strategy Partnership Multiparty Monitoring Update

for the Rio Chama Collaborative Forest Landscape Restoration Program



# Overview of results:

## Predicted Flame Lengths (using IFTDSS)

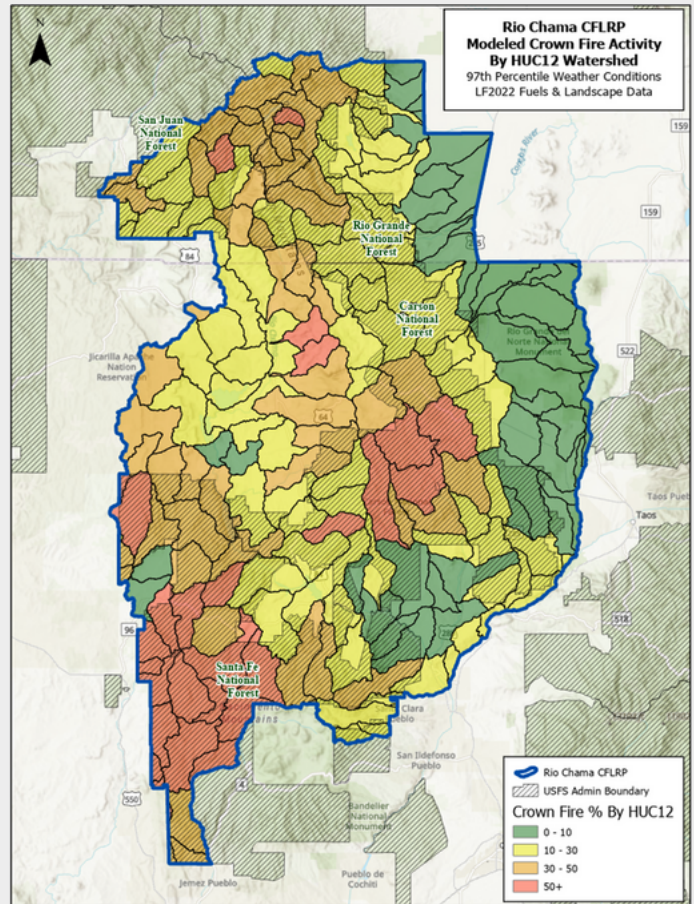
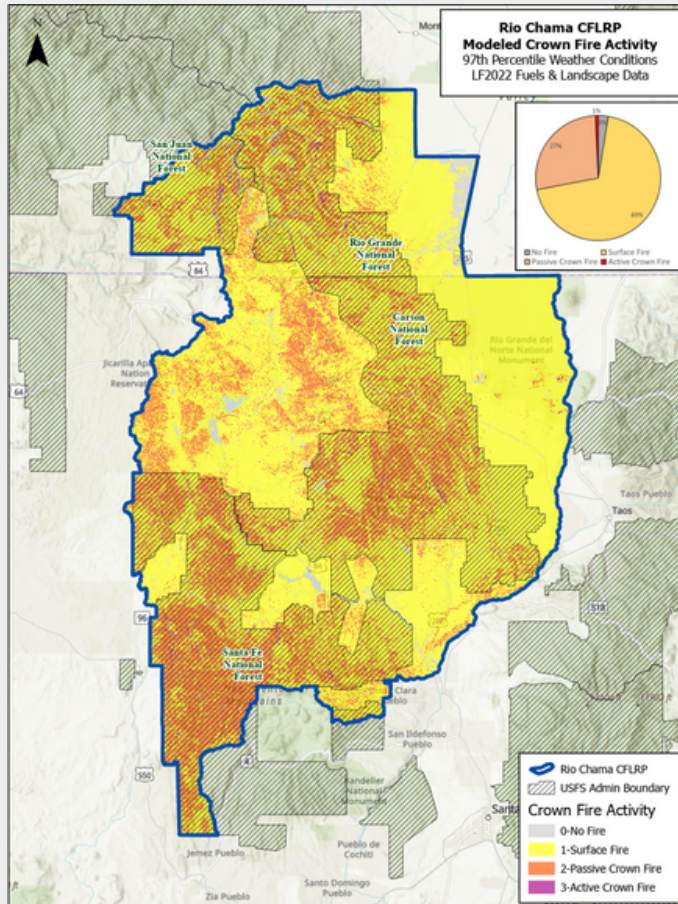


FlameLength	Acres	% Area
Non-burnable	99,701	3%
>0-1	2,018,458	53%
>1-4	663,824	17%
>4-8	97,579	3%
>8-11	88,969	2%
>11-25	537,876	14%
>25	304,690	8%
<b>Total</b>	<b>3,811,096</b>	



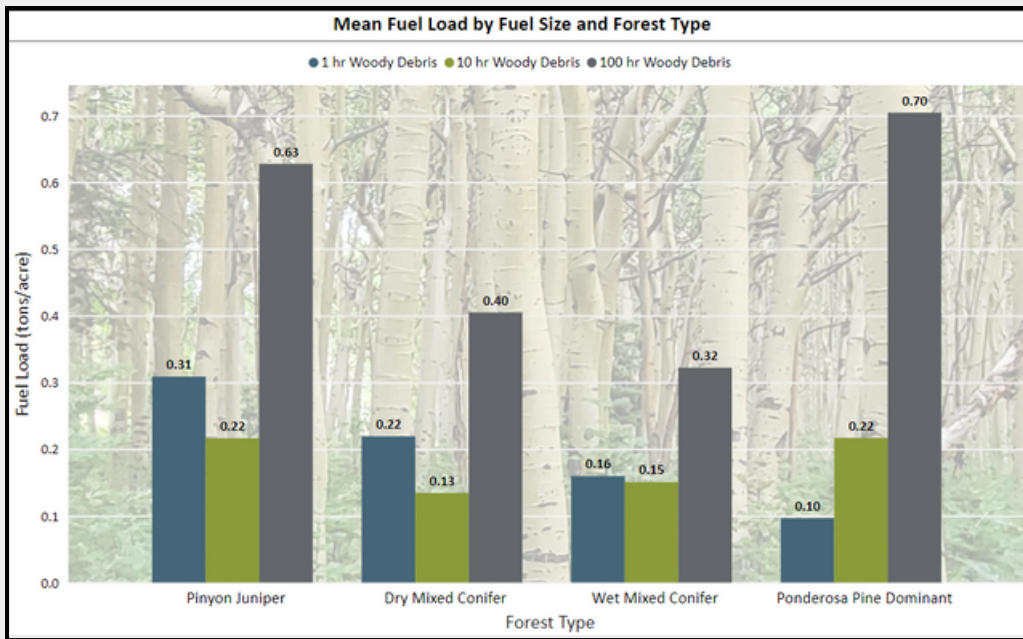
Canada del Agua prescribed fire - Carson NF 2023

## Crown Fire Probability (using IFTDSS)

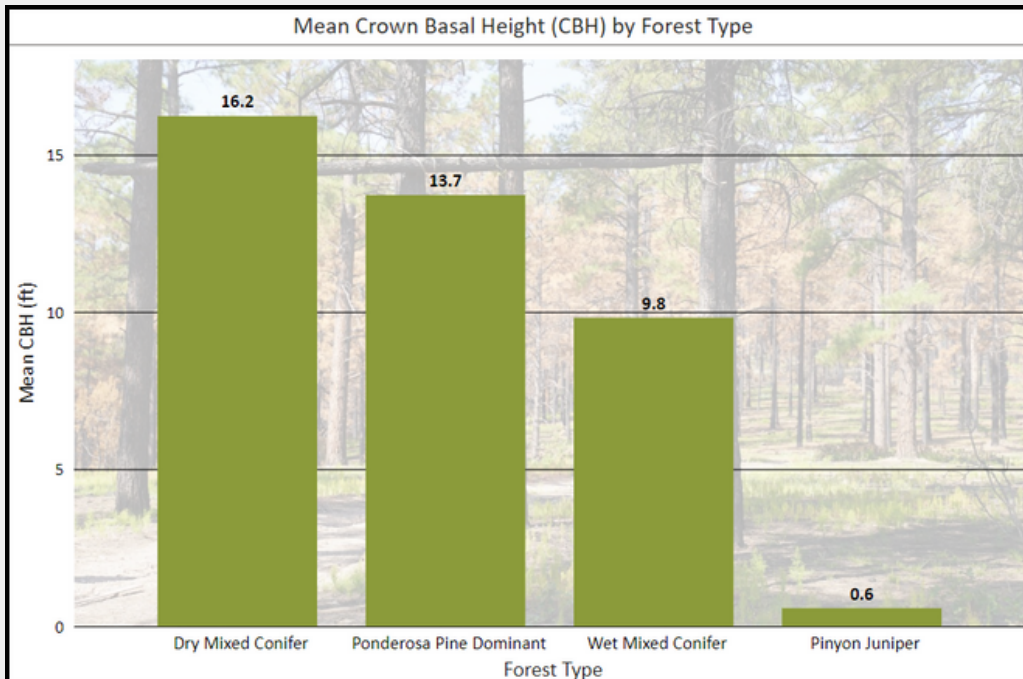




## Fuel Loads and Ladder Fuels : Pre Treatment Forest Plot Data



Forest Type	Fuels (tons/acre)				Ladder Fuels		
	1000 hr	100 hr	10 hr	1 hr	Saplings (TPA)	Seedlings (TPA)	Crown Base Height (ft)
Pinyon-Juniper	3.72	0.63	0.22	0.31	222	122	0.60
Ponderosa Pine	2.33	0.70	0.22	0.10	261	50	13.70
Dry Mixed Conifer	5.39	0.40	0.13	0.22	122	317	16.20
Wet Mixed Conifer	6.50	0.32	0.15	0.16	448	930	9.80



Overall, 72 plots were surveyed over 8 monitoring sites. These 8 sites included 1 pinyon-juniper site, 2 ponderosa pine dominant sites, 2 dry mixed-conifer sites, and 3 wet mixed-conifer sites.

## Notes from the field:

IFTDSS maps are based on LANDFIRE vegetation data - which accounts for all disturbances through the end of 2022. LANDFIRE is an established, spatially consistent, and highly used vegetation database (including other 232 Multiparty Monitoring questions). However, temporal changes to model parameters may influence year to year comparability and SW ecologists note that LANDFIRE data can be problematic at the dry ends of Ponderosa Pine forests.

Forest plot locations were determined by mapping a systematic grid (based upon USFS Forest Inventory and Analysis protocols) across the full CFLR. Anywhere a grid point (1 every 2000 acres) intersected a planned treatment, a 3x3 plot grid was installed (spaced one plot per acre). The plot grid clusters plots, increasing crew efficiency and standardizing the amount of data collected from each treatment. In some cases, the 3x3 plot grid extended beyond treatment boundaries, potentially providing un-treated “controls” but also limiting the number of in-treatment plots.

Table summarizes adaptive management (AM) watch-outs as defined in Edition 1 of the 232 Partnership Multiparty Monitoring plan. AM watch-outs were determined by the 232 Partnership at the February 2023 meeting in Taos, NM. Yellow boxes indicate the watch-out was met, or not measured, and should be considered for collaborative discussion.

AM Watch-out	Commentary
Flame lengths increase by more than double baseline estimates.	Baseline data only - no comparative data.
# of acres with crown fire activity increases.	Baseline data only - no comparative data.
Significant change in fuel loads and sapling density.	Baseline data only - no comparative data.
Treated stands have greater % of high severity fire than adjacent untreated stands	Analysis not conducted

### Monitoring Committee Recommendations and Takeaways

- Define sustainability
- Climate change, as identified in the AM watch-out, is missing from fire regime and landscape analysis.
- When would it be best to use the Fuel Treatment Effectiveness Monitoring (FTEM) application (IFTDSS) vs. Vegetation Condition Class (Landfire)?

Rio Chama CFLRP monitoring efforts and collaborative discussions are ongoing. Please direct comments and questions to [cody@forestguild.org](mailto:cody@forestguild.org)