FIRE MANAGEMENT
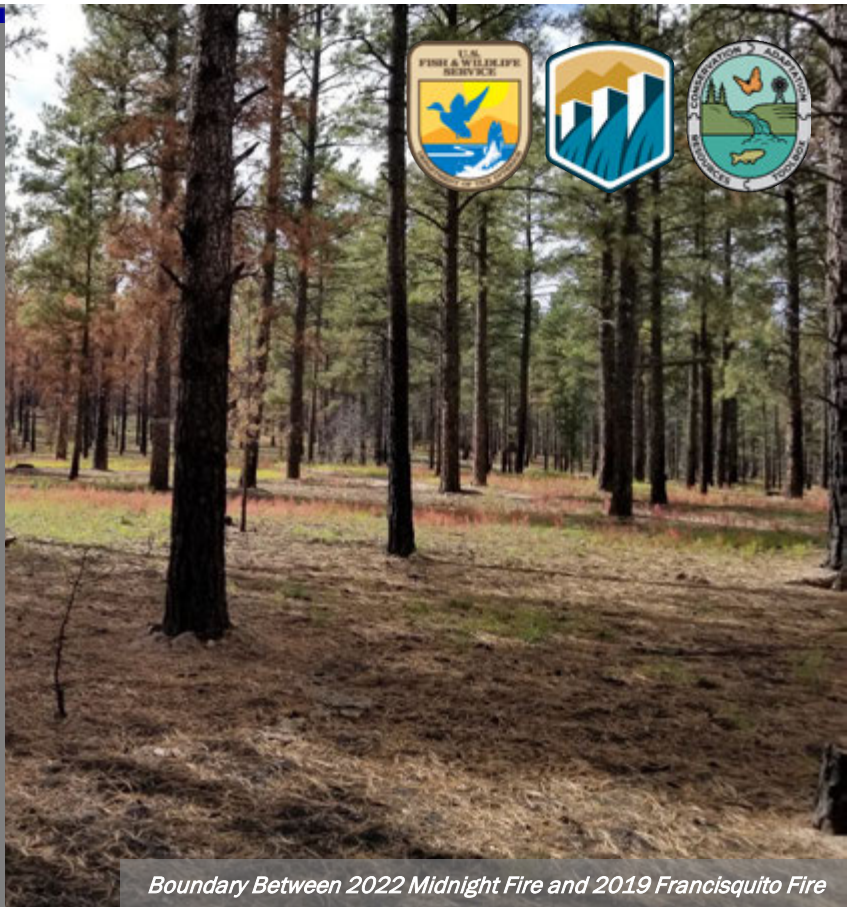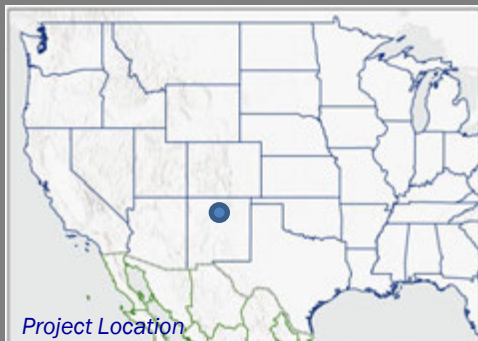
Thinning, Prescribed Fire, and Managing Wildfire for Resource Benefit Reduce Severity of the Midnight Fire

Boundary Between 2022 Midnight Fire and 2019 Francisquito Fire

INTRODUCTION

Fire-adapted forests in New Mexico benefit from frequent, low-intensity fires, maintaining ecosystem health and biodiversity. However, fire suppression has led to unnaturally dense forests, increasing risk of high-severity fire. Climate change exacerbates risk by altering fire patterns and potentially shifting plant communities in these fire-dependent ecosystems. The Carson National Forest has implemented various management strategies, including thinning, prescribed fire, and managing wildfire for resource benefit, to improve forest health, resilience to fire and climate change, and protect communities. The 2022 Midnight Fire demonstrated the benefits of previous forest management to balance ecological benefits with community safety.

Project Location

KEY ISSUES ADDRESSED

Creating buffer zones around communities through thinning and prescribed fires helps reduce size and severity of wildfire. The Carson NF used a "catcher mitt" approach, strategically treating areas to create a buffer that protects communities like Vallecitos from fire. Managing fires for ecological benefits offers a cost-efficient solution for treating large, remote forest areas, promoting forest health and resilience to future fire and changing climate, and creating barriers against severe wildfires. However, the unexpected impacts of the 2017 Bonita Fire that was managed for resource benefit on Vallecitos' water resources caused community distrust, and the need for rebuilding trust through community involvement. Successful forest management requires open communication, active community participation in decision-making, and prioritizing public safety.

PROJECT GOALS

- Use prescribed fire to reduce fuel, create safer zones, and establish fuel breaks
- Thin forests and use controlled fires to increase resilience against climate stresses
- Build community trust through increased communication about fire management

The Rio Chama Watershed, where the Midnight Fire Burned, provides 1/3 of New Mexico's drinking water and sustains rural economies in Colorado & New Mexico

Incident Commander Chris Ferrar on Initial Attack of Midnight Fire

PROJECT HIGHLIGHTS

Past Prescribed Fire Protect Communities: The Alamosa burns (4,400 acres in 2014, 2,833 in 2018) near Vallecitos helped manage the 2021 Poso Fire. Fire was directed to reduce fuel in Borracho Canyon, with night operations minimizing smoke impact. The Carson NF took extra precautions, addressing community concerns from the 2017 Bonita Fire.

Thinning and Prescribed Fire Improve Wildfire Management: The 2019 Francisquito Fire (2,021 acres) was contained within boundaries due to previous thinning and prescribed fire reducing fuel loads in advance.

Previous Burns Reduce Fire Severity: During the 2022 Midnight Fire, the 2019 Francisquito burn area lowered fire intensity, reducing flame heights from 200-300 feet to 2-3 feet, enabling safer firefighter access.

Community Engagement Restores Trust: Carson NF increased communication through kitchen table discussions, community presentations, and online platforms. They taught about fire ecology, emphasized the benefits of prescribed fire, and addressed concerns, rebuilding trust in areas like Vallecitos.

Collaborators

- United States Forest Service, Carson National Forest
- New Mexico State Forestry
- Southwest Fire Science Consortium
- Joint Fire Science Program

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LESSONS LEARNED

The Carson NF employs a strategic fire management approach, starting with thinning, then prescribed fire, enabling effective management of larger fires. This sequence proved successful during the 2022 Midnight Fire, where fire intensity decreased in previously burned areas despite extreme weather conditions. Over time, managers have created a mosaic of treated areas, allowing for cost-effective wildfire management across larger landscapes while reintroducing fire's natural role in ecosystem health. This approach yields numerous benefits, including improved watershed health, community safety, and biodiversity. Managing wildfires for ecological benefit is often more resource-efficient than extensive thinning and requires less environmental review than prescribed fires. However, it still adheres to forest plan guidance and best practices.

The Forest Service prioritizes community engagement, sharing prescribed fire plans and results through social media and meetings. They educate residents about fire's role in forest management, discuss outcomes, and maintain public trust by engaging with local officials and fire departments. This comprehensive communication strategy keeps the community informed about fire management strategies and their impacts.

NEXT STEPS

- Implement Carson NF's 10-yr strategy: Increase resources for thinning and prescribed burning, maintain year-round crews, support fire-adapted ecosystems amid climate change.
- Improve staff retention and expertise: Offer competitive wages and build a skilled team in planning, mapping, and fire ecology.

For more information on this project, contact Angie Krall: angela.krall@usda.gov

Community Meeting in Abiquiu During Midnight Fire