



Fire Learning Network Notes from the Field

Rio Trampas TRES Copper Hill Prescribed Burn

Penasco, New Mexico
October 15-27, 2017

Through their work together on the Copper Hill prescribed burn, a team of 46 people built their wildland firefighter qualifications and progressed in their firefighter position task books. From an ecological perspective, the TRES provided a very beneficial opportunity to follow recent timber thinning treatments with fire. With this reduction in fuels, this burn brings the Copper Hill landscape a step closer to a frequent low- to moderate-intensity fire regime.

The scope of the TRES extended beyond the participants on the roster to residents and landowners in the surrounding area. Outreach efforts included a community meeting, a tour for a New Mexico Highlands University wildland fire management class, and a tour with group of local landowners interested introducing prescribed fire on their property.

The burn itself was a good example of inter-agency collaboration. Hosted by the Bureau of Land Management and Forest Stewards Guild, numerous others—including the Tesuque and Picuris Pueblos, New Mexico State Land Office and New Mexico Game and Fish—and firefighters from across the U.S. as well as from Canada and Spain, contributed to its success. Burning took place on BLM and State Land Office lands, and included about 160 acres of piles and broadcast units.



Forest Stewards Guild staff led a tour of the burn units with local landowners. © John Denne

TRAINING SUMMARY

A Prescribed Fire Training Exchange has three main goals: implement burns in different ecosystems with different objectives; conduct outreach in different directions and contexts; and, of course, provide training and experience. In a TRES, everybody is a trainer and everyone is a trainee at some point. During this incident, we tried to fulfill all the needs of participants, with a range of learning opportunities to develop skills, having in mind burning windows and operational periods.

- 46 participants, including members of the Incident Management Team, worked over the course of 12 days to complete 160 acres of broadcast and pile burns
- 4 students completed the online S130/190 training course and 7 completed the safety refresher (RT130) in preparation for this burn; 8 people completed their fire shelter deployment practice
- 25 participants worked trainee positions—2 Burn Boss (1 task book signed), 2 Firing Boss (2), 2 Engine Boss (2), 5 Fire Effect Monitor (2), 9 Fire Fighter 1 (8) and 5 Fire Fighter 2 (5)
- 27 Incident Personnel Performance Rating forms (IC225) were completed
- there were also presentations from participants, a very interesting basic wildfire safety session—and “an incredible amount of high quality training hours”

FIRE EFFECTS SUMMARY

A qualified FEMO from Bandelier National Monument provided invaluable training opportunities to three trainees from the U.S. Forest Service and Forest Stewards Guild at this TRES. Trainees collected fuel moisture samples, weather readings, fire behavior observations and smoke observations, and assisted with writing reports.

Over the course of the TRES, 160 acres across six units were treated with fire:

- Two units consisted of hand piles aimed at reducing aerial and ground fuels and enhancing conditions for ponderosa pines that exhibit old-growth characteristics
- Three units consisted of patch cuts designed to simulate natural high-intensity fire in pinyon-juniper
- A 60-acre broadcast burn aimed to maintain previous treatments by enhancing understory through reduction of needle cast, raising crown base height and generating mortality in seedling and sapling classes

Prescription objectives were met through good fire effects and duff, litter and fuel consumption.

Participant Organizations

Bureau of Land Management—Taos Field Office
Forest Stewards Guild
Gering Fire Department
Gravitas Peak Wildland Fire Module
National Park Service—Bandelier National Monument
New Mexico Game and Fish
New Mexico Prescribed Fire Council
New Mexico State Forestry—Returning Heroes Wildland Firefighter Program
New Mexico State Land Office
Pueblo of Picuris
Pueblo of Tesuque
The WildEarth Guardians
U.S. Geological Service
Volunteers from Colorado, Idaho, Nebraska, British Columbia, Spain



DRONE USE SUMMARY

The Forest Stewards Guild used a DJI Phantom 4 drone during this TREX; it was primarily used for aerial photography and was not integrated into burn operations. The operations were successful in documenting pre- and post-treatment conditions, fire effects and burn operations.

Lessons learned and future opportunities:

- Flight and mission planning make for more efficient drone use, especially given the limited battery life.
- Due to limited cell service on site, flight plans and software and hardware updates require access to wifi.
- The efficacy of drones in burn operations—for example to locate spots or scout units—has yet to be determined. However, drone use for fire effects monitoring is promising. For units of 100 acres or more, using software such as DroneDeploy to stitch together photos of approximately 10-acre plots is one potential method. Aerial plots can be tied to fire effects plots on the ground, adding greater dimension to existing methods and data.

Drone use on prescribed fires is still an emerging practice. At a minimum, real-time aerial photography of post-burn and active burn operations is



useful for telling the story of fire use. Using drones to monitor fire effects is perhaps the most promising use of drones, as smoke obstruction and hazards and regulations associated with flying drones near and over personnel are not issues with this application.

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For more about this TREX, contact:

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TREX participants used a strip lighting technique to build heat and raise the crown height in a ponderosa pine stand.

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The Fire Learning Network and Prescribed Fire Training Exchanges (TREX) are part of *Promoting Ecosystem Resilience and Fire Adapted Communities Together*, a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior. For more information about PERFECT, contact Lynn Decker: ldecker@tnc.org or (801) 320-0524.



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