

Municipal Fire Department Leads the First TRES in Arizona

By Neil Chapman, Flagstaff Fire Department

Flagstaff, Arizona, is flanked by sacred peaks and canyons, and surrounded by the largest continuous ponderosa pine forest in the world. The forests of northern Arizona have existed for thousands of years and evolved to benefit from frequent fires—both those ignited by seasonal monsoonal weather patterns and those that were part of cultural burning practices. Unfortunately, more than a century of fire exclusion and suppression-based management has left the forest in an altered condition. The changes threaten Flagstaff's natural resources, infrastructure and quality of life, as well as its recreation and tourism based economy.

Recent collaborative fuel management efforts that involve agencies, communities and stakeholders have proven successful at advancing wildfire risk reduction projects across northern Arizona. No one person, agency or organization can do this alone.

The Flagstaff Fire Department led the most recent collaborative effort, hosting a Prescribed Fire Training Exchange (TRES) designed to bring together structural and wildland firefighters for two weeks of prescribed fire treatments, training and outreach focused on the wildland urban interface. Funding and planning support came from the International Association of Fire Chiefs and The Nature Conservancy's North America Fire Program.

TRAINING & BURNING HIGHLIGHTS

The Flagstaff TRES crew accomplished 881 acres of prescribed fire on city and federal lands, including 328 acres at the City of Flagstaff's Observatory Mesa Natural Area and 553 acres of the Wild Bill Project on the Flagstaff Ranger District of the Coconino National Forest. A 93-acre unit at Coconino County's Rogers Lake Natural Area was also prepped for a future burn.

Task book signatures accomplished during the TRES included ENGB, FEMO, FFT1, FIRB, FOBS, RXB2 and SOFR.

Busy Week Waiting for a Window

Fall moisture pushed back the TRES start date by a week, and as the crew gathered, a few more warm, dry days were needed to get into prescription. So the first week focused on training, burn unit prep and outreach opportunities.

- Subject matter experts with the Ecological Restoration Institute spent time with the TRES crew, who learned about northern Arizona fire ecology and fire regimes, and how managing wildfires is moving the forests toward desired conditions.
- A trip to the Grand Canyon with National Park Service resource advisor Jason Nez focused on how cultural burning shaped northern Arizona's forests and how archeological resources can be protected with fire.
- Coconino National Forest timber staff took the TRES crew to dry mixed conifer forests that had been thinned as part of the Flagstaff Watershed Protection Project and to ponderosa pine stands thinned as part of the Four Forest Restoration Initiative.
- Dr. Catrin M. Edgeley from Northern Arizona University discussed research on how communities across the western United States are growing increasingly familiar with the impacts of uncharacteristic wildfires and subsequent post-wildfire flooding.



Observation Mesa Burn © Eric O'Connor/Rapid City Fire Department



Video taken during the Obs Mesa burn shows effective smoke lift and dispersion. City of Flagstaff Engineering and Capital Improvements staff flew their drone over the burn units before, during and after the burns, collecting hi-res videos and ortho and lidar imagery that will be used for fire effects monitoring (click to view).

- Coconino National Forest fire staff led a tour of the 2014 Slide Fire and discussed how fuel management projects and structure triage pre-planning efforts supported the protection of values at risk in Oak Creek Canyon.
- Staff from the International Association of Fire Chiefs presented on the Ready, Set, Go! program and all the outreach and grant resources that are available to fire departments and districts.
- TRES participants went out into the community to field test Firewise and structure triage assessments using new app-based databases developed by Flagstaff Fire Department, Coconino National Forest and National Park Service staff.

Observatory Mesa Prescribed Burn

The Observatory Mesa Natural Area—2,251-acres of open space owned and managed by the City of Flagstaff—was purchased in 2013 with funding from a voter-approved bond and an Arizona State Parks “Growing Smarter” grant. The area is an important wildlife corridor for large mammals traveling between the San Francisco Peaks and the Mogollon Rim, and “Obs Mesa” is a well-used recreation area often thought of as Flagstaff’s back yard.

The units were first entry burns in an area that had been mechanically thinned in 2015. Significant effort was put into engaging local and statewide media during these burns. The effort paid off, with *The Arizona Daily Sun* (Flagstaff’s local newspaper), *KNAU Arizona Public Radio*, *KAFF News Radio Flagstaff*, *Fox 10 Phoenix* and *ABC 15 Arizona* covering the event.

Wild Bill Prescribed Fire Project

A cooperative burn planned with the Wild Bill Prescribed Fire Project of Coconino National Forest Flagstaff Ranger District was postponed when the winds were not in prescription—there was not enough wind to support proper smoke dispersion. Even though the opportunity to put fire on the ground was delayed, Coconino National Forest fire staff led a pilot balloon, or pibal, demonstration and facilitated a valuable discussion about go/no-go decision making. A few days later, on the last day of the TRES, the crew was able to assist on this burn.

PARTICIPANT ORGANIZATIONS

Fire Departments

- Flagstaff Fire Department (AZ)
- Golder Ranch Fire District (AZ)
- Grand Lake Fire Protection District (CO)
- Highlands Fire District (AZ)
- Pinewood Fire District (AZ)
- Rapid City Fire Department (SD)
- Red, White, and Blue Fire District (CO)
- Salt River Fire Department (AZ)
- Summit Fire and Medical District (AZ)

Other Organizations

- International Association of Fire Chiefs
- National Park Service—Grand Canyon and Flagstaff Area Monuments
- Nevada Division of Forestry
- Northern Arizona University—School of Forestry
- Northern Arizona University—Ecological Restoration Institute
- The Nature Conservancy
- USDA Forest Service—Coconino National Forest

Looking Forward

The Flagstaff area has a robust forest thinning and fire management culture, but we are struggling to keep up the pace required to burn all the thinned acres and slash piles. Leveraging the partnerships and capacity building created with this TRES will help us meet the needs of the Flagstaff community. The burns at Observatory Mesa could not have happened without the added qualifications and capacity that TRES crew brought. The additional staff support for the Forest Service burn helped increase the operational tempo and reduced smoke impacts. With the value of TRES clearly established, the Flagstaff Fire Department is looking forward to developing and improving future TRES based on the lessons learned from this event.

For more about the Flagstaff TRES contact:

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Prescribed Fire Training Exchanges are part of the *Promoting Ecosystem Resilience and Fire Adapted Communities Together* (PERFACT) cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior. For more about PERFACT, contact Marek Smith at marek_smith@tnc.org.

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