

# Prescribed Fire Training Exchanges and Cooperative Burning

Experiential training events in support of landscape restoration and resiliency, fire adapted communities and workforce capacity-building

In a season filled with both remarkable growth and serious challenges, the fall Prescribed Fire Training Exchanges provided training for more than 250 participants, treated more than 1,500 acres with much-needed fire, and kept messages about good fire and our ability to work together to live better with fire in the conversation through media outreach.

TREX events are organized as prescribed fire assignments, managed using the Incident Command System (ICS) and hosted by a combination of federal, state and non-governmental organizations. A typical two-week agenda begins with classroom presentations and field trips where participants learn about local ecology, conservation challenges and opportunities, and tour sites of wildland fires in the area to

explore and discuss their impacts. Participants are then divided into modules, and begin training with their assigned equipment and scouting burn units. Over the course of the TREX, the modules work as part of a burn team completing a series of prescribed burns on a variety of ownerships. Through this process, participants learn how to effectively work on interdisciplinary teams, and experience how legal and administrative frameworks for cooperative burning can enable regions to increase the pace and scale of prescribed fire. They also gain experience working for—and leading—firefighters, managers and practitioners from other states, regions and countries.

The fall started with the Spanish-language TREX, hosted—for the seventh year—by the Santa Fe National Forest, bringing together fire managers and technicians from Latin America and the U.S. Also returning this fall was the community-based Klamath River TREX in Orleans, California, where a collaboration between tribes and other local residents continues to demonstrate how federal, state, tribal and private cooperators can accomplish more together. The Yurok tribe hosted its second TREX of the year, and following last year’s enthusiastic response, the



In an example of how flexibility—and having crews mobilized—can be key to success, participants in the first Umpqua TREX did two things at once on their very first day. The fire effects monitoring team and a burn boss trainee took part in the cooperative burn at the Sycan Marsh Preserve, while the rest of the participants burned in grass and oak woodland on private land south of Roseburg, Oregon.  
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## Training, Treatments & Outreach

Prescribed Fire Training Exchanges & cooperative training burns provide:

- hands-on training and NWCG position task book opportunities
- prescribed fire treatments that meet local objectives
- outreach to community leaders, media outlets and land managers

## Fall 2017 TREX



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		people	acres
Spanish-language TREX	NM	17	40
Cascadia TREX	WA	21	419
Yurok TREX	CA	32	92
Klamath River TREX	CA	86	311
Women in Fire TREX (WTREX)	CA	31	20
Rio Trampas TREX	NM	34	160
Umpqua TREX	OR	30	545
<b>TOTAL:</b>		<b>251</b>	<b>1,587</b>

second Women in Fire TREX was held, this time hosted by Yosemite National Park.

There were three first-time TREX events this fall as well, hosted by partners in Washington, New Mexico and Oregon—the Cascadia, Rio Trampas and Umpqua TREX, respectively. Also new was the CalTREX initiative, a program sponsored by the U.S. Forest Service and CAL FIRE to build capacity and demonstrate effective cooperative burning through a series of TREX events across California; the first two events were scheduled for this fall (in Butte and Calaveras counties), but the deadly October fires in northern California led to a statewide burn ban and all previously issued permits were rescinded. This also impacted the longstanding flagship NorCal TREX, causing it to be postponed until spring.

The launch of the TREX Coaches Network over the summer is already leading to the spread of the TREX model and increased collaboration by developing and empowering TREX leaders to expand their impact. There were two particularly important outcomes from the Coaches Network this fall. First, there was a marked increase in cross-pollination of TREX, with coaches from one area participating in and helping lead a TREX in another area; this included five TREX coaches rendezvousing in northern New Mexico to assist with 800 acres of burning on the Vermejo Park Ranch, a 600,000-acre private property with important conservation programs.

And in November, the first TREX hosted outside the country—the Alto Minho TREX—was held in northern



The Klamath River TREX is tightly bound to the communities along the river. In addition to providing training for local residents and conducting strategically placed burns to protect homes and infrastructure, outreach is key. This comes in many forms, from bringing kids out to gather a healthy acorn crop made possible by fire, to hosting media on the fireline.

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Burning hazel produces a regrowth of straight, flexible shoots needed for basket weaving. The Yurok TREX brought together participants with skill levels ranging from new FFT2 trainees to firefighters with decades of experience. Their burn objectives were equally wide-ranging, including to enhance the propagation of basket weaving materials, medicinal plants and traditional foods; prairie restoration; home protection; and fuel reduction along the Highway 169 corridor, an area rated by CAL FIRE as a very high fire hazard severity zone.

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The Camp Stoney dining hall, before and after fuel reduction work by the Spanish-language TREX crew. Adding a defensible space assessment and demonstration project at the base camp was a pilot project for TREX, intended to promote such practices in this area near Santa Fe.

© Erin Banwell



Scientists install monitoring instruments before a cooperative burn at the Sycan Marsh Preserve.

Through Fire Learning Network partnerships, host sites can make use of a national administrative agreement that enables cooperative burning between the U.S. Forest Service and The Nature Conservancy. In southern Oregon, long-time FLN partners used this agreement to host their first cooperative burn at the Sycan Marsh Preserve. In addition to the benefits of the burn to the landscape, it provided training opportunities for more than 30 fire practitioners. It also hosted a large multi-organization research team that collected datasets for evaluating coupled fire-atmosphere models, smoke production and dispersion models.

© TNC (Craig Bienz)



Hosted by the Forest Stewards Guild in northern New Mexico, the Rio Trampas TREX took participants from shelter tests to 160 acres of burning in 12 days. This TREX provided a good boost to local prescribed fire capacity, with a large proportion of the participants coming from within the state. Twenty-five trainees worked on position task books ranging from Fire Fighter 2 to Burn Boss.

© Forest Stewards Guild

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Portugal, with four coaches helping to inspire, plan and lead the event.

With the launch of the TRES Coaches Network and the CalTRES initiative, the TRES strategy is not only developing resiliency, it is growing—doubling the number of events held a year or two ago. The Fire Learning Network (FLN) began supporting cooperative burn training events in 2008; FLN leaders soon adding field days and diverse learning objectives to make the most of participants' time together, and TRES was born. Fast forward to 2017—and the FLN has now delivered more than 70 events that have provided training, hands-on experience and relationship-building for more than 2,500 participants and

implemented more than 100,000 acres of planned burns.

The most recent evolution of the TRES strategy is a shift toward host sites being fully capable of financially, administratively and organizationally supporting their own TRES events. For the fiscal year 2018 prescribed fire seasons—the fall burns just completed, and the spring events with planning underway—only half of the 22 TRES events planned will receive direct funding and support from the FLN. The others—with leadership from members of the TRES Coaches Network—will carry on the TRES vision, model and effectiveness with funding and organization provided by federal, state and non-governmental organizations.

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Smoke rose—again—near the City of Roslyn, Washington. Cascadia TRES crews successfully burned near a town that just weeks earlier had been under threat from the Jolly Mountain Fire—a fire that had put the whole TRES, let alone the particular burn unit, very much up in the air. But a change in the weather—and the diligent work of local partners—allowed the work to go forward. With support from local fire agencies, the TRES crew conducted a prescribed burn adjacent to the Roslyn Urban Forest, less than a mile from downtown Roslyn. It was an important burn, for both restoration, and to begin the work needed to protect the community from future fires. © John Marshall



Poor air quality in the Central Valley, and then a state-wide burn ban due to fatal wildfires, precluded much prescribed burning during this year's Women in Fire TRES (WTRES). The crews immediately turned to other work—from training on engines to working with local CAL FIRE partners to practicing fire effects monitoring (FEMO) skills on the Empire Fire in Yosemite National Park.

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The first TRES to be held outside the United States took place in Alto Minho, in the north of Portugal, this fall. Planned by a team of inter-municipal managers (similar to county managers), the Alto Minho TRES drew participants from throughout Portugal's fire management and firefighting community—foresters, district managers, professional wildland firefighters and volunteer firefighters from federal and municipal agencies—as well as wildland firefighters from Spain, Brazil and the United States. Using many of the lessons learned over the years in the U.S., this team was able to pull off a remarkably successful event. Like California, Portugal suffered devastating fires this year, with June and October conflagrations killing more than 110 people and blackening hundreds of thousands of acres. As the TRES teams gathered a couple weeks later, burn bans were still in place. With community and agency leadership support built through months of planning and coordination, however, the TRES leaders were able to get burn ban waivers approved by federal authorities. They completed many of their planned burns, and received positive national and local coverage in newspapers and on television.

Leaders and participants alike believe the lasting result will be better integration of firefighting teams and managers, and better coordination and outreach that together will result in an increased commitment to prescribed burning. Even a month after the TRES, leaders were reporting an increase in the amount and kind of prescribed burning being used. © TNC

## Tested by a Fiery Fall

There is always uncertainty about the weather and burn conditions—especially since TRES must be planned 6-12 months in advance to allow participants and hosts to complete all the advance work and scheduling. There are always surprises. But even by TRES standards, the fall 2017 burn season was particularly impacted—by a long hot summer, drought, heavy rains and deadly wildfires.

TRES events, however, have built a robust culture of assessing any situation and asking “What can we do?” rather than focusing on what can’t be done. There are always back-up plans. And when Plan B needs a Plan B? TRES leaders build resiliency into their planning. Hosts put thought into variability in their burn unit selections, having ready both broadcast and pile units, including a variety of slopes and aspects, and having multiple ownerships or jurisdictions available to work in. Leaders also have non-fire work lined up—like the preparation of additional burn units or scouting—and a range of learning opportunities, from sand-table exercises to additional ecology presentations to firefighting courses like S-212 or S-131.

This fall, TRES coaches and hosts maintained their focus on finding the path to opportunity, rather than on the barriers. They focused on finding opportunities to accomplish the important burns—but also on the less weather-sensitive aspects of TRES: delivering high quality training, and public outreach through print, radio and television.

Key elements of TRES resiliency include having a selection of diverse burn units, opening a wider window to find suitable burning conditions. Mobilizing the burn team for two weeks gives flexibility to navigate uncooperative weather—but also provides a creative and committed network of practitioners, hosts and coaches who can together find solutions to unexpected challenges. A commitment to flexibility is also invaluable: when a two-week time frame absolutely won’t work, a willingness to re-group and shift the dates rather than cancel, allowed two TRES this fall to go forward almost as planned.

Few TRES go exactly as planned. This fall, the Spanish-language TRES assisted on a wildfire and with wildland-urban interface hazard mitigation work when prescribed burning wasn’t possible. The Umpqua TRES was delayed due to wildfires, but then conducted a burn adjacent to a recently threatened town (and received very positive media coverage for it). The Rio Trampas TRES was postponed not once, but twice, before being successfully implemented. But these challenges can even end up enriching a TRES, by spurring the creativity and learning driven by the question “What is possible here?” Through their resiliency as a team of committed practitioners, TRES leaders—and their crews—continue to find ways to accomplish their burn objectives safely, while providing training and outreach to firefighters and communities.



An evening burn on the Klamath River TRES took advantage of cooler temperatures and higher humidity during a warm, dry season. This fall, in addition to completing 310 acres of burns, crews from the Klamath River TRES prepped more than 800 acres for later burns as they waited for Red Flag warnings to pass.

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### MORE ONLINE

Upcoming TRES—planning generally begins 6-12 months before a TRES: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/HabitatProtectionandRestoration/Training/TrainingExchanges/Pages/Upcoming-Training-Exchanges.aspx>

FLN Notes from the Field—Index: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Index-FLN-Notes-from-the-Field.aspx>

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