

Semi-Annual Report

July – December 2016

Promoting Ecosystem Resilience and Fire Adapted Communities Together (PERFACT):
Collaborative Action and Co-ownership of Fire

In compliance with Agreement No. 11-CA-11132543-094

Submitted to:
USDA Forest Service

February 14, 2017

Submitted by:
The Nature Conservancy



Promoting Ecosystem Resilience and Fire Adapted Communities Together (PERFACT)

Semi-Annual Report: July – December 2016

Overview & Contents

The Promoting Ecosystem Resilience and Fire Adapted Communities Together (PERFACT) partnership works to restore our relationship with fire, helping us get to “right fire” through:

- the Fire Learning Network (FLN), fostering collaboration for restoration and fire management in landscapes across the country;
- the Fire Adapted Communities Learning Network (FAC Net), which is doing the same for communities adapting to wildfire;
- Prescribed Fire Training Exchanges (TREX) and cooperative burns, experiential training integrating a range of people, places and aspects of fire;
- intensive targeted action under Scaling-up to Promote Ecosystem Resiliency (SPER);
- the Indigenous Peoples Burning Network (IPBN), supporting traditional burning practices and cultural revitalization; and
- the Burned Area Learning Network (BALN), bringing people together for pre-fire planning for better post-fire restoration.

PERFACT efforts—the FLN and the FAC Net, TREX, SPER, IPBN and BALN work that it has inspired and incubated—are inter-connected and support each other. Our impacts are greater and results more durable where multiple overlapping and complementary efforts are directed. As our strategies are becoming more interwoven, they are becoming more powerful.

In addition to the ongoing work across the country that steadily builds on the 15-year history of the partnerships grown under this agreement, some of the highlights from this fall include:

- more than 140 workshops and learning exchanges at which members and partners shared, learned, planned and worked together;
- eight events—TREX, cooperative burns under SPER and IPBN, and select courses—that provided experience and training to 230 people and treated 2,441 acres with fire in support of landscape resilience, community safety and cultural resources;
- the first Women in Fire TREX, which used the effective TREX model to bring women and men together to explore issues surrounding women in fire leadership while getting good fire on the ground in northern California;
- increased growth of the FAC Net through investments in sub-networks and engaging affiliate members at the network’s periphery; and

- ongoing adaptive management, from Social Network Analysis conducted by the FAC Net, to the change in course of the communities of practice strategy agreed upon by leads at their workshop to a more urgent embrace of communities by FLNs in the Southeast after a difficult wildfire season.

HIGHLIGHTS & LEARNING

Summaries focus on specific aspects of PERFACT, illustrated with examples from this reporting period. Of necessity, they cover but a small proportion of the work. These are suitable for use as handouts or information sheets.

PERFACT—four pages briefly introduce the main PERFACT strategies and how their work together addresses a range of Cohesive Strategy goals

Fire Learning Network (FLN)—four pages briefly cover how the FLN works, illustrated with highlights from the second part of 2016

Prescribed Fire Training Exchanges (TREX)—four pages cover the TREX, cooperative burns and other experiential training offered this fall

Prescribed Fire Training Exchanges 2008-2016—a graphic of TREX growth in size and diversity, updated with 2016 calendar year data

Fire Adapted Communities Learning Network—six pages cover recent developments in the network and highlights of member work

Scaling-up to Promote Ecosystem Resiliency (SPER III)—three pages summarize recent work of the three ongoing projects and two new ones

Indigenous Peoples Burning Network (IPBN)—two pages highlight the Healthy Country Planning, family-based burning and other IPBN work

APPENDIXES

A: Delivery on Actions from PERFACT Work Plan for FY 2017: work plan table for the fiscal year, with work delivered in this reporting period

B: FLN Regional Network & Landscape Work Plan Progress Detail

C: Prescribed Fire Training Exchanges & Cooperative Burning

D: FAC Learning Network Core Member Organization and State Network Work Plans

E: Work Plan Details for Projects under “Scaling-up to Enable the Social and Operational Capacity for ‘Right Fire’” (SPER III)

F: Indigenous Peoples Burning Network Progress Detail

G: Selected Media Coverage of PERFACT Actions, People & Places

Promoting Ecosystem Resilience and Fire Adapted Communities Together (PERFACT)

A cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior

This partnership works to restore our relationship with fire by helping us get to “right fire”—where good fire can do its necessary work on the landscape, and both human and natural communities are better able to live with fire. We work in key places with individual people, and also at regional and national scales. We also leverage the connections between those scales. This work is accomplished through:

- the Fire Learning Network (FLN), fostering collaboration for restoration and integrated fire management in landscapes across the country;
- the Fire Adapted Communities Learning Network (FAC Net), which is doing the same with communities adapting to wildfire;
- Prescribed Fire Training Exchanges (TRES) and cooperative burns, providing experiential training opportunities that integrate a range of people, places and aspects of fire;
- targeted restoration action and capacity-building under Scaling-up to Promote Ecosystem Resiliency (SPER);
- the Indigenous Peoples Burning Network (IPBN), supporting traditional burning practices and cultural revitalization; and
- the Burned Area Learning Network (BALN), bringing people together for pre-fire planning for better post-fire restoration.

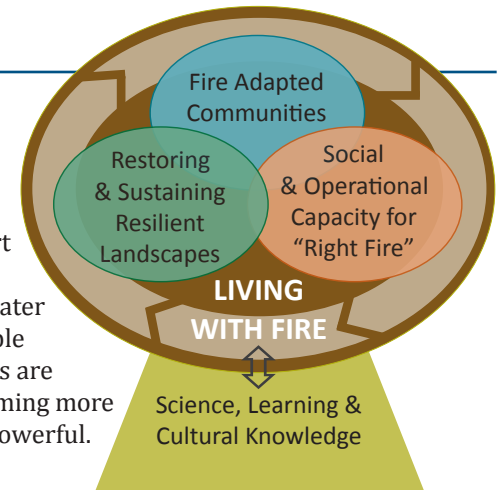


Nearly 90 people, many of them local, took part in the fall Klamath River TRES hosted by the Western Klamath Mountains FLN. For two weeks they worked on their skills and learned from each other—while getting fire on the ground in places that matter to communities along the river. Their 406 acres of burning was spread over 43 units that ranged in size from half an acre to about 100 acres; units were strategically placed to protect infra-structure and communities from wildfire, and to renew culturally important resources that depend on fire.

© Stormy Staats

Stacking Efforts for Impact

These efforts—the FLN and those that it has inspired and incubated—are interconnected and continue to support each other. We and our partners are starting to see that our impacts are greater and results more durable where multiple overlapping and complementary efforts are directed. And as the strategies are becoming more interwoven, they are becoming more powerful.



RECENT PERFECT WORK

In the second half of 2016, PERFECT supported:

- 11 Fire Learning Networks encompassing 60 million acres
- 16 community-based Fire Adapted Communities Learning Network core member organizations in 15 states, and 3 state-wide networks (and mentoring another 2 state-wide efforts), while engaging 75 individuals and organizations as affiliate members
- 3 Prescribed Fire Training Exchanges, 3 cooperative burns, a wildfire training exchange and a family burn training event in coordination with the Indigenous Peoples Burning Network; together these provided training and experience for 230 people while treating 2,441 acres with fire
- more than 140 workshops and learning exchanges that enabled partners and stakeholders to learn, plan, implement, monitor and adapt together and to share knowledge among communities and landscapes

Over the course of 2016, PERFECT partnership work and training events also leveraged more than \$22 million* in additional funds for treatments and other actions that will build forest, watershed and community resilience.

* awarded in calendar year 2016—some of the funds are for multi-year projects

This is perhaps most strikingly true, for example, in the places where we are working in southern Oregon, northern California and northern New Mexico. In all of these places, virtually all PERFECT strategies are being used in synergy. In the forests—and especially in the municipal watershed—around Ashland, concerted FAC Net and FLN efforts may have been working even better than projected. At events this fall intended to address public concerns with smoke, they found little such concern, which they believe may have been due to the care with which burning—including

some supported by SPER and TREX—and related public outreach has been conducted. In the Klamath Mountains, PERFECT work is now so integrated, it is difficult to tease the threads apart: FLN planning underlies the general strategic thrust, which is tightly bound to FAC goals. Implementation includes TREX and SPER-supported burning that builds local fire management capacity while completing fuel treatments for community safety, and to meet some of the cultural fire needs identified by the Indigenous Peoples Burning Network. PERFECT is also working in northern

New Mexico, from the upper reaches of the Rio Grande watershed to the forests surrounding Santa Fe. TREX and SPER burning this fall included WUI fuels treatments led by FAC Net strategies and people, and watershed resiliency treatments under the Rio Grande Water Fund, a major project in which the FLN leads from The Nature Conservancy are driving partners. The New Mexico FLN is also the birthplace of the Burned Area Learning Network, now spreading to FLN landscapes in California and Washington, and the Indigenous Peoples Burning Network began scoping expansion to New Mexico this fall.

All of these efforts have leaped forward in the last two years, with the infusion of SPER support. In addition to putting fire on the ground, with its immediate impacts on forest resilience and community safety, these efforts are building really robust constituencies of people who support fire, and workforces who can implement it.

This supports our belief in a densifying strategy—that stacking efforts works. It is also clear evidence that our long-term strategy of building and supporting relationships works. PERFECT is unusual in this focus on funding relationship capacity-building—yet it is how we consistently accomplish more and build towards bigger things faster.

Raising Fire Leaders

PERFACT is also helping bring a new cadre of fire leaders to the fore. We mentor, support and otherwise enable people to have opportunities to develop and contribute like no other institution is doing. This takes a range of forms: Through its liaison structure, FAC Net provides mentoring—and netweaving—that is tailored to each member's

Flat Ranch Burn Introduces Fire to Preserve, Community to Prescribed Fire

FLN partners in Idaho (with help from a Burn Boss from the Southern Blue Ridge FLN) conducted the first-ever burn on TNC-Idaho property this fall. An important aspect of the event was public outreach, with the community invited to ranch headquarters for a picnic and time to talk with staff about this fire, and the role of fire in the landscape.

Left: © TNC (Mike Norris)

Below: © TNC (Robert Unnasch)



Workshop process diagram from the FAC Net communities of practice workshop in December. Locally based FAC practitioners are taking the lead in the network's nationwide COPs—and in helping the network adapt these topic area sub-groups to meet member needs

MEMBER VOICES

“I didn’t really know what to expect, but I can definitely say that I didn’t expect such a powerful 10 days that was going to alter my perception and goals for my future in fire.”

— WTREX participant



Top photo: NPS (Kelly Martin)

Below: © UC Extension (Lenya Quinn-Davidson)

Longer quotes from participants in the Women in Fire TREX are collected in an *FLN Notes from the Field* posted at <https://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Notes-WTRET-2016.aspx>

needs. Its Network Builders Club is a community of practice in which peers learn from and assist each other as they build state-wide networks. The TREX Coaches Network has been under active development this fall, and its first members—those identified as the rising coaches and TREX leaders who will take the strategy forward—have been invited to the first train-the-trainer workshop in the spring.

Women have traditionally been an underutilized resource in fire management. This fall’s Women in Fire TREX (WTREX) addressed that this fall by taking the established, successful TREX model and applying it specifically to women in fire leadership. Having this many women, of all levels of experience, on an incident provided an opportunity—almost unique in the professional experience of many there—to learn from other women. Reversing the gender ratio typical of fire incidents, and explicitly talking about gender issues, was also a powerful experience for the women and men alike who took part in this innovative experience. Demand for the event was high—only about half the applicants could be accepted—and interest in another WTREX is even higher, so this is clearly an offering that will be repeated.

Diversifying the Fire Workforce

In addition to embracing women in the fire workforce, TREX and the cooperative burns supported by PERFECT welcome tribal members interested in cultural burning, regulatory agency staff, non-profit organizations, new burners, students wanting field experience, private contractors, ranchers and others. This diversity enriches the TREX experience for all, but perhaps more importantly, builds both the size of, and the breadth of experience in, the local, regional and national workforce.

At the Klamath River TREX this fall, members of local tribes made up almost a quarter of the participants, with local NGOs, landowners and contractors also very strongly represented. This is building their capacity to complete the treatments their communities need—and improving response to the inevitable wildfires, especially as they begin to work more closely with Forest Service staff on TREX. In New Mexico, cooperative burns are also strongly focused on bringing new groups into the workforce, for example by engaging Youth Corps and veterans in the Black Lake burning this fall. In the Chama Peak landscape, ranch managers and VFDs brought important local knowledge to the mix.



Across Cultures, Across Generations

At the Spanish-language TREX, the international crew had a round robin of fire learning exercises with fifth and sixth graders from Albuquerque at Cottonwood Gulch. © Forest Stewards Guild

Moving to Implementation

TREX events also target people with strong motivations for getting good fire on the ground, and hosts and leaders that are grounded in the work of FLNs. These are places where stakeholders representing real needs for fire—for the landscape and for communities—are deeply invested in the planning, implementation, monitoring and plan adjustments. As a result, they don’t ask “Can we burn?” but rather “How can we burn?” And so the needed burning gets done—while individual units are sometimes deferred, TREX are only very rarely cancelled. For example, this fall, the Klamath River TREX went forward even though California was under a state-wide burn ban due to drought. Earlier



A Movement that Works

FAC Net increasingly operates like a movement—but members also get a lot done on the ground. While FAC Net doesn't directly fund (and so, doesn't track) mitigation work that results from participation in the network, members leverage the organizational capacity, learning and peer support they get from the network to help garner funding for mitigation. © UT DFFSL

relationship-building with CAL FIRE, along with planning that ensured a wide variety of burn units to choose from, allowed the organizers to meet with the permitting agency and agree upon cooler, north-facing units that could be safely burned under those conditions. Shortly after that, torrential rains broke the drought—but made many areas too wet to burn, threatening the WTREX. The organizers delayed the start by a day to accommodate those with disrupted travel, and again, by focusing on opportunities rather than barriers, and by having identified in advance a range of potential burn units over a wide area, were able to host an event that was successful on all fronts.

In New Mexico, PERFECT projects completed more than 1,850 acres of burning this fall, through the Spanish-language TREX and cooperative burns in Black Lake and Chama. Investments in relationships—with landowners, agencies and practitioners—were key to developing projects that succeed because they address priority needs of each of the many stakeholders.

Building a Movement

We are now seeing evidence on several fronts that our intent to build a movement for good fire is taking root.

When devastating wildfires struck the Southeast late this fall, numerous FLN partners reported that the relationships developed among agencies and practitioners over the years contributed significantly to their ability to respond. A focus, already underway, on elevating the role of fire adapted communities in these landscapes will be accelerated, and will be able to spread through channels already in place.

MEMBER VOICES

During our unprecedented fall wildfire season, “we believe that the partnerships forged over the decade of FLN work greatly improved communication/sharing of information on wildfires that crossed agency boundaries or that had resources from other units. Not only did the FLN improve working relationships, but agency suppression decisions were influenced by the recognition that fire needs to be on the landscape.”

Prescribed Fire Training Exchanges and cooperative burning modeled on TREX are also taking on a life of their own. We are aware of planning underway this fall for at least two spring training exchanges that will be led and hosted by TREX alumni, but without direct support from PERFECT. The online TREX tool kit, some personal mentoring, and the new TREX Coaches Network are supporting this organic growth and spread of TREX.

The FAC Learning Network has rapidly moved toward becoming an organically growing, but guided, movement—as originally envisioned in its theory of change. This fall, a Network Systems Analysis and discussions at a workshop for leaders of network communities of practice (COPs) provided opportunities to assess where the network is, and how to make adjustments for maximum impact. The network analysis showed a tightly connected group whose staff liaising strategy has been central to building network relationships—but as members deepen their connections, their reliance on staff decreases, an excellent outcome, and these core members are now situated for collective action. When COP leaders gathered in December, they quickly realized that their planned agenda—and the COP model as a means of connecting within

the network—needed to be revised. Network members and staff realized that the network is undergoing a phase shift, from primarily a connection and sharing network to a joint-action network, and worked together to make the changes needed to support that.

More Online

<http://www.conservationgateway.org/fln>
<http://FireAdaptedNetwork.org>
<http://nature.ly/trainingexchanges>



Culturally important resources like food and basketmaking materials rely on “good fire,” which people are reclaiming through TREX in northern California. © Stormy Staats



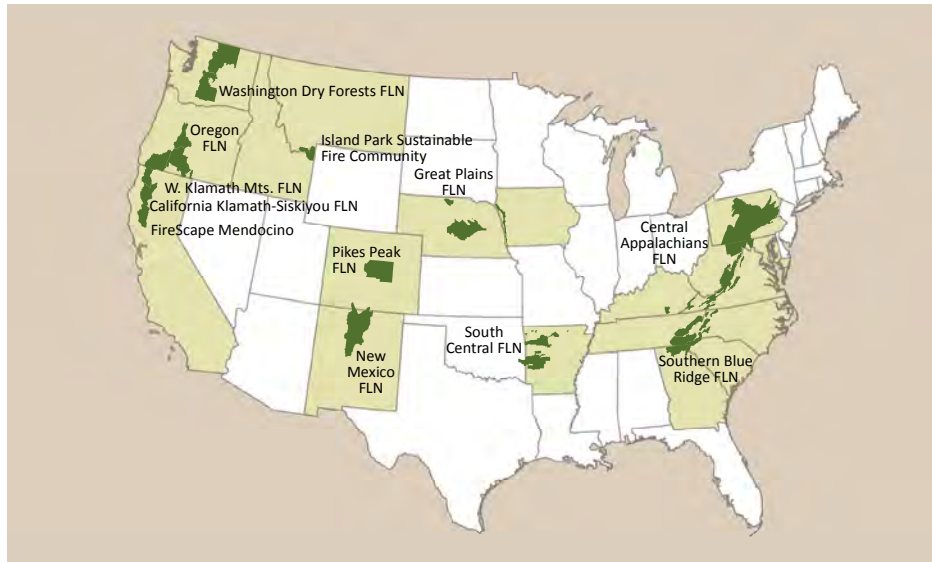
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PERFACT is an equal opportunity provider.

Fire Learning Network

A cooperative program of the Forest Service, Department of the Interior agencies and The Nature Conservancy, the FLN has a 15-year track record of helping to restore our nation's forests and grasslands and to make communities safer from fire.

Highlights from around the Network: July-December 2016



The FLN continues to assess challenges and opportunities, push at boundaries, try new things, learn and change as needed, in support of Cohesive Strategy goals: resilient landscapes, fire adapted communities, and safe and effective wildfire response.

This fall the FLN supported work in 11 regional networks and large landscapes. Recent changes in the network include the addition of a landscape, in Maryland and West Virginia, to the Central Appalachians FLN. On the Idaho-Montana border, focus was tightened, with the Island Park Sustainable Fire Community joining the FLN network in addition to its engagement with the Fire Adapted Communities Learning Network (FAC Net). The Washington Dry Forests FLN took a brief break to reorganize its administration and align its FLN work even more closely with the FAC Net. FireScape Mendocino began incorporating community adaptation to fire in its work, and, with a tragic late wildfire season, the Southern Blue Ridge FLN is accelerating its FAC efforts. The New Mexico FLN also continues to expand the scope of FLN work with the Burned Area Learning Network, addressing post-fire recovery and restoration.

The FLN continues to be the foundation of the wide range of work in progress and developing under PERFECT, and beyond. For example, FLNs in northern California hosted two TRES this fall—as well as providing other trainings, planning workshops, guidance and facilitation for the prescribed fire council, and meeting with state forest, fire and air quality staff to enable more use of good fire. In Oregon, the prescribed fire council—again, with leadership from the FLN—is providing comments to the state EPA to help shape smoke regulations, and the FLN is working with the Fire Adapted Communities Learning Network to address social concerns about smoke; together, these are building the enabling conditions for using fire at the scale needed. In the Southern Blue Ridge region, relationships developed over years of FLN work together were reported to have made response to a severe late fall wildfire season more effective. And the partnerships grown in the South Central FLN are now forming the core of broader partnerships such as the multi-state Shortleaf Pine Initiative and, most recently, growing the Ozark and Ouachita Interior Highlands Restoration Collaborative into a broader range collaborative.



California Klamath-Siskiyou FLN

“We have been working closely with a landowner-driven watershed association that represents 80,000 acres of prime rangelands and forestlands in eastern Humboldt County to further their capacity for prescribed fire. In August, we hosted a learning exchange with prescribed burn association leaders from the Great Plains FLN. It included field exchanges with local ranchers, a large workshop in Eureka about prescribed fire on private lands, and a field exchange and workshop in Ashland, OR. The exchange generated significant excitement about prescribed fire on private lands, so we followed up with a training focused on fire behavior, burn planning, ignition techniques, permitting, and other topics. That training had 72 people in attendance, including 25 from VFDs.”

“We think that on-the-ground success, like live-fire trainings, will be important to gel some of these concepts from this work, and make prescribed fire a more attractive or feasible tool for landowners.”

Partners in the Great Plains FLN, including members of prescribed burn associations, traveled to California (and then Oregon) late in the summer to share and learn about strategies for expanding private burning.

In addition to presentations in the classroom and field tours of partner lands, they found time for a hike together in Redwood National Park.

© UC Extension (Lenya Quinn-Davidson)



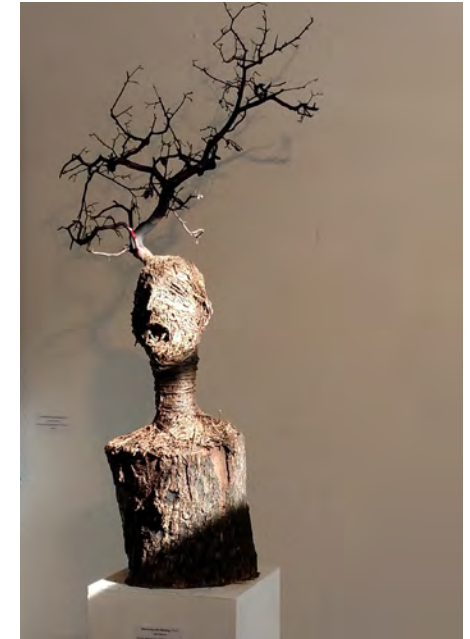
Central Appalachians FLN

FLN partners discussed integrating fire and mechanical treatments to restore shortleaf pine communities during the field day of the annual regional workshop, held in the Blue Ridge mountains of Virginia in early November.

© Lisa Kennedy

Speaking about the workshop, the new Director of Conservation for the Conservancy's Kentucky chapter said, “Being new to the FLN, the field trip portion of the regional workshop was invaluable in terms of building partnerships and gaining a better understanding of successes and challenges across the four FLN landscapes. Although classroom presentations can be useful and informative, there is little comparison to the impact of seeing mechanical treatments and resulting desired conditions in the field, or the thought-provoking discussion of using fire to restore hydro-tables to benefit species of concern.”

“These in-field discussions resulted in new contacts, new relationships, and a better understanding for me of how we can leverage the FLN across geographies for common conservation goals.”



FireScape Mendocino

The sculpture “Watching and Waiting” by Lisa Kaplan was part of the “Ashes to Art” exhibit at the Middletown Art Center (MAC) marking the anniversary of the Valley Fire. The art center has become an important community hub, helping people to recover from recent catastrophic fires by using art to find beauty and meaning in their experiences. © TNC (Jana Carp)

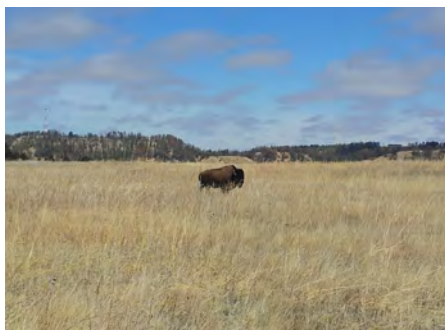
“We have been testing an approach to developing fire adapted communities that is designed for low-resource communities, such as those within the geographic scope of FireScape Mendocino.”

“This fall’s work focused on interviews and field visits that will form the basis for asset mapping, a form of situation assessment. Preliminary findings suggest that communities in this landscape may not associate their sense of place with the Mendocino NF, and that people with energy for creating fire adapted communities are likely to come from non-traditional places, such as a public library or an arts community. Much of the Lake County fire management community is overwhelmed by the loss of homes and infrastructure caused by the past two years of wildfires.”

Great Plains FLN

“The Grassland Conservation Network is a Conservancy effort to share knowledge about grassland conservation, management and policy throughout North America. It has traditionally focused on developing expertise to support grassland conservation, develop partnerships and support best practices in grassland conservation. However, the fire ecology of grasslands and the importance of fire for management have not been a focus of the group in the past, although fire is clearly a significant factor in grassland ecology. The Great Plains FLN is engaging with this network, and can inform this conversation by discussing linked fire and grazing management, and by highlighting the use of prescribed fire for grazing management by private ranchers in the Great Plains, especially by prescribed burn associations.”

“If we can affect grassland management in these areas, we will extend our area of impact far beyond the bounds of our FLN landscapes.”



Bison graze at the Niobrara Valley Preserve, where fire is also used to manage the grassland.
© José Luis Duce



Island Park Sustainable Fire Community

In August, 28 community members took part in a tour of the Partridge Fire with USFS staff. Discussions focused on management decisions and the resource benefits of allowing fire to play its natural role when it's safe to do so.

© TNC (Matthew Ward)

“Folks participating in the tour had no idea they would see plants growing, willows sprouting and a beautiful flowing creek. I think they expected to see mainly damage from the fire. We had many comments about the good the fire did for the riparian area and how fast Mother Nature recovers after a moderate severity fire. It was a great demonstration of what the Forest Service would like to accomplish with prescribed fire. In short, the Partridge Fire tour opened the eyes of a few nay-sayers in other organizations to the benefits of fire and to the idea that all fire is not devastating.”

We also got one homeowner from Pine Haven interested in involving his entire subdivision in an evacuation plan and fuels mitigation work. He has actively pursued this since the field trip. This is a subdivision where IPSFC has been trying to drum up some interest.”



New Mexico FLN

During a multi-partner field tour of the southern Sangre de Cristo Mountains, Santa Fe Fireshed partners from the Tesuque Pueblo described the Pueblo's fire risk reduction work and why this area of the Sangre de Cristos is important to the tribe.

© TNC (Anne Bradley)

“As we have been launching the Burned Area Learning Network, we have been surprised by the lack of coordination, systematic processes and applied technology in planning, implementing and tracking post-fire actions. We see a tremendous opportunity to use tools from the fire community to support improvements in post-fire response and to integrate pre-fire planning, active fire response and post-fire response holistically.”

“Our efforts to take a big picture look at existing systems can contribute substantially to accelerating our learning, disseminating knowledge and ultimately improving practices and outcomes.”



Oregon FLN

Partners in the southwest Oregon Prescribed Burn Association discussed the Ashland Forest Resiliency project on a tour of the watershed with city officials. Work of this FLN, as well as Scaling-up to Promote Ecosystem Resilience (SPER) and the Fire Adapted Communities Learning Network, helps to protect the city's water supply.

© TNC (Darren Borgias)

“As we have been addressing the scientific uncertainty on the role of fire in our forests, we have found that there is a deficit of fire on the landscape across all fire regime groups. This is most prominent in fire regime group 1 (frequent fire systems), where the deficit of low-severity fire is significant. However, it is also interesting that test runs of the models indicate a small but nonetheless important deficit of high-severity fire in fire regime groups 3 and 5. Final results are not available yet, and test run results should not be shared, but the results look like they will provide important data bolstering the argument for the need for restoration, as well as the long-term role of fire in maintaining resilient landscapes.”



South Central FLN

Students from the Russellville High School AP Biology class toured one of the restoration areas on the Big Piney Ranger District of the Ozark National Forest. They learned about the role of fire in keeping the forest open to support increased biodiversity, and about the importance of the forest for the community's drinking water supply. © TNC

This FLN has taken a leadership role in formalization and expansion of the Ozark and Ouachita Interior Highlands Restoration Collaborative into a broader range collaborative.

“Many of the new partners in the Collaborative are hearing what has worked and what has not worked related to media outreach, funding proposals and restoration prescriptions that lead to manageable woodland conditions.”

Fire Learning Network
<http://www.conservationgateway.org/fln>



Southern Blue Ridge FLN

A visitor checks out the Fire Learning Trail on the Grandfather RD in the Central Escarpment Landscape. This means of outreach is spreading in the region, with the Southern Blue Ridge Escarpment landscape installing a new trail in South Carolina's Table Rock State Park to interpret a 2016 wildfire. On that trail, signs will include QR codes that allow visitors to upload their post-fire pictures. © TNC (Adam Warwick)

While the unprecedented fall wildfire season interrupted planned work in this region, “we believe that the partnerships forged over the decade of FLN work greatly improved communication among those working on the late-fall wildfires that crossed agency boundaries or that had resources from other units. Not only did the FLN improve working relationships, but agency suppression decisions were influenced by the recognition that fire needs to be on the landscape. Over and over, we heard that these wildfires, when feasible, were treated in a similar fashion to prescribed burns. Rather than confining fires to the smallest footprint possible—for example with rapid fuel burnouts—natural firebreaks were used and burnouts took into consideration the amount of tree mortality the method would generate.”



Western Klamath Mountains FLN

Increasing the abundance of cultural resources through application of right fire is a cornerstone of FLN work in this landscape. The first day of burning at the Klamath River TREX saw good fire returning to a tan oak stand with the East Simms pile burn. Thinning and burning this area will greatly improve the quality and yield of tan oak acorns and huckleberries. © Jenny Staats

“This year, we implemented cross-boundary burning at a much larger scale than in previous years.”

“We also coordinated with more partners, including the Happy Camp VFD, during the implementation of burns, which greatly increased community support for that portion of the TREX. And we got more acres of right fire on the ground than at any previous TREX, despite this fall's challenging burn windows. We also demonstrated traditional fire management techniques by using changes in aspect and moisture gradients as burn boundaries, rather than the costlier use of firelines.”



The FLN is supported by *Promoting Ecosystem Resilience and Fire Adapted Communities Together* (PERFACT), a cooperative agreement between The Nature Conservancy, the USDA Forest Service and agencies of the Department of the Interior. For more information, contact Lynn Decker at (ldecker@tnc.org) or (801) 320-0524.

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Pikes Peak FLN

A water delivery system set-up was part of the mobilization for the North Catamount Prescribed Burn, before unsuitable conditions caused the burn to be postponed.

© Colorado Springs Utilities

“This summer we finalized our communications guide and implemented it as we approached the fall prescribed fire season. The communications team did an excellent job using lessons learned from previous years to focus on methods that worked, like Twitter and our webpage. Work was also spread among more partners, resulting in a more fluid, manageable workload; this also allows the burn boss to focus on resource coordination, training and implementation.”

Prescribed Fire Training Exchanges and Cooperative Burning

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

PERFACT staff and partners continue to deliver capacity-building training to diverse participants through Prescribed Fire Training Exchanges (TREX). The events strategically address barriers to safe and effective implementation of prescribed fire at the scale needed to meet restoration and community safety needs.

These experiential trainings provide opportunities for professional federal, state and tribal agency fire practitioners to gain experience, learn about integrating conservation and cultural issues into fire management, and receive position task book evaluations in trainee positions. TREX also actively engage others interested in integrating fire training into their experience—including tribal members, ranchers and private contractors—in events that meet NWCG standards, helping these practitioners work more safely and effectively together. In addition, some participants may have never burned before: university students, resource managers, regulators and researchers, for example, have taken part in TREX to better understand how fire affects their work so they can make more informed fire-related decisions.

This fall there were three full TREX events, and a fourth one—the Yurok TREX—was reconfigured into other training opportunities, when the weather failed to cooperate. Other training related work during this period included a late-summer wildfire training exchange, two multi-day cooperative burns with strong learning components, and planning for six spring TREX and the TREX coaches network.

Fall TREX

Spanish-Language TREX

Northern NM September 14-30

The Intercambio y Entrenamiento en Quemadas Prescritas en Español was hosted this fall by the Cottonwood Gulch Foundation and the Santa Fe National Forest. The goal of this annual TREX is to integrate the international experience and knowledge of fire practitioners and students from Spanish-speaking countries with their

local counterparts, sharing approaches and experiences about fire and conservation across different cultural and natural systems. Many firefighters and managers in New Mexico are bilingual, so this location provides a unique opportunity to effectively conduct fire operations while sharing perspectives with a wider geographic



Spanish-language TREX © José Luis Duce

Fall 2016 TREX, Cooperative Burning & Training



© Stormy Staats

			people	acres
Spanish-Language TREX	NM		22	806
Klamath River TREX	CA		88	406
Women in Fire TREX (WTREX)	CA		43	172
Wildfire training exchange	UT		18	n/a
Black Lake Cooperative Burn	NM		38	500
Yurok Cooperative Burn*	CA		10	8
Chama Cooperative Burn	NM		17	549
Family burn training*	CA		10	n/a
TOTAL:			230	2,441

* Yurok TREX alternative actions

and cultural reach than other TREX. The TREX crew worked with local volunteer fire departments and crews from federal agencies and the city of Santa Fe's Wildland Fire Division, completing prescribed burns on both private and public lands, and also worked on wildfires that were being managed for resource benefit.

Klamath River TREX

Northern CA October 3-15

TREX are organized as incidents, generally using a Type 3 Incident Management Team. In the Klamath, the IMT is community-based, and the level of local engagement is high—about half of the burn team is made up of local landowners, tribal members, volunteers and employees of non-profit organiza-

tions in the area. This local focus is part of a strategy to build community capacity for managing wildfire, and the burning done during the TREX provides community protection from future wildfires by burning around homes and in strategic locations that will help firefighters protect the community. Unique to the Klamath River TREX is its size—about 90 personnel mobilized this fall—and that they are split into two burn teams and based in two locations, Happy Camp and Orleans. Managing two burn teams requires a larger Type 3 team than other TREX events, but also increases its impact: this fall the two teams burned a total of 43 strategically-placed units, which ranged in size from a half-acre to nearly 100 acres.



WTREX briefing

Women in Fire TREX

Northern CA October 18-28

Organized and led by women, the WTREX hosted both men and women, though in proportions that were the reverse of what is often seen in the field, with about 90 percent female participants. And unlike any other prescribed fire training event to date, the WTREX focused on women in fire, explicitly recognizing and reinforcing the importance of female perspectives. Women often find the dominant fire management system to be dismissive of female perspectives and strengths—even as its increasing complexity requires fresh approaches and insights. WTREX also provided a supportive environment for women and men to understand and elevate the need for diversity—not only in numbers, but also in approach.



© UC Extension (Lenya Quinn-Davidson)

About half the participants came from federal agencies—the Forest Service, BIA, BLM and National Park Service—and worked alongside women and men from state and local agencies, NGOs, universities, private contractors and several international participants. Over the course of the event, 24 incident trainees had opportunities to work on position task books, with assignments ranging from Firefighter 1 to Burn Boss; eight of them received final evaluations and were recommended for agency certification. More important, in the words of one participant, “the women and men I met there have inspired me. They’ve made me believe that we are capable of creating a new kind of fire community that can be a good fit for anyone who wants to be a part of it.”

Yurok TREX—Resilience in Action

Weitchpec, CA (several dates)

TREX are intentionally led by managers and practitioners who are determined to burn, build flexibility into their planning, and refuse to cancel their work. This was highlighted this year by the Yurok TREX, planned for September. During the first part of their burn window, CAL FIRE burn restrictions were insurmountable; this was immediately followed by an “atmospheric river” weather pattern—torrential rains—that essentially eliminated the ability of fire to consume fuels. So the Yurok TREX as planned was impossible.

But the organizing team did not outright cancel the training. Instead, they restructured, and offered several smaller events that, together, met the goals of the TREX: cultural and occupational fire training, and good fire in

support of cultural resources. This nimble approach resulted in two NWCG courses (S-211 and S-212, on using pumps and chain saws) to strengthen the job-related fire skills of youth. A two-day cooperative burn provided hands-on experience, and put fire into an area rich in fire-dependent cultural resources. And a family-based burning workshop supported the strategic direction being worked out in the Yurok-Hoopa-Karuk landscape as part of their Indigenous Peoples Burning Network planning.

The result did not look anything like a typical TREX—except in the final analysis, where TREX are about doing what is needed to ensure that people continue to work together to get more good fire on the ground, and learn while doing so.

“Perhaps the best part of being part of the training was the opportunity to interact with such an impressive group of people, experience their passion for fire management, and the effort they are willing to put into ensuring the best outcomes possible, for everyone. I have had some great opportunities in my 15 years with the USFS but this [WTREX] was one of the most positive—and fun—activities I have been involved in to date.”

Fire Social Scientist
USDA Forest Service Rocky Mountain Research Station



Black Lake burn

© Forest Stewards Guild

Cooperative Burns

TREX events are effective because they put equal focus on training, treatments and outreach. But while a full TREX is not the best fit for every circumstance, the model is still contributing to improved fire management. This year saw the rise of cooperative burning that takes the best management practices learned from TREX events and applies them to local situations where federal, state and private managers are applying an “all hands, all lands” approach to increase their scale and impact. In addition to the cooperative burn that was part of the Yurok TREX alternative, two cooperative burns in New Mexico this fall highlighted opportunities for federal, state and private fire practitioners to assist one another and overcome concerns about liability and responsibility.

Black Lake Cooperative Burn

Over the course of two weeks of cooperative burning in October, crews completed units that have been a priority for local partners since their 2013 and 2014 TREX. They returned fire to more than 500 acres of meadows and ponderosa pine, aspen and mixed conifer forests, and brought broadcast burns very close to homes in the community of Angel Fire, reducing dangerous fuels there. Among the nearly 40 people taking part in this burning (and the associated NWCG trainings) were members of the local Youth Corps and veterans in the New Mexico State Forestry Returning Heroes Wildland Firefighter Program.

Chama Cooperative Burn

Thirteen practitioners from California, Colorado, Missouri, Oklahoma, Oregon, South Carolina, Utah and Washington (and almost as many organizations) joined four northern New Mexico partners from the Forest Stewards Guild and City of Santa Fe to conduct 549 acres of

burning in the Upper Chama Watershed. The burns had been identified as high priority areas by the Rio Grande Water Fund.

Wildfire Training Exchange

Wasatch National Forest August 9-23
Getting sufficient training and evaluation opportunities on wildfires can be a bottleneck in the development of a robust Burn Boss workforce—wildfire assignments are required for the FFT1, Single Resource Boss and ICT4 positions needed for Burn Boss qualification. After years of laying the groundwork, in late summer PERFECT mobilized a Type II Crew made up of prescribed fire practitioners who needed opportunities to work on ‘W’ tasks in their position task books. The Uinta-Wasatch-Cache NF hosted the crew, assigned to a small lighting-strike fire being managed under a “confine” strategy. All 20 people on the crew—from the Forest Stewards Guild, Pottawattamie County (Iowa), The Nature Conservancy and Wildland Restoration International, as well as

the BLM and Forest Service—were able to work on specific firefighting skills, as well as learn from local Forest Service and Utah DNR firefighters. According to the Conservancy’s Director of Fire Management, “Getting folks these wildfire training experiences is an important step to expanding our reach and impact in prescribed fire and habitat restoration.”

Looking Ahead

In addition to delivering these events, planning work is well under way for a very active spring prescribed fire season, with two TREX each planned for Nebraska, Oregon and New Mexico, and a cooperative burn week planned in Iowa. Staff have also provided some guidance for partnerships that will be holding training exchanges based on TREX in Oklahoma and South Dakota, and continue development on the TREX Coaches Network, which will enable further expansion of TREX, beyond those directly supported by PERFECT.

MORE ONLINE

Wildfire Training Exchange—An FLN Notes from the Field about the “TNC Crew 10” has more about this first-time offering:

<http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Notes-WildfireTraining-2016.aspx>

Women in Fire TREX—Several participants wrote an *FLN Notes from the Field* that includes long quotes with personal stories from the event:

<http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Notes-WTREX-2016.aspx>

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

PERFACT is an equal opportunity provider.

In Others' Words

Klamath River TREN:

"I've watched the TREN people on the ground and now listened to this broadcast. It's an impressive program to take ownership of our future in our towns along the river. Everybody around here knows that with fire it's not 'if' but 'when.' Smart communities don't wait and hope. They take action. Sophie Neuner and José Luis Duce nail it in this broadcast."

Comment on link to radio interview posted on local Facebook page, referring to "Fire Training In The Fire-Prone Klamath," broadcast on Jefferson Public Radio October 11, 2016.
<http://ijpr.org/post/fire-training-fire-prone-klamath#stream/0>

Spanish-Language TREN:



© TNC (Jeremy Bailey)

"Among the different activities the group accomplished, maybe the most interesting one was spending one day with a group of more than 60 middle school students from Albuquerque, teaching about fire ecology and the importance of fire, safety, good fire effects, tools and actions ... Incredible experience!"

Final Report on Spanish-Language TREN by three participants

Women in Fire TREN:

TREN Strategy:

TREN "partnerships do more than help the non-governmental people; they also spur innovation within governmental agencies through exposure to the differing goals and approaches of outside entities, whether they are environmental activists, for-profit enterprises or tribal nations."

from the article "U.S. Federal Fire and Forest Policy: Emphasizing Resilience in Dry Forests" (Ecosphere, November 11, 2016)

<http://onlinelibrary.wiley.com/doi/10.1002/ecs2.1584/full>



Photo: NPS (Kelly Martin)



© UC Extension (Lenya Quinn-Davidson)

"This is not the fire world I know. This is a new fire world, and I thoroughly, thoroughly enjoyed it. How to explain how powerful this experience was? It was powerful; it was healing; it was motivating; it was inspiring; it was energizing. I watched women leaders collaborate, listening to others for information and ideas and then making clear decisions. I experienced some of the most honest and educational AARs I've ever been a part of. I heard women ask questions and express difficulties that I've had, and I saw women answer those questions and offer solutions."

WTREN participant (female)

"The thing that hit me the hardest was that there is a very big problem in fire, and that I'm a part of the problem. I've always thought I was a good guy, but through the discussions at WTREN, listening to all these women speak candidly about their experiences as women in a man's world, I realized how complicated the problems are.... And I found myself guilty of using common language and terms that are hurtful.... I'm conscious of these problems now, and I'll be able to self-evaluate and check myself. I'll also share these things with the people I love—my crew..."

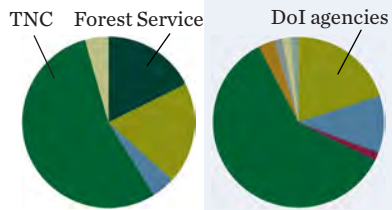
WTREN participant (male)

PRESCRIBED FIRE TRAINING EXCHANGES (TREX) 2008-2016

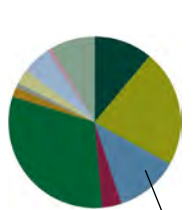


307 TREX, 156 in co-op burns & other experiential training

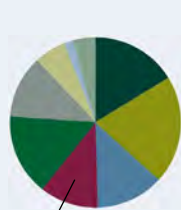
participant numbers



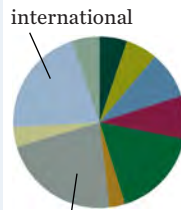
participant diversity



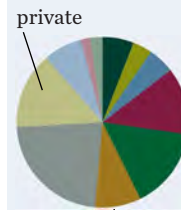
state agencies



local governments



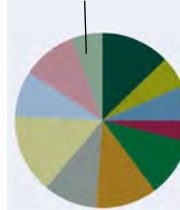
university students



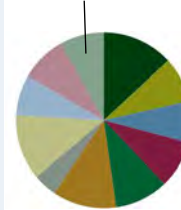
other NGOs



tribal members



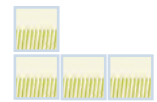
other—includes VFDs and DoD



other—VFDs and youth corps

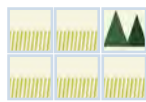
25 percent of participants in 2016 training events were women

TREX in grasslands



training diversity

and western forests



and WUI



and eastern forests



and cooperative burns and community-based trainings



geographic range

2008

2009

2010

2011

2012

2013

2014

2015

2016

Fire Adapted Communities Learning Network

Our mission is to connect and support people and communities who are striving to live more safely with wildfire. The FAC Net is a catalyst for spreading best practices and innovations in fire adaptation nationwide.

Nationally, A New Phase

Social change network experts describe a typical network evolution pattern of connection → alignment → production. The Fire Adapted Communities Learning Network (FAC Net) has followed this trajectory. This fall we began a phase change, from our initial focus on connecting, learning and aligning, to the next stage in the network's development, expanding and working on joint projects. When we started, the focus of the FAC Net was to encourage and facilitate core member connections and learning. Through learning exchange events,

peer mentoring and staff coaching, members have deepened fire adaptation practices in their communities. As we've come to better understand where within the network's membership there is alignment—in terms of priority fire adaptation strategies and opportunities—we've begun to identify how members can support each other's local work. Building on our foundation of strong relationships and deep understanding of one another's local work, we have created the opportunity to work at a broader scale to affect fire adaptation

MEMBER VOICES

Relationships with other practitioners are some of the most valuable components of a network approach. FAC Net provides “access to brilliant people working on the same challenges and provides lessons learned, guidance, moral support, and resources to collectively solve complex problems.”

Connections among members offer moral support as well as “relationships that connect us to resources and experience that we would otherwise have to recreate or may or may not find for ourselves.”

“The network provides a great way for us to link locally/regionally in ways that have rarely happened in the past. Whether the focus is on the diverse forests and fresh waters around us, or the neighbors next door, constructive engagement with others is incredibly beneficial.”

beyond our members' home communities. And on the network's horizon is the next stage of evolution, where we will harness the collective wisdom and practice of our membership to spread what we know works—and discover what else communities can do—in order to live more safely with fire.

In recent months we have been preparing for this phase shift by making investments in:

- **Growth**, through our website, fireadaptednetwork.org, which has facilitated an affiliate membership option for FAC practitioners, more than tripling network participation;
- **Self-assessment**, through social network analysis that examines the relationships and potential for collaboration among our core participants; and
- Initial framing of a **network-wide strategy** that will allow us to begin work across boundaries on the more confounding aspects of integrated fire management.

These efforts have been undertaken in addition to the core functions of the network—coaching and connecting members, sharing and spreading practices and approaches, and advancing on-the-ground mitigation projects in member communities.



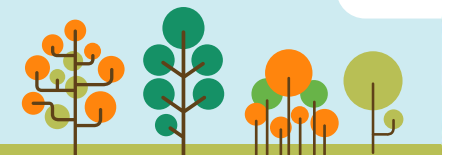
The Fire Adapted Communities Learning Network helps society live more safely with wildfire...

Network members are some of the most advanced community resilience practitioners in the country, and through the FAC Net, they are spreading better ways of living with wildfire—ways that recognize the role of fire in our ecosystems, provide alternatives to costly fire suppression, and protect the lives of citizens and firefighters.

22 CORE MEMBERS OF THE FAC NETWORK ENGAGED **154** NEW PARTNERS
between July and December 2016.

CORE MEMBERS WORK DIRECTLY WITH 797 partners to help their communities live more safely with fire.

Their partnerships have leveraged over **\$5,000,000** from **68** funding sources **TO MEET LOCAL FIRE ADAPTATION GOALS.**



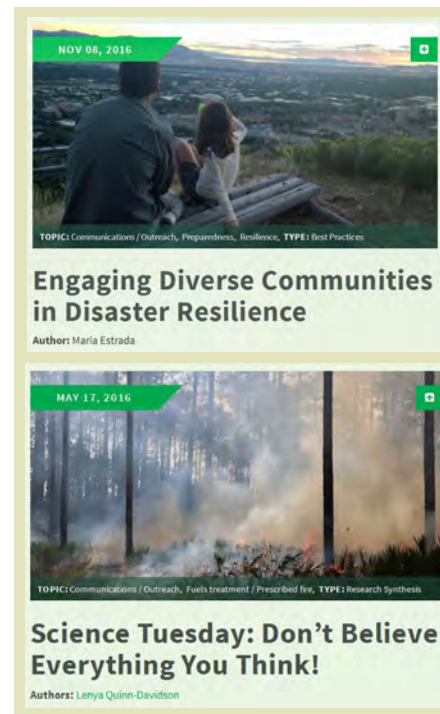
Growth: Affiliate Membership and Interactive Website

When we launched the FAC Net in 2013, we knew we needed to gather a diverse group of highly committed and active FAC practitioners who could represent a range of contexts, approaches and opportunities. These people became our core members—helping to daylight and showcase the state of fire adaptation practice across the country. The next step was to work with that committed core to expand the network—sharing practices developed or honed by core members and revealing where we need to create new or more effective approaches.

The affiliate member initiative is helping us achieve this broader engagement and impact. Affiliate membership is a less resource-intensive way for the network to help practitioners connect around fire adaptation. It's a way for staff and core members to broaden our sphere of influence, engage with new partners and create reciprocal learning opportunities without the level of investment required of core members. And as one member noted, "it's very comforting to know that help is only a text, email, or phone call away when we need to know where to find information for how to proceed. There



The FAC Net has grown from a small core membership—with staff and all members invested heavily in the network—to a much larger and more diverse group. This includes a larger number of core members, several state-wide sub-networks, and the less intensively invested affiliate members, all of whom are helping to spread working FAC practices and to innovate where we need new solutions. *From top:* FAC Net in mid-2013, late 2014 and late 2016. Large dots represent core members, hatched areas represent state-wide sub-networks, and smaller (green) dots represent affiliate members.



As we've grown, our blog has become increasingly important for sharing learning beyond the Network's formal membership. It gives us a platform to share important approaches, like the Diversity, Equity and Inclusion initiative that The Nature Conservancy's Maria Estrada blogged about in November.

Science Tuesday posts are some of the most popular on the blog, delivering a powerful combination of fire and social science. These pieces help make the science accessible, and place it in context for FAC practitioners around the world, including our core and affiliate members.

A new post appears each Tuesday and Thursday at <https://fireadaptednetwork.org/blog/>.

is always someone who's had a similar experience or will give a suggestion." Affiliates represent a broad array of practitioners ranging from insurance industry employees to fire departments, non-profits, state agencies, individuals and more. And as intended, the affiliate initiative has grown the FAC Net, allowing us to directly reach nearly 75 additional members in communities around the country.



FAC Net partnered with the Ecosystem Workforce Program at the University of Oregon to explore workforce issues and document innovative examples of organizations navigating the maze of local, state and federal funding opportunities, programs and procurement strategies to build FAC workforces.

Assessment: Measuring the Depth and Quality of our Connections using Social Network Analysis

FAC Net implemented a social network analysis this past summer. The analysis measured aspects of relationships among network members, including the frequency of their interactions, depth of their relationships and likelihood of working collaboratively together in the future. From these relatively simple measures, the analysis produced a wealth of information that will help strengthen our bonds—



The Social Network Analysis software yields both numeric values for measures of connectedness, to track change over time, and ways to visualize relationships within the network. Spatial relationships, color, size and line attributes can be defined so multiple factors can be seen in one diagram. Staff are finding these helpful for seeing patterns and opportunities, and for raising questions that can guide effective growth.

and also revealed much about the network's overall health—namely that:

- We are a tightly connected group whose staff liaising strategy has been central to network relationships—but as members are deepening their connections, reliance on staff to connect them is decreasing. This is a great outcome, since building a solid foundation of relationships has been the primary focus of the network in its initial stages. Now that those relationships are established, core members are situated for collective action.
- While there is a high degree of connectivity in the network, there are many connections still to be made, signaling the need to continue investments in netweaving.
- We have opportunities to grow our periphery. Those on the fringes of

a network are key to its health—they bring in new ideas and opportunities. As we expand our affiliate program and engage new partners, this periphery will grow.

- Network members have identified great potential for co-work that staff can now direct time and resources to.

Network Strategy: Shaping New Opportunities for FAC Practice

In December, 16 leaders from our seven communities of practice (COPs) gathered. We met with the intent of the strengthening the COPs that we and the Fire Learning Networks had jointly formed a year and a half ago, by developing clearer learning agendas for each of the groups. Another objective was for participants to gain experience using various “Liberating

Structures” facilitation techniques—a menu of microstructures that enhance relational coordination and trust—to support their work together.

But through a day of discussions and working sessions, the group came to realize we needed to change direction—rather than developing individual learning agendas for the existing COPs, our focus should shift to exploring current network-wide strategies and learning opportunities that would position us to have a much greater impact. So we briefly took stock of each COP and decided whether to keep them as is, disband them, or transform them into task forces or other types of groups. Then we adjusted the workshop to work on framing our broader strategies and a network-wide learning agenda.

While some of the COPs will continue, leaders were able to identify efforts that were not well suited to a COP structure, and clarified the actionable nature of many of our opportunities—making it clear that we need systems that support our working together as well as learning together. This workshop was pivotal, in that participants and staff all realized that the network is undergoing a phase shift, from primarily a connection and sharing network, to a joint-action network.

MEMBER VOICES

“I attended the CoP workshop and am excited to see the direction the network will take. Since the network is not in a ‘start-up’ phase any longer, it is exciting to see this kind of strategic development occurring so that the network can grow and mature...”

“It was great to take stock of what we have going on in a strategic way. I think it will help us take the next steps forward as a network to make meaningful change.”

Members at Work: Making a Difference in Communities

FAC Net's investment in learning about fire adaptation approaches across the membership has yielded insight into the practices that are the most robust, deeply developed and transferable, and those that are in need of more exploration, or are uniquely suited to specific contexts. The few examples here highlight recent member projects that exemplify fire adaptation best practices, along with some that explore and test novel approaches.



Prescribed burning on a municipal property in the center of Rapid City, SD. © Rapid City Fire Dept.

Fuels Management

FAC practitioners demonstrate how vegetation management—from lot-level chipping programs to prescribed burning to harvesting methods—are foundational to most fire adaptation efforts. A comprehensive fire adaptation approach goes beyond fuels treatments, but most effective FAC approaches include them. In most places, for people to live more safely with fire, fire behavior—and therefore fuel arrangements—must be managed to promote citizen and firefighter safety, restore fire resilient ecosystems and to avoid structure loss.

MEMBER VOICES

“Recent news coverage of a large prescribed burn in the area has started to shift language in the community to focus on positive descriptors like “good fire” and “fire resiliency in our forest.” Help from the resources that our FAC Net staff liaison provided made this effort easier by giving us good ideas about the points to focus our efforts on and how to most effectively promote the message we want to convey.”

FAC Net practitioners use a variety of approaches to get mitigation work done on the ground in their communities. Pile and broadcast burns took place this fall and winter in Rapid City, Ely and Island Park. In Flagstaff, FAC Net members spearheaded an education effort about harvesting methods to increase support for thinning; the effort has been met with enthusiasm. And throughout the network, members and their communities are investing heavily in fuels programs—like chipping and defensible space projects—that target residents directly. For example,



In North Salt Lake, an Eagle Scout implemented a wildfire risk reduction project with help from local residents and staff from South Davis Metro Fire; Utah Division of Forestry, Fire and State Lands and the city's open space program.

© UT DFFSL (Brianna Binnebose)

in Ely they chipped material from a record 254 properties this fall, and in Oregon, Project Wildfire broke their previous record, collecting more than 11,000 cubic yards of vegetation at their FireFree event.



In Washington, state legislation (House Bill 2928) designed to capitalize on the momentum created by several devastating wildfire seasons is an opportunity for forest collaboratives to increase the pace and scale of their prescribed burning efforts in pilot areas. To increase the amount of prescribed fire in the pilot communities, groups like the Chumstick Wildfire Stewardship Coalition hosted field learning events (*above*), held meetings with fire managers and citizens and conducted extensive outreach this fall. The Washington FAC Learning Network along with the Washington Prescribed Fire Council and The Nature Conservancy were also among those who played leading roles in this important step forward for the state.

© Chumstick Coalition (Hilary Lundgren)

Collaborative Planning

While fuels projects help create new fire futures in communities, they can't happen without a foundation of collaborative planning, partnerships and enabling policy. FAC Net members are helping bring holistic perspectives to their communities—coordinating Community Wildfire Protection Plans, facilitating use of the FAC Self Assessment Tool, leading and participating in forest and watershed management collaboratives, and helping craft smoke management policies that will give communities and land managers the latitude they need to be more proactive.



Increasing Diversity in Fire Management

Communities can work for decades planning and implementing projects, writing CWPPs, and developing the relationships that are the foundation of their fire resilience, but we're still working behind the curve. How a fire is managed in a community's backyard can write the future of its relationship with its place (and with future fires) for a generation or more. If we really want to change our relationship to fire, we need better ways to interface with fire managers, and more diverse approaches in the firefighting ranks.

FAC Net members continue to host a variety of events that bring people together to learn and plan.

Top: This fall FireWise of Southwest Colorado hosted a field discussion for the Dolores Watershed and Resilient Forest (DWaRF) Collaborative. (This group's work was featured in the June blog post <https://fireadaptednetwork.org/becoming-dwarf/>.)
© FireWise of Southwest Colorado

Bottom: The Forest Guild shared collaboratively-drafted project design plans with their community at an outdoor meeting; they also use their website and other media to keep the community abreast and engaged.
© Forest Stewards Guild

Elsewhere, network members in Boise made progress on a Multi-Hazard Mitigation Plan that will serve as a CWPP as well as a plan for other hazards. A cross-walk document developed by the Idaho Department of Emergency Management helped the team include all of the necessary components.



Morning briefing at the Women in Fire Prescribed Fire Training Exchange (WTREX). Organizers of the groundbreaking WTREX event articulated the need for diversity in fire management: "Today's fire problems are so complex that we need to elevate diversity in talent, intellect and perspective in order to solve them." The diversity we need requires not only women, but people who can bring more diverse cultural perspectives to fire management. As more diverse people and organizations become more deeply involved in adapting their communities to fire, a more diverse and representative contingent of fire managers will be required to get better fire outcomes. © UC Extension (Lenya Quinn-Davidson)

This fall, while others in the PERFECT partnership led the Women in Fire TREX, which focused on women in fire leadership, FAC Net members took on other areas of diversity. For example, a workshop in Austin focused on getting non-traditional personnel into Resource Advisor roles. In New Mexico, the Wildfire Network is a new organization aimed at providing job training in wildfire mitigation and management for disadvantaged youth, thus addressing two community needs simultaneously.



Ignition Squad on the Pierson Unit for the 2016 Klamath River TREX. In communities along the Klamath River in northwest California, local tribes are partnering with non-profit organizations to re-invigorate cultural fire management. Diverse cultural perspectives, and institutional and organizational representation enriches their fire management approach.
© Stormy Staats

Resident Engagement

Among the most deeply developed FAC practices of network members are programs aimed at residents. This fall the Landowner/Homeowner community of practice held several webinars where members explored tools and shared models for resident engagement. For example, the Neighborhood Ambassador program led by FireWise of Southwest Colorado has been particularly successful, and

was discussed at one of the webinars; afterwards, at least five other core members expressed interest in starting a similar program in their areas. A learning exchange hosted by FireWise of Southwest Colorado and Fire Adapted Colorado also focused on the Neighborhood Ambassador program. In other parts of the country, network members worked on other resident engagement efforts, including leading the multi-partner Think First Tahoe campaign near Lake Tahoe and conducting post-fire outreach in parts of the Southeast affected by wildfires this fall.

State-Wide Sub-Networks: Putting “All-Hands, All-Lands” into Practice

A recent addition to the FAC Net’s growth strategy is an increased focus on the formation of state-level sub-networks to meet the demand of FAC practitioners regionally. The first state network—the Washington State Fire Adapted Communities Learning Network (WAFAC)—launched the year after the first community-based core member in the state joined the FAC Net, and is operating using the same model as the national network. Through the WAFAC, 10 member communities in



Washington are now connected, and state-level investments from the departments of Natural Resources and Commerce and others have been leveraged with funding from the regional BLM to support their network. The existence of WAFAC has greatly accelerated fire adaptation across the state, and lessons from launching and running that sub-network are benefiting other emerging state sub-networks.

Fire Adapted Colorado (FACO) is now well on its way to serving communities in Colorado. At a state wildfire conference last year, the concept for FACO was vetted with communities. Since then, a non-profit organization, board and network strategy have been formed, and a number of learning exchanges have been held. FACO will launch its membership drive after the Colorado Wildfire Conference this April.



Far left: Moving beyond webinars, the Four Corners Exchange brought together fire adaptation practitioners from Arizona, Colorado and New Mexico focused on resident engagement.
© WRTC (Michelle Medley-Daniel)

Left: Project Wildfire is using 4-Star Firewise Community assessments to help current Firewise Communities evaluate their risk and inform their action plans. These are quick home-to-home assessments that look at a variety of items, from roofing to surface and ladder fuels and overall adequacy of defensible space. National leadership of the Firewise Program is looking at the 4-Star program for insights on assessing participation rate in Firewise Communities nationwide.
© Gary Marshall

In Nevada, leaders of the Living with Fire program, currently hosted by the local extension office, have been managing their own network for several years. Finding the right institution to host the network, and to act as a pass-through organization for mitigation funding, has been the focus of experimentation over the past few years, and the Nevada Division of Forestry is now poised to take over the Nevada network this coming summer. Meanwhile, the educational and convening functions of this continue to prove valuable to communities throughout the state.

Arizona is the latest state to show interest in launching a sub-network. This fall, leaders scoped the idea with communities and partners—and in doing so garnered the enthusiastic support of the State Forester and of steering committee members needed to help take their effort to the next level.

This level of organization promises to be important to the growth of the impact for the FAC Net, as we continue to integrate work at multiple levels—individual, community, state and national—to develop and spread fire adapted communities concepts, practices and actions.

<http://fireadaptednetwork.org/>

<https://www.youtube.com/channel/UCw0iVlThjzZbd5A4bf3tGkw>



The Fire Adapted Communities Learning Network is supported by *Promoting Ecosystem Resilience and Fire Adapted Communities Together* (PERFACT), a cooperative agreement between The Nature Conservancy, USDA Forest Service and Department of the Interior, in partnership with the Watershed Research and Training Center. For more information about the FAC Net, contact Michelle Medley-Daniel at michelle@thewatershedcenter.com.

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Scaling-up to Promote Ecosystem Resilience (SPER III)

Scaling-up to Enable the Social and Operational Capacity for “Right Fire”

January 2015 – December 2017

The SPER strategy began in 2011, with relatively modest amounts of funding strategically targeting implementation that yields larger-scale impacts: SPER projects have filled gaps or otherwise helped bring work in progress to a landscape scale. They have been catalysts, accelerating work in key places. In the first phase, six SPER I projects completed more than 20,000 acres of treatments in support of ecosystem resiliency, community safety and watershed protection. Under SPER II, five projects completed 3,000 acres of treatments, and local fire management capacity was increased through several training opportunities.

SPER III is focusing on fewer places, more intensively, to accelerate the development of both the social and the operational capacity for using fire, benefitting forest resiliency and community wildfire protection alike. We think of this as getting to “right fire”—fire at the right time, right place and of the right size to move us toward our goal of living better with fire.

Spring 2015: The First Three SPER III Projects

Three projects began work under SPER III in the spring of 2015 with the goal of briskly moving these landscapes toward a healthy relationship with “right fire”—mitigating the damage from severe, uncharacteristic wildfire, while living safely with wildfire that the natural systems need to remain resilient. All three projects—in California, New Mexico and Oregon—build on a foundation laid by long-term partnerships under the Fire Learning Network, Fire Adapted Communities Learning Network and Prescribed Fire Training Exchanges.

The three SPER projects that began work in 2015 proposed thinning and prescribed fire treatments on 965 acres over the three-year period.

To date, at just past the half-way point, they have completed **1,383 acres of treatments—531 acres of thinning and 852 acres of prescribed burning.**



Laying down fire during the Tule Creek prescribed burn near Hayfork, CA.

© WRTC (Josh Smith)

California: Trinity Integrated Fire Management Partnership

SPER support has helped the Watershed Research and Training Center (WRTC) convene the Trinity Integrated Fire Management Partnership to develop strategies and outline opportunities, and formalize a shared fire management curriculum. Project leads also engage with CAL FIRE to expand their opportunities to burn, and reach out to fire practitioners through the Northern California Prescribed Fire Council to private landowners through one-on-one meetings to expand the reach of the partnership. WRTC has partnered with the Hayfork and Weaverville water districts to develop plans for expanding their service areas and to work to develop support for forest management activities on the basis of local water supplies. Burning under SPER has included land managed by or critically important to these municipal watersheds. The SPER burning also emphasizes local capacity-building by engaging local nonprofits, landowners and volunteer fire departments. All project work will be recorded in a CWPP update and integrated into the county’s fire management strategy.

Work this fall included hosting four days of the Women in Fire Prescribed Fire Training Exchange (WTREX) and offering basic training for local crewmembers, who immediately took part in burns on private and USFS lands. SPER crews also completed site preparations on more than 100 acres of an upcoming burn unit.



© WRTC (David Jaramillo)

VOICES FROM THE FIELD

Several owners of land adjacent to the Tule Creek burn conducted this fall “have been very concerned and wary of the use of prescribed fire on the landscape. They have expressed their concerns about the potential risks and the adjacency to populated areas. As we safely conduct burns like this, however, these landowners are now working with the WRTC on expanding the burn plan area onto their properties. Although they are still concerned and worried, they are now accepting of the practice and optimistic about the potential of bringing good fire to the landscape that they care so much for.”

New Mexico: Integrating Fire Adapted Communities, Resilient Landscapes and Response to Wildland Fire in the San Juan-Chama Headwaters of the Rio Grande Water Fund

Chama Peak Land Alliance, The Nature Conservancy and the Rio Grande Water Fund are members of the community based San Juan-Chama Watershed Partnership. Its strategy is to host a collaborative, cross-boundary, multi-stakeholder process to protect drinking water supplies by creating landscape resiliency. SPER is supporting this partnership as it prioritizes forest projects at the landscape scale, coordinates fire plans and agreements for fire management activities across jurisdictional

VOICES FROM THE FIELD

“SPER support also allowed the Rio Grande Water Fund (RGWF) to invest in a resilience strategy for the Navajo and Blanco basins in southwest Colorado. Water diverted from these watersheds into the Rio Grande provides about a third of the surface water used by half of the population of New Mexico. We anticipate that based on this strategy work we will be able to make the case to the Albuquerque Bernalillo County Water Utility to invest their funds in fire risk reduction treatments in these critical watersheds. This creates the critical link between the water-producing watersheds and the primary water user—a goal of the RGWF.”

boundaries, adapts forest management based on monitoring and feedback, and builds capacity and knowledge for prescribed burns through trainings and other learning experiences.

This fall saw more than 300 acres of burning on private land on Rancho Lobo in northern New Mexico and on the Banded Peak project, across the border in Colorado. Planning is also under way for more burns in these areas at a TREX that will take place in May that will include ranch hands from the area.

SPER work was also cited as leverage for a successful NRCS Regional Conservation



© Forest Stewards Guild
(Esme Cadiante)

Partnership Program proposal that will provide \$3.2 million to further expand treatments in the Upper San Juan-Chama landscape.

Oregon: Ashland Forest All-Lands Restoration Project

Partners in the AFAR project are working to create a durable community fabric of local capacity for right fire, to help ensure lasting funding for landscape scale maintenance, to influence smoke management policy for greater flexibility, and to support the community in its adoption of right fire. SPER support has helped integrate AFAR effort with a Joint Chiefs’ funded project in the city’s watershed, including engaging the community in planning and implementation during the bridge period before the Joint Chiefs’ work began. In the spring of 2016, SPER supported the Ashland TREX, bringing heightened public and stakeholder awareness and support to prescribed burning and the Cohesive Strategy, and helping the community move toward burning with appropriate effects and at a meaningful

VOICES FROM THE FIELD

“While the agencies and our partners are pursuing ways to better manage expectations around smoke to ease restrictions that limit burn days, public stakeholders have been given little cause for concern and so have not elevated smoke issues. This lack of concern stems from the benign impacts of the AFR winter pile burning, which is often not visible above the low clouds, and the several broadcast burns on city, Foest Service and private lands, including TREX burns in May 2016, which were successfully conducted with little smoke impact.”

scale. The project has also supported a series of facilitated community listening sessions, focus groups and shared learning and planning workshops that are enabling the community to collaboratively address barriers and reach agreements that define a fire management plan embracing “right fire” and informing the agency Wildland Fire Decision Support System.

With the planned implementation under SPER completed, this project has moved on to outreach and engagement strategies that will ensure continued support for ongoing work in the municipal watershed. In addition to several tours of treatment sites, for both public and agency/regulator audiences, partners are working on a series of events that will help the community come to agreement on management of smoke-related concerns.



Fall 2016: Two Additional SPER III Projects

Two additional partnerships received a pulse of SPER support in the fall of 2016, intended to supplement the existing body of cooperative work in each area as the communities and landscapes move toward right fire. As with the earlier SPER III projects each has a strong footing in FLN and FAC Net as well as TRES experience.

California: Scaling Up Right Fire in the Western Klamath Mountains

Central to this project was providing leadership and management support for the Klamath River TRES this fall. In support of this—and of future prescribed burning—were investments in engagement with CAL FIRE and Forest Service to increase support for prescribed fire through permitting, formal and informal agreements, participation and funding. Similarly, engagement of local, regional and state Air Quality Management Districts is helping to maximize the potential for using prescribed fire in the Western Klamath Mountains and surrounding landscapes. Partners are also providing support and expertise to inform the Wildfire Risk Analysis effort for six National Forests in northern California. Together, these efforts are aimed at garnering support for managing wildfires to achieve resource and community benefits.

Discussions with numerous agencies this fall were quite fruitful, with outcomes including Forest Service commitments to discuss the Wildfire Risk Analysis at

the spring Klamath Fire Symposium, increase participation in next fall’s Klamath River TRES, and provide significant funding for that TRES.

New Mexico: Cooperative Burning in New Mexico

Forest Stewards Guild is organizing and leading a series of cooperative burns that leverage existing relationships and projects to strengthen New Mexico’s overall capacity to deliver—and embrace—planned fire. The cooperative burn projects provide treatments to lands that need it, while providing training to local and regional practitioners, and opportunities to engage with communities and influence perceptions of and relationships with fire.

This project hosted the first burns of the Spanish-language TRES, in mid-September; when conditions were unexpectedly favorable, the Burn Boss was able to adjust the plan, allowing the crew to burn a full 20-acre unit, rather than conducting only the test burns. A week of cooperative burning near Black Lake in October yielded about 500 acres of effective treatments in spite of damp conditions, and provided training opportunities for 37 people, including many from local fire agencies, as well as several Youth Corps members.

Left: On the October 2016 Klamath River TRES. © Mid Klamath Watershed Center
Right: After the Black Lake burn. © FSG

VOICES FROM THE FIELD

“The scale of the burn at Black Lake—especially given its proximity to homes—was our most significant accomplishment this fall. It was part of a very ambitious year for the Guild and NM State Land Office in this WUI setting—especially with no moisture predicted after the burn. To manage for this, we adjusted our plans to increase patrolling resources after the burn. The site was patrolled for nearly three weeks after the demobilization thanks to existing partners and allocation of funds to pay for a firefighter and the local VFD to patrol and apply water during and in advance of some red flag days.”

VOICES FROM THE FIELD

“The amount of acceptance and support for prescribed fire in California is rapidly expanding—we are seeing it from individuals and communities in the Western Klamath Mountains FLN area to the state and regional levels of CAL FIRE and the Forest Service. Recent wildfires have caused state and federal fire managers to look for alternative fire management strategies, and invest in them. Through the Western Klamath Restoration Partnership and TRES, we can help by providing key examples of how cost savings can be realized, while achieving better ecological results on the ground and protecting and enhancing cultural resources. The ability for our staff to communicate and engage with stakeholders at all levels is instrumental in facilitating this paradigm shift.”

Scaling-up to Promote Ecosystem Resiliency is supported by the USDA Forest Service through the *Promoting Ecosystem Resilience and Fire Adapted Communities Together* (PERFACT) cooperative agreement between The Nature Conservancy, Forest Service and agencies of the Department of the Interior. For more information, contact Lynn Decker (ldecker@tnc.org).

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Indigenous Peoples Burning Network

The mission of the Yurok-Hupa-Karuk IPBN is to revitalize the implementation of cultural burns in native communities through the cultivation of an intertribal support system in which traditional ecological knowledge is shared and our rights are protected.

Native American people walk in two worlds: their ancestral tribal world and the contemporary world, which is led by other people. When we first started creating a network centered on fire management from an indigenous peoples' perspective, we laid out some principles for how this would be different from other fire-related partnerships. Some principles, like self-determination are universal to indigenous peoples around the world; others, like preparing the next generation of cultural fire practitioners are specific to the local landscape. For the IPBN, these principles mean operating our network from the indigenous perspective first, and designing connections with partners where there is synergy for reaching our vision.

Healthy Country Planning

Earlier in 2016, Blane Heumann, The Nature Conservancy's Director of Fire Management, introduced us to an indigenous conservation plan from Balangarra, Australia. The plan was developed using Healthy Country Planning, a culturally-based planning approach adapted from other formats by Aboriginal peoples in Australia. There, local people have been "caring for country" for 40,000 years, and fire plays a big part. After a work session

with this method in June, Margo Robbins of the Cultural Fire Management Council and Mary Huffman of the Fire Learning Network staff traveled to Darwin, Australia for 10 days of training to learn more.

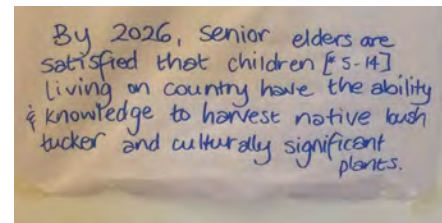
"Two things really hit us," said Margo, "Aboriginal people there have rights to use fire that aren't recognized here and their plans talk a lot about sustaining culture into the future." Healthy Country Plans put the culture of Native people and their homelands as a top priority.



At first Healthy Country Planning looks like ordinary adaptive management planning, but anybody who opens up a Healthy Country Plan will feel right away that it is something different. The focus is on living culture, revealing different ways of thinking and speaking through the words of indigenous peoples who have deep connections to their homelands.

"In Healthy Country Planning, Mary observed, "nobody has to ignore important spiritual relationships and nobody has to put on somebody else's planning jacket that doesn't fit their way of being." To emphasize local ways of thinking, a plan can incorporate the local indigenous language(s), and be translated later for a broader audience.

We anticipate that our Yurok-Hoopa-Karuk Healthy Country Plan will inform other land management plans with indigenous perspectives. These plans include federal forest management plans, and the Community Health and Wildfire Protection Plan for Yurok ancestral territory.



A culturally-based goal for Kakadu National Park, developed during training in Healthy Country Planning in Australia. The goal recognizes the importance of native foods (tucker), future generations living on the land, and evaluation of progress by elders of local Aboriginal clans. In contrast, a typical management plan crafted in the U.S. might read something like, "By 2025, 85 percent of the historical resources in the park are documented and protected."

After the workshop, Margo and Mary joined two staff members from the Conservancy's Northern Australia program for a 3-day driving tour of south-eastern Cape York. Spending time in the field with indigenous ranger groups and partners who are advancing cultural burning showed us how Healthy Country Planning is being put into action. We learned that elders in that part of Cape York are teaching younger generations to light cool fires either before the hot, dry season or just before the arrival of rain storms, a practice called "storm burning." We learned that ordinary people can take care of the land with cool, patchy fires. Cool



During training in Healthy Country Planning, Margo Robbins of the Yurok Tribe (center) participates in the fire management work group, together with a coach (right) and Aboriginal people from two clans in Northern Australia.

© Conservation Management (Stuart Cowell)

If Native people choose, their Healthy Country Plans can be a tool for elevating the strength and clarity of their voices in shaping the management of large ancestral territories. For example, in the Yurok-Hoopa-Karuk landscape, reservation lands encompass roughly 155,000 acres, while the Forest Service manages most of the 1.8 million acres of combined ancestral territory. Planning meetings usually include discussions of sacred places, practices and knowledge, but to protect intellectual property rights, participants decide what is appropriate to share in the final document. In this way, Healthy Country Plans can bridge to other management plans, such as USFS Forest Land Management Plans.

fires are necessary to maintain native plants for wallabies, kangaroos and other native animals. Cool burns reduce the “rubbish” but don’t affect the canopies of the trees which are important to shade both animals and understory plants in this hot climate. What’s more, the elders light the fire when only some species of grass will burn, leaving unburned plants for food and cover for animals. Later after the burned grasses have greened up, the elders return to burn the remaining unburned plants. A hot burn that consumes the entire understory and damages tree canopies is considered very bad practice.

Staff from Cape York Natural Resource Management, Ltd. showed us how they are connecting indigenous people who want to advance their ability to “care for country,” including cultural burning. Partners are making extensive use of video and websites to enable local people to tell their story of fire recovery, document Healthy Country Plans and connect people working on similar efforts across Australia. We will continue our relationships with these practitioners, who will continue to provide inspiration and guidance for the expansion of our Indigenous Peoples’ TREX and the Indigenous Peoples Burning Network.

The second session of Healthy Country Planning in the Yurok-Hoopa-Karuk landscape will take place over three days in the first months of 2017. The draft plan will then be reviewed in a large workshop that community members from all three tribes will be encouraged to take part in.

Family-Based Burning

The most important outcome of the June Healthy Country Planning workshop was an increased emphasis on family-based burning. In the ancestral territories of the Yurok, Hoopa and Karuk Tribes, controlled burning was traditionally done according to family lines. Participants in the workshop identified a goal of building the capacity for 40 families to do cool- fire controlled burns in the coming three



Low-intensity controlled burns conducted under the Six Rivers National Forest’s Roots and Shoots Program combine mainstream fuel reduction with improving conditions for culturally significant species. Photo: USFS

years. To this end, the Cultural Fire Management Council hosted a fire training in November, where 10 people received training. Network advisors are also in dialogue with the California Air Resources Board to discuss how air quality plans could support traditional burning practices.

Legal Framework

A review this fall of policy and key legal cases involving treaty rights for natural resource management suggests that they typically address Native Americans’ rights to hunt, fish and gather in their ancestral territories. At this first level of investigation, rights to actively manage habitat (such as controlled burning to perpetuate resources) for areas that are within ancestral territories, but off reservations, do not appear to be well-explored.

The Presidential and Secretarial Orders of 2009 and 2016, which direct federal agencies to consult with tribes, emphasize the need for meaningful government-to-government consultation, including fire planning and management. It appears that it would be helpful to have a small project that enabled tribes in the IPBN to describe how they would like fire-related consultation to be conducted.



In November the Warrior Institute held a field learning day for youth, providing occupational training in fire. © Margo Robbins

Expanding the Network

In a series of meetings in New Mexico in December, the IPBN staff lead explored the possibility of expanding the IPBN to one or more landscapes in the state. There is high potential for working with two tribes to advance controlled burning in an indigenous context. Work with these tribes would dovetail with the large multi-party watershed project, the Rio Grande Water Fund.



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