

Semi-Annual Report

January – July 2018

Promoting Ecosystem Resilience and Fire Adapted Communities Together (PERFACT):
Collaborative Engagement, Collective Action and Co-Ownership of Fire

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USDA Forest Service

August 14, 2018

Submitted by:
The Nature Conservancy



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

DELIVERING ON A VISION FOR A BETTER RELATIONSHIP WITH FIRE

The PERFACT partnership works to restore our relationship with fire by moving us toward “right fire”—where good fire can do its work on the landscape, and both human and natural communities are better able to live with fire. We invest in the people who share our goal of implementing the integrated tenets of the Cohesive Strategy, helping them develop the resources and relationships they need to succeed. We work in key places, with the people and organizations leading the charge locally, and also at regional and national scales to create enabling conditions and to facilitate the spread of innovations.

PERFACT works through interwoven strategic efforts. The Fire Learning Network (FLN) fosters collaboration for restoration and integrated fire management in landscapes across the country. The Fire Adapted Communities Learning Network (FAC Net) supports and connects people and communities who are striving to live more safely with wildfire. The Indigenous Peoples Burning Network (IPBN) supports traditional burning knowledge and practices to perpetuate traditions and a healthy environment. Prescribed Fire Training Exchanges (TREX) and cooperative burns provide experiential training that integrates a

range of people, places and aspects of fire, expanding our collective capacity to manage fire well.

HIGHLIGHTS FROM THE NETWORKS

As a mature network, the FLN is focusing on strengthening its leadership and partnerships, with an emphasis on diversifying local coordinating capacity and building a sustainable interjurisdictional workforce. Cross-network coordination proved essential to these efforts—for example, FLN leaders in Oregon and Washington collaborated to facilitate a joint workshop between their two prescribed fire councils. TREX events in Oregon benefitted from peer assists from FLN partners in the Island Park, South Central and Southern Blue Ridge FLNs. Formation of the Humboldt County Prescribed Burn Association in northern California—the first in the state—was the direct result of learning exchanges over the past year with partners in Nebraska. Such investments have also been fundamental in informing or implementing statewide policy, such as the 2928 Forest Resiliency Burning Pilot in Washington and the California governor’s May 10, 2018 executive order for protecting communities from wildfire and climate impacts.



Members of the network builders community of practice work through network design questions and concepts at their spring workshop.

PERFACT is a leader in the practice of network design and implementation. Staff from the Fire Adapted Communities Learning Network regularly share their expertise in designing and stewarding learning networks, both within and beyond FAC Net. This spring this included a three-day network leadership session for FAC Net members working on statewide community wildfire adaptation networks, as well as network design sessions in New Mexico and Montana. Reaching beyond the network, lessons from PERFACT networks were shared at a workshop of network leaders in The Nature Conservancy; at the workshop, FAC Net and the Fire Learning Network were held up as model social impact networks, and researcher Dr. Bruce Goldstein and a FAC Net staff member presented a case study on how FAC Net has fostered member connections and addressed network evaluation.

© WRTC (Emily Troisi)

FAC Net members are expanding their visions of what is possible, and as a result are tackling new issues and trying new approaches. For example,

the New Jersey Fire Safety Council implemented its first wildfire drills for first responders and residents. The Council is also involved in a reciprocal

prescribed fire learning exchange with peers in Long Island, New York. This exchange—two events that involved 58 people—was spearheaded by another network member, the Forest Stewards Guild. Meanwhile, in New Mexico the Guild also had another first, hosting a community asset mapping workshop in Santa Fe. Working across networks, FLN and FAC Net contacts in Georgia are engaging that state’s prescribed fire council to improve enabling conditions for prescribed burning in the northern part of the state.

Members of the TREX Coaches Network organized and led seven PERFECT-supported TREX this spring,



Taping an interview at the Central Oregon TREX. Outreach about the benefits of prescribed fire continues to be a focus in central Oregon. This TREX provided opportunities to engage local media, and to capture professional quality photos and video that will be used by partners in public service announcements and social media campaigns.
© TNC (Pete Caligiuri)



During the Fire Networks Workshop field tour, participants learn about some of the wildfires that burned close to Lake Chelan in 2015. The group then took part in a role-playing exercise based on the 2928 Forest Resiliency Burning Pilot.
© TNC (Liz Rank)

along with a cooperative burn week in Iowa and a fire tour of the Great Plains that were fully supported with other funds. Together, the 227 participants in the seven TREX completed 3,430 acres of burning, most of which was in support of priorities set by FLN and FAC Net partners and hosts. In northern New Mexico, where unusually warm and dry conditions precluded burning, the TREX went forward anyway, with crews turning to other essential work, like training and community engagement in support of local FAC Net efforts.

In late May, members of the FLN, FAC Net, IPBN and TREX Coaches Network gathered in central Washington, along with key national partners and members of the Washington Fire Adapted Communities Learning Network, for a national Fire Networks Workshop. This was the first time members of all the national networks met together, so opportunities for cross-network connections and planning for co-work were maximized. The diversity of participants also provided glimpses into work being done at many scales, and sessions

addressed a wide range of fire-related issues across the full before-during-after wildfire cycle.

WORKING TOGETHER IN KEY PLACES

When PERFECT strategies come together in a location, the effects are multiplied. This can be seen now across a large landscape along the border between New Mexico and Colorado, where a broad array of organizations, agencies, contractors and collaboratives are scaling up the use of beneficial fire. Key players are members and partners in the FLN, FAC Net and TREX coaches network, with the various projects learning from, complementing and supporting each other. The Rio Grande Water Fund (RGWF), an FLN landscape, has been at the core of this for several years; its planning efforts laid out a strategic direction for increasing the resiliency of forests in the watershed that serves half the population of New Mexico. Numerous TREX in and near the RGWF landscape over the last few years—including the Taos and Chama TREX this spring—are building workforce capacity in the state. The TREX also provide opportunities for people and organizations to work together. The use of agreements, sharing of resources, and coordination of burn teams is

helping a whole new community of fire practitioners form, grow and build support networks that will continue to achieve good fire. The TREX also support FAC Net efforts, through treatments, trainings and community outreach; when the Chama TREX crews were unable to burn because of this spring's weather, they turned to other work, including partnering with FAC Net member FireWise of Southwest Colorado on home assessment training.

Also active in this landscape is the Burned Area Learning Network, an initiative coordinated by the New Mexico FLN. Its members are working to understand and mitigate the flooding and debris flows that can follow severe wildfire, and to lay out best practices to mitigate them—after the fire, but also through pre-fire planning for post-fire impacts. Its efforts this spring included drafting an overview of burned area response policies and resources, and a field tour to assess the effectiveness of a range of erosion control methods. Many participants in the national Fire Networks Workshop expressed interest in this post-fire planning, so the learning from this will undoubtedly inform the wider networks.

Looking forward, the IPBN is exploring expansion into this landscape through

connections with pueblos. At a learning exchange in late winter, co-leads from the Yurok-Hupa-Karuk IPBN traveled to New Mexico to meet with people from two pueblos and start the conversations.



Participants in the spring Yurok TREX grind acorns into flour for soup. Regular fire supports food security in this landscape by keeping the acorn crop healthy. © TNC (Amanda Stamper)

Prescribed Fire Training Exchanges and the Indigenous Peoples Burning Network support each other. Many indigenous cultures—including those in northern California—are fire-dependent. The Yurok TREX provides long-awaited opportunities to put fire on the ground in a way that supports revitalization of fire culture. Native people often hear about the IPBN through their participation in TREX—and vice versa. While the IPBN facilitates strategic planning, partnership building and intergenerational learning at the conceptual level, hands-on experiential learning at a TREX is often the first place where the rubber meets the road.



Smoke rises from a pair of controlled ecological restoration burns on the Ashland Forest All-lands Restoration Project during the Ashland TREX.

After the final day of burning during this TREX, there was an overnight smoke intrusion in Ashland when forecast winds failed to materialize. This became a teaching moment—complaints from the community were addressed in a piece in the local paper written by the mayor, executive director of the Ashland Chamber of Commerce and the forest division chief for Ashland Fire & Rescue (a FAC Net core member). The article addressed the source of the smoke, its health implications, and the rationale for using prescribed fire to prevent more severe fire (and smoke) issues later. *Photo: USFS (Don Boucher)*

GETTING REAL ABOUT SMOKE

Another topic of growing interest in the networks (and beyond) is smoke. Several FAC Net and FLN members in the West are adopting a new approach to smoke outreach. The typical strategy has been to try to increase acceptance of smoke from controlled burns through carefully crafted messaging. On its own, this has not produced sufficient results—while people understand the value of fire, the smoke is still a real concern for about one-third of households nationally. So network members are now addressing that directly by providing practical information and resources—including HEPA filters—to

help sensitive populations mitigate the effects of wildland fire smoke. This is being done as a public service and also as part of a larger effort to create more social license for prescribed burning and managed wildfires.

Using the network to find out what works, test ideas and not reinvent the wheel, members in Ashland, Deschutes County, Flagstaff and Santa Fe now provide websites, videos, maps and resource portals for their communities. And sometimes the network helps even more directly: with fires burning this summer in Colorado, Santa Fe recently loaned its HEPA filters to their Colorado colleagues.

LEVERAGING THE NETWORKS FOR BETTER POLICY

While PERFECT does not fund any government relations work, the partnerships and knowledge base built under the agreement are being used to drive change at a larger scale through network members' engagement in policy matters.

In New Jersey this spring, FAC Net members mobilized neighborhood ambassadors to weigh in on a proposed New Jersey Pinelands management plan with the aim of ensuring that wildfire safety is taken into account. They have also made progress advancing state legislation to improve the policy environment related to prescribed burning.

In Oregon, the state's Smoke Management Plan is up for revision, and a central element of the proposed changes is a provision that would give local communities greater flexibility to implement prescribed burning in and around the wildland urban interface if a proactive plan is in place to notify the public and provide them with smoke mitigation strategies. In central Oregon, FAC Net and FLN members created an informal coalition with local partners in air quality, public health, and state and federal forest and fire management, and developed a fire

and smoke information portal for the public that meets these conditions, providing real-time updates about smoke events, as well as a range of mitigation options. If the proposed rules are approved and adopted by state agencies, it would address a key barrier to increasing the scale of prescribed burning to improve forest health and reduce wildfire risk to communities and firefighters, while also addressing public health concerns associated with short-duration prescribed fire smoke.

In Washington, members of the FLN and Washington Fire Adapted Communities Learning Network used the relationships and credibility



The spring 2018 Chama TREX crew.

You can always tell a TREX team by the variety of colors of hard hats. Bringing firefighters from many different organizations for each event creates a lot of diversity in experience among participants, setting the stage for excellent peer-to-peer learning. Similarly, diversity in gender, ethnicity and background enhances the training and working environment and helps these teams be as successful as they are. TREX coaches and leaders are working very hard to make diversity, equity and inclusion an important core value of every event.

© Chama Peak Land Alliance (Caitlin Barbour)

they've developed over the years to organize a roundtable discussion with Governor Jay Inslee and other elected officials, state and federal agency representatives, and leaders from several nonprofit organizations. Held in conjunction with the national

workshop, the roundtable elevated conversations about community wildfire resilience, bringing learning from PERFECT networks to key audiences in a state that is currently at the forefront of learning to live better with fire.

More Stories Online

- 9 New *FLN Notes from the Field* this spring (see issues 128-136 in the index):
<http://conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Index-FLN-Notes-from-the-Field.aspx>
- 27 weekly posts on the FAC Net blog:
<https://fireadaptednetwork.org/blog/>
- 6 capacity solutions in the new *Lessons from TREX Coaches* series:
<http://conservationgateway.org/ConservationPractices/FireLandscapes/HabitatProtectionandRestoration/Training/TrainingExchanges/Pages/CapacitySolutions.aspx>
- 3 handouts about using asset-based community development for fire adaptation:
<https://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/NetworkProducts/Pages/ABCD.aspx>

Network Websites

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



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FIRE NETWORKS WORKSHOP

May 22-25, 2018

Wenatchee, Washington

PERFACT has been working for several years on fully integrating the landscape, community and training strategies being developed and carried out by members of the various networks in the places they work. Over time, it has become increasingly evident that these efforts are made more powerful when several are “stacked” in a location. In specific locations around the country members of different networks have met together and worked together, and collaboration across networks in these places has enriched and accelerated work. In Wenatchee, we were able for the first time to take this to the national scale, with leads from all the networks meeting together at one large workshop.

This workshop brought together the four national learning networks developed and supported by the Promoting Ecosystem Resiliency and Fire Adapted Communities Together (PERFACT) cooperative agreement—the Fire Learning Network (FLN), Fire Adapted Communities Learning

Network (FAC Net), Prescribed Fire Training Exchange (TREX) Coaches Network and Indigenous Peoples Burning Network (IPBN)—along with the Washington State Fire Adapted Communities Learning Network (WAFAC), a statewide network inspired by and modeled on the FAC Net.

As planned, this allowed for important connections—both expected and serendipitous—to be made.

WORKSHOP OBJECTIVES

The workshop brought together about 130 key network members and partners to advance our place-based work across the country by providing opportunities for peer-to-peer learning and facilitating connections that will lead to more cross-network action.

To accomplish this, the workshop was designed to:

- strengthen relationships within each network,
- facilitate evolution and improvement within each network, and
- build relationships between members of different networks.

“The annual workshop is something that I look forward to more than anything in my entire job. The face-to-face communication is life changing!”

PLACE-BASED LEARNING

The workshop was held in central Washington, which had experienced catastrophic wildfires in 2014 and 2015, in order to distill lessons from those fire seasons, and from the remarkable work that has been accomplished since then by the networks in the state. Among the session highlights were:

- flash presentations that allowed rapid introductions to a wide range of topics,
- a variety of exercises and informal gatherings structured to encourage new connections between networks and geographies and provide space for renewing existing relationships,
- a presentation and discussion of ongoing post-fire recovery led by recovery case managers from a community hit hard by fires,



A “share back” session evaluation was conducted in the round. © TNC (Marek Smith)

- skills sessions that covered applying trust theory to build resilient collaboration, cultivating effective relationships with legislators, establishing equitable partnerships in the fire worlds with indigenous peoples, and strategies for expanding the use of prescribed fire,
- role-playing and wildfire simulation exercises that forced participants to work through unfamiliar parts of the decision-making process (and demonstrated tools useful for both planning and community engagement), and
- a roundtable with Washington Governor Jay Inslee and other influential policymakers, at which network members were able to share key insights from their work.

Members of the Okanogan County Long Term Recovery Group brought artifacts and compelling stories of their work with survivors of the 2014 and 2015 wildfires in the state. For participants whose work mainly focused on other parts of the wildfire cycle, this presentation was eye-opening, and many people noted it as a high point of the workshop. © TNC (Liz Rank)

“I can’t begin to tell you what a great week you provided to all of us network members last week.... I came home with lots of ideas and a long to do list and it all came from my interactions with everyone and the presentations we had....”



WHAT WORKED?

The workshop organizing team conducted a thorough evaluation of the workshop, including an online survey for participants, an after action review by PERFECT staff, and follow-up assignments.

According to the workshop evaluations, the most valuable aspects of the workshop were:

Networking opportunities (including meeting new people) (21)

“Networking and connections I made, especially in the informal sessions”

Post-fire recovery session (9)

“The presentation on Wednesday afternoon about the recovery stories was especially poignant and made me think about how I could apply some of these lessons learned in my own community to better prepare for the possibility of wildfire.”

Learning from others to inform my practice (5)

“The opportunity to learn what is working in other locales”

A specific skills session (4)

Meeting people from the other networks (4)

The most common response (12) to the question about the least useful part of the workshop was “None.” Other answers showed no clear pattern, with several mentioning a specific breakout session, the role playing exercises (“we’re all too nice”), and a few notes about logistics and too much sitting.

We also asked about the strengths and weaknesses of all the networks meeting together. There were few surprises in the responses: Strengths included the opportunity to learn more about other networks’ work and how we all fit together (18), networking and collaboration opportunities (9), efficiency for members from places where multiple networks are operating (6), and inspiration (5). Weaknesses included the difficulty in getting to meet everyone or build deep connections (6), having less relevant content by trying to meet too many needs (5), needing more time for individual network work (4)—and being overwhelming (2). A number of responses fell into a middle ground category—“I liked meeting together, but think we need to meet separately, too.” In post-workshop discussions, it was decided to follow this plan, with networks meeting separately in 2019.

A DIVERSE GATHERING

Participants in the workshop had about 90 different job titles ...

Advisory Board Member / Area Fire Advisor / Assistant Director / Assistant Director, Fire / Assistant Fire Management Officer / Associate Director of Global Diversity Equity & Inclusion / Associate Professor / Board Chair / Board Member / Board President / Chief Diversity & Inclusion Officer / Chief Operations Officer / Collaborative Coordinator / Collaborative Forestry Program Manager / Communications Coordinator / Communications Manager / Community “Sparkplug” / Community and Landscapes Project Coordinator / Community Engagement Consultant / Community Outreach Director / Conservation Coordinator / Conservation Director / Consultant / Cooperative Fire Specialist / County Forester / Deputy Director of Eco-Cultural Revitalization / Deputy Regional Forester / Director of Fire Management / Director of Forest Conservation / Director of Forest Restoration and Fire / Director of Policy and Partnerships / Director of Stewardship / District Manager / District Ranger / Executive Director / External Affairs Director / Fire Adapted Communities Coordinator / Fire and Fuels Coordinator / Fire and Fuels Program Director / Fire Brigade Chief / Fire Chief / Fire Ecologist / Fire Management Officer / Fire Management Specialist / Fire Manager / Fire Mitigation & Education Specialist / Fire Mitigation Specialist / Fire, Fuels and Forestry Program Director / Fire, Landscapes and Communities Coordinator / Firewise Coordinator / Foothills Restoration Specialist / Forest Division Chief / Forest Ecologist / Forest Program Coordinator / Forest Program Director / Forester / Fuels Coordinator / Fuels Planner / GIS Specialist / Good Neighbor Authority Statewide Coordinator / Land Owner Assistance Forester / Landowner Assistance District Manager / Liaison / Mitigation Planning Program Manager / Module Lead / Network Coordinator / President (NGO) / Program Associate / Program Coordinator / Program Manager / Project Coordinator / Project Manager / Public Information Officer / Recovery Coordinator / Regional Manager and Policy Assistant / Research Associate / Restoration Director / Restoration Partnership Coordinator / Right-of-Way Maintenance Lead / Risk Analysis Branch Chief / Senior Policy Advisor / Service Hydrologist / State Hazard Mitigation Officer / Stewardship Crew Lead / Training Specialist / Volunteer Firefighter / Water Resources Manager / Wildfire Analyst / Wildfire Mitigation Coordinator / Wildfire Risk Reduction Coordinator / Wildlife Biologist / WUI Coordinator / WUI Specialist

... and came from about 65 organizations:

Arizona Department of Forestry and Fire Management / Ashland Fire & Rescue / Bureau of Land Management / Cascadia Conservation District / Chama Peak Land Alliance / Chelan County Fire District 1 / Chestatee-Chattahoochee RC&D Council / Chumstick Wildfire Stewardship Coalition / City of Boise / City of Santa Fe Fire Department / Coalitions & Collaboratives, Inc. / Colorado Forest Restoration Institute / Community Fire / Cook and Lake County / Cultural Fire Management Council / Deschutes County / Dovetail Partners, Inc. / Eagle County / FEMA Region 10 / Fire Adapted Colorado / FirePoppy Consulting / FireWise of Southwest Colorado / Flowery Trail Community Association / Forest Stewards Guild / Four Mound Firewise / Gravitas Peak Wildland Fire Module / Hidden Valley-Swauk Fire Adapted Community / INFOCA (Andalucia) / Island Park Sustainable Fire Community / Jackson County Fire District 3 / Karuk Tribe / Kittitas County Conservation District / Lake Wenatchee Fire & Rescue / Lake Wenatchee Fire Adapted Community / Latino Community Fund of Washington / Lincoln County Conservation District / Mid Klamath Watershed Council / Mottek Consulting / Mt. Adams Resource Stewards / National Park Service / National Weather Service / New Jersey Fire Safety Council / Okanogan Conservation District / Pheasants Forever / Project Wildfire / Prometheus Fire Consulting / Quiet Warrior Racing & Consulting / Salmon River Restoration Council / San Juan Islands Conservation District / Seattle City Light / Sinarmas Forestry / Sustainable Northwest / Tahoe Fire and Fuels Team / Tapash Sustainable Forest Collaborative / Terra Fuego Resource Foundation / The Nature Conservancy / U.S. Fish & Wildlife Service / University of California Cooperative Extension / University of Colorado / USDA Forest Service / Utah Division of Forestry, Fire and State Lands / Virginia Department of Forestry / Washington Department of Natural Resources / Washington Emergency Management Division / Washington RC&D Council / Washington State Conservation Commission / Watershed Research and Training Center / Wildland Restoration International



Left: Preparing for a role-playing exercise on the shore of Lake Chelan © TNC (Liz Rank)
Above: FAC Net working session © WRTC

MORE ONLINE

FAC Net blog post

<https://fireadaptednetwork.org/its-the-relationships/>

FireScape Mendocino blog post

<http://mendocinofirescape.blogspot.com/2018/06/building-capacity-for-prescribed-fire.html>

Media—Governor’s Roundtable

http://www.ifiberone.com/columbia-basin/inslee-greets-wenatchee-wildfire-networking-conference/article_050744c4-5f7e-11e8-98a2-5fa8f5eb7e6a.html

Okanogan County Long Term Recovery Group

<http://www.okanogancountyrecovery.com/>



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v. 9 Aug 2018

Fire Learning Network

A cooperative program of the Forest Service, Department of the Interior agencies and The Nature Conservancy, the FLN has a 16-year track record of helping to restore our nation's forests and grasslands and to make communities safer from fire.



The FLN supports public-private landscape partnerships that engage in strategic planning, implementation and monitoring. This builds the trust and relationships critical to durable, sustainable collaborations that facilitate work across boundaries and leverage a diversity of investments. The FLN also provides a means for sharing the tools and innovations that increase capacity and enable strategies to get to scale.

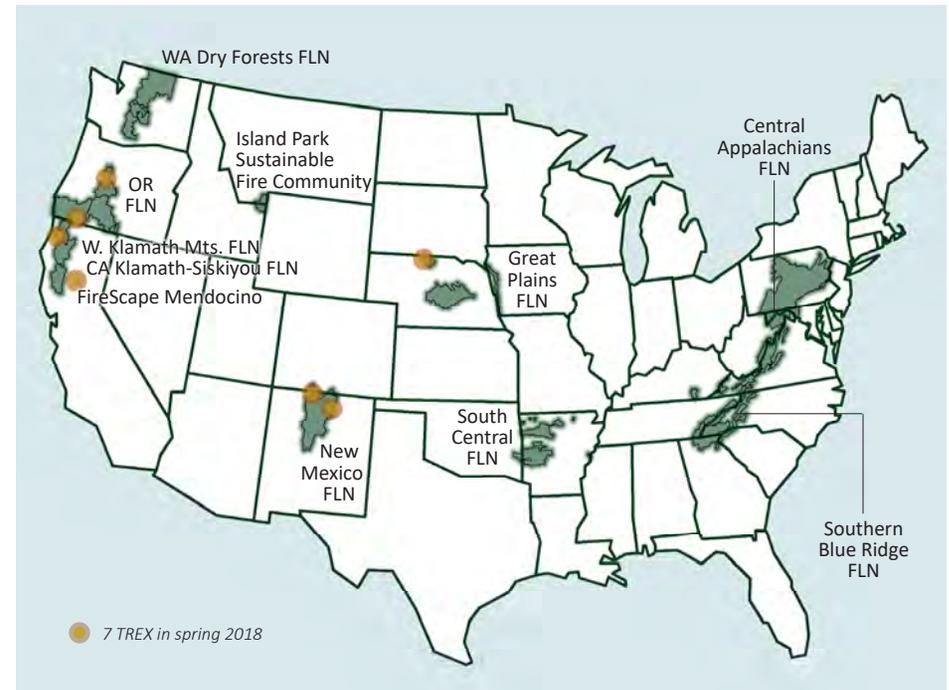
Network News

After 14 years—leading first the FLN, and then implementation of the entire PERFECT cooperative agreement—Lynn Decker retired in April. Over the course of her tenure, she guided the FLN to maturity, and mentored an extended team through the development of innovative strategies that sprang from that foundation, including Prescribed Fire Training Exchanges (TREX), the Fire Adapted Communities Learning Network (FAC Net) and the Indigenous Peoples Burning Network (IPBN). In her announcement to FLN leaders, Lynn spoke from the heart: “I have loved enabling your work, the work of your partners and working with you—great people all! You have inspired me and so many others on many flaming fronts.”

Building Bridges to Facilitate Shared Learning and Action

As a mature network, the FLN is focusing on strengthening its leadership and partnerships, with an emphasis on growing and diversifying local and regional coordinating capacity. This includes partnering within the FLN, between the FLN and other networks under the PERFECT cooperative agreement—the Fire Adapted Communities Learning Network (FAC Net), Prescribed Fire Training Exchange (TREX) Coaches Network and the Indigenous Peoples Burning Network (IPBN)—and with other initiatives and organizations working in the same geographic area or field.

This spring, FLN leaders in Oregon and Washington—who fill leadership roles in their state prescribed fire councils—facilitated a joint workshop of the councils. One of the workshop goals was to strengthen the participation of private landowners, several of whom shared their unique stories and offered strategies to improve outcomes for private burners; a useful framework was also provided by the Chiloquin Community Forest and Fire Project. As a result, both councils have established a new priority for supporting private lands burning. The workshop also cemented connections between



This spring, ten regional networks and large landscapes were supported by PERFECT funding, advancing a shared vision of integrated and adaptive fire management through 30 landscape collaboratives across the country.

regional councils across state lines in northeastern Oregon and southeastern Washington, highlighted the cross-

In late February, prescribed fire practitioners toured the Mt. Adams Community Forest near Glenwood, Washington during a joint workshop of the Oregon and Washington prescribed fire councils.

© WA RC&D (Kara Karboski)





A 2014 Klamath TREX participant was inspired by the experience to pursue a career in fire, going on to work on Forest Service crews in subsequent years. She is now an emerging fire leader in her community: having received her master's degree from University of Oregon, she is currently working for the Karuk Tribe facilitating internships with universities and other educational institutions. © Jenny Staats

border prescribed fire partnerships already producing outcomes on the ground, and fostered an agreement with the U.S. Fish & Wildlife Service that establishes a joint funding mechanism to support council operations.

In May, the Burned Area Learning Network (BALN) held a post-fire restoration field tour of Santa Clara Canyon followed by a workshop with the East Jemez Landscape Futures project. More than 30 partners took part in the two-day event, which reinforced connections within the New Mexico water and forest conservation communities. It also brought together key research scientists working on post-fire reforestation challenges—for example, researchers from New Mexico State University and the University of New Mexico who connected on the field tour went on to develop a joint research proposal, while Bandelier National Monument staff got assistance

developing tangible objectives for their East Jemez project.

BALN connections to the Washington State Fire Adapted Communities Learning Network—made through the national network—also paid dividends: after a recent large wildfire on private lands, the BALN was able to tap their Washington colleagues' experience with community recovery from severe wildfires to provide advice to New Mexico State Forestry on assembling a post-fire response team.

In the Southeast, the South Central FLN continued its multi-state work with the Shortleaf Pine Initiative, hosting a regional workshop in northwest Alabama in January. More than 20 partners from Alabama, Arkansas and Tennessee convened to help initiate a 22,000-acre shortleaf pine restoration and demonstration area in a two-state landscape involving multiple partners who have rarely worked together—precisely the kind of work the FLN excels in. Project partners toured the restoration area, discussed current conditions, and began the development of desired future conditions for different sites. Partners also discussed current challenges, restoration prescriptions, and, perhaps most important, opportunities to accelerate the partnership.



The FLN led spring burning near Hayfork, California, building capacity and partnerships.

© WRTC (David Jaramillo)

Developing Capacity to Make a Difference on the Ground

The FLN also focuses on building a sustainable interjurisdictional workforce. Again, partnerships in the national network and coordination with others locally are essential to these efforts.

The Humboldt County Prescribed Burn Association was officially formed in northern California this spring. This PBA—the first in the state—was the direct result of learning exchanges over the past year with FLN and TREX partners in the Great Plains, along with small, targeted investments by the California Klamath-Siskiyou FLN in live-fire trainings. In a place where private-land burning is not the rule, these investments inspired landowners: in the last year, partners in what became the PBA completed seven burns totaling more than 200 acres. Staffed with volunteer fire departments, landowners and other

community members, these burns have shifted the conversation in the county, among landowners and agency personnel alike, from “if we might burn” to “where will we burn during the next good window?”—knowing that if it can be done in Nebraska, it can be done in California.

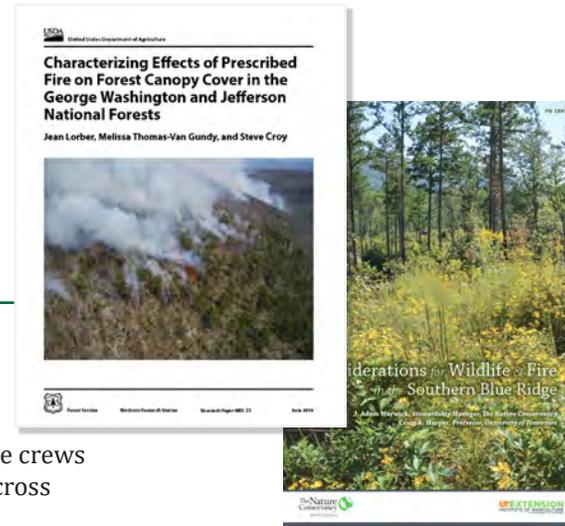
FLN members help each other—local neighbors and national network colleagues—with burning, which boosts both landscape capacity and individual experience. This can take a number of forms.

In Idaho, the Island Park Sustainable Fire Community (IPSF) followed up on relationships built with the U.S. Fish & Wildlife Service on the Flat Ranch burn in 2016, and assisted the FWS on their first private-land prescribed burn in the state. While that burn wasn't in the IPSFC project area, it supported this FLN's goal of furthering the safe

Two publications released this spring bring the work of FLN partners to the wider practitioner community.

Effects of prescribed fire on canopy cover: <https://www.nrs.fs.fed.us/pubs/56438>

Considerations for wildlife and fire: <http://www.appalachianfire.org/research-publications-1/2018/6/26/considerations-for-wildlife-fire-in-the-southern-blue-ridge>



use of controlled fire to restore habitat across a larger landscape—and building the partnerships needed for success.

A federal partner from IPSFC took part in the Central Oregon TREX this spring, working on his fireline skills while helping Oregon get priority burning done. His participation—along with peer assists at TREX events from partners in the Southern Blue Ridge and South Central FLNs—was also part of the glue that makes the networks strong. While TREX coaches take part in numerous events and maintain consistent delivery and performance, participation from FLN landscapes like this provides additional connections between the various TREX and FLNs, which improves both the exchange of knowledge and the interconnections between people and places.

Without the relationships built through the FLN, it is unlikely that the Georgia, North Carolina, South Carolina and Tennessee chapters of The Nature Conservancy would have engaged the seasonal and on-call burn crews that assisted with about 20,000 acres of burning accomplished by Southern Blue Ridge FLN partners this year. This model is based on a pilot developed by the Central Appalachians FLN under SPER; the four Conservancy chapters worked together to secure funding

(from the USDA Forest Service Region 8 and Joint Chiefs' funding, with match from the Conservancy), and to deploy the crews to accomplish priority burns across the region.

Using Science and Cultural Knowledge for Adaptive Management

From the very beginning, FLN partners have worked together to set goals, plan actions, observe effects, and adjust their work as needed.

The Heart of the Appalachians landscape in Virginia went back to its FLN roots this spring, and began a formal revision of its strategic plan with a day-long workshop that brought together 33 people from six agencies. They started with a look back at 13 years of accomplishments, and small groups then brainstormed action items in three categories from the original plan. A steering committee is now overseeing the revision that will guide work in this landscape over the next several years.

In northern California, a small team from the adjacent California Klamath-Siskiyou and Western Klamath Mountains FLNs spent a full day strategizing how to advance spatial fire planning in the Klamath and Siskiyou mountains of northern California and southern Oregon. They discussed

the social, political, economic and ecological components that need to be included, and came up with a detailed plan of action to achieve results, which included forming a multi-disciplinary steering committee with members from numerous organizations in both states.

In North Carolina, the Conservancy and the Southern Blue Ridge FLN captured years of on-the-ground experience and research in the report "Considerations for Wildlife & Fire in the Southern Blue Ridge." It includes fact sheets about 13 species and taxonomic groups that include brief life histories, habitat needs, monitoring methods, and fire effects and conservation challenges.

In the Central Appalachians FLN, multi-partner vegetation monitoring has been conducted for 10 years by members of the Heart of the Appalachians landscape's Monitoring Working Group. This group's data was used as the basis for the report

"Characterizing Effects of Prescribed Fire on Forest Canopy Cover in the George Washington and Jefferson National Forests." Published by the Northern Research Station, the report is based on analysis of more than 100 burn events over 20 years.

Broadening and Deepening Community Engagement

Gone are the days when public outreach meant just a press release or a brochure. FLNs across the country are using new channels and working with new partners to reach and engage people in more compelling ways.

Fire Learning Trails are springing up across the southern and central Appalachians region thanks to the FLN, Consortium of Appalachian Fire Managers and Scientists, Forest Service and The Nature Conservancy. These trails, which have a combination of interpretive signs and podcasts that discuss various aspects of wildland fire in the mountains, are now in place in several states, and on lands spanning multiple agencies. This spring, a set of three podcasts was added to the signs on the Fire Learning Trail on the Daniel Boone National Forest, and partners from the Chattahoochee National Forest are interested in adapting these products to their landscape.



The #goodfire hashtag, which originated with the first Southern Blue Ridge FLN Fire Learning Trail in 2017, is being picked up nationally. About 70,000 people see it each week.

A Fire Learning Trail runs through Table Rock State Park in South Carolina. Located in the Southern Blue Ridge Escarpment landscape of the Southern Blue Ridge FLN, the park hosted the regional network's annual workshop in May, so participants were able to experience part of the learning trail during the field tour. Links to all the podcasts are at <http://www.appalachianfire.org/thefirelearningtrail/>.

Photo: USFS (Steve Bekkerus)

An asset-based community development effort was undertaken in two communities in the FireScope Mendocino landscape, led by community engagement consultant Jana Carp. As part of this, a Round Valley screening of Paul Hessburg's "Era of Megafires," followed by a discussion, drew about 30 people. The Forest Service battalion chief scheduled to co-facilitate was on a fire, but a CAL FIRE crew member in the audience stepped up to answer questions about defensible space—and got three immediate takers in response to an offer to do home inspections. Most of the audience stayed for an hour, and some even longer, talking about how to proceed, given the community's assets.

The Oregon FLN once again delivered two TREX this spring, in Ashland and Central Oregon. Both TREX continue to provide vehicles not only for training and accomplishing prescribed fire, but

for public outreach and engagement on issues related to its increasing use in fire-adapted forests surrounding communities. This outreach is multi-faceted and involves an ever-widening array of local, state and regional partners, including members of FAC Net. New this year is a growing partnership between people working in public health, air quality and fire management who are communicating strategies that residents can use to mitigate smoke impacts.

Collectively, Oregon partners have used a wide range of media to reach people—including street and lamppost banners; public service announcement videos; newspapers, Facebook and blog posts; and perhaps most important, the Central Oregon Fire Info website, with resources on when and where fire is occurring, smoke and air quality impacts, and easy-to-follow public health protection measures. Looking ahead, professional photo and video shot during the spring TREX yielded video footage, still images and interviews with fire professionals for use in future outreach and social media campaigns.

"There is so much action across the country to get fire back onto the landscape. This collective action helps to support all of our local work."

Capitalizing on Success for Greater Collective Impact

FLN efforts—especially when aligned with those of other networks and partnerships—have effects that reach well beyond their landscape borders. This year, the clearest examples are in California and Washington, where more than a decade of investments by the FLN—and, more recently, TREX and FAC Net—are bearing remarkable fruit.

The work of the California Klamath-Siskiyou and Western Klamath Mountains FLNs—and their leadership and support of the Northern California Prescribed Fire Council, numerous TREX, and other regional innovation and demonstration efforts—facilitated and enabled the work behind executive order B-52-18 issued by Governor Jerry Brown in May. Intended to protect communities from wildfire and climate impacts, this order demonstrates the state's strong pivot toward embracing prescribed fire as an essential tool for land management and climate mitigation.

In Washington, the Department of Natural Resources released a 20-year forest health strategic plan that sets forth a collaboratively developed all-

lands vision and approach for eastern Washington forests. Numerous FLN and FAC Net partners are among those acknowledged for their contributions, and according to the Washington Dry Forests FLN lead, "if you read through this plan you will recognize many of the strategies and approaches presented at our annual meetings over the years." The strategic plan is supported by legislative actions, including SB 5546 (addressing wildfire risk by creating a forest health treatment assessment) and HB 1711 (prioritizing lands to receive forest health treatments). This action follows earlier breakthrough legislation in the state, the 2928 Forest Resiliency Burning Pilot, also supported by FLN and other partners who have helped implement it. When members of all PERFECT networks met for their national workshop in Wenatchee this spring, they saw some of this collective work firsthand—and the inspiration is likely to ripple throughout the networks and across the country.

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 Marek Smith at marek_smith@tnc.org or (704) 681-1165.

PERFACT is an equal opportunity provider.

Prescribed Fire Training Exchanges and Cooperative Burning

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



The winter/spring 2018 burn season saw partners deliver a series of cooperative burning and training events, including seven Trex supported by the Fire Learning Network—the Yurok Trex and Butte Trex in California, Niobrara Trex in Nebraska, Taos Trex and Chama Trex in New Mexico and the Central Oregon Trex and Ashland Trex in Oregon. Several events based on previous Trex were also delivered without direct FLN support, including a cooperative burn week in Iowa offered by the Loess Hills Fire Partners, a fire tour of the Great Plains (Pheasants Forever) and training exchanges in South Dakota (U.S. Fish & Wildlife Service). Members of the Trex Coaches Network led, organized, mentored or otherwise took part in all of these events.

These successful efforts prove that a solution to the wicked problem of

inadequate capacity for prescribed fire treatments on public and private lands is to use various models of cooperative burning to facilitate an all-lands, all-hands approach. The burns range from formal agency assists to less formal neighbor-helping-neighbor expectations—but in all cases, sharing resources and having teams in place to prioritize the prescribed fire work



At the Ashland Trex, 50 percent of the incident management team and 37 percent of participants were women. Overall, 24 percent of Trex participants this spring were women.

Sustainable & Resilient

About 20 Prescribed Fire Training Exchanges held across the country each year are proving that we can work together as a community, we can work together as different agencies with different standards, and we can accomplish more planned burns together than separately. Trex hosts, coordinating staff and participants are all learning that to build sustainable and resilient burn capacity you have to spend time and energy administering agreements, planning a year ahead, developing a variety of burn units with various weather parameters, coordinating multiple funding sources, and assembling a diverse burn team that can burn on various jurisdictions.

Spring 2018 Trex



Photo: BLM (Lisa McNee)

		people	acres
Yurok Trex	CA	32	30
Niobrara Trex	NE	53	1,347
Taos Trex	NM	15	1
Chama Trex	NM/CO	19	0
Central Oregon Trex	OR	39	1,669
Ashland Trex	OR	50	328
Butte Trex	CA	19	55
TOTAL:		227	3,430

Interpreting the numbers: Each event is planned with the intent to accomplish the right fire at the right time under the right conditions. But planners and coordinators all discuss and develop alternative training activities for when the weather or other factors don't cooperate. The wide range in number of acres burned at this season's events resulted from both excellent and extremely poor burn windows, but also because some important burns are small while others are large. In New Mexico, the warm, dry winter prevented burning, but the teams conducted a full suite of alternative training and outreach. In Oregon, conditions were conducive to burning at both Trex; the fewer acres burned in Ashland were just as critical as the larger acre totals in Central Oregon. The Ashland team is focused on the watershed above the city, so they burn numerous small units to build a matrix or mosaic of different burn footprints. This helps manage smoke, and also creates important diversity in the vegetation that breaks up fuel continuity. Nebraska was a mixed bag—they were limited by weather, but also had some excellent days and prepared teams, so when the burn windows opened they took full advantage. The Yurok and Butte acre totals, though small, covered important acres in priority locations to accomplish the teams' goals, which for the Yurok was generating basket making material and for the Butte was community protection and demonstration burns.

will help ensure the burns are in fact completed and the benefits from the use of fire are realized. A typical Trex is a two-week prescribed fire assignment, conducted under the Incident Management System, with a strong emphasis on integrated fire management and skills beyond the fireline. But the Trex model

has the ability to flex or morph to fit the opportunities at hand, and is especially suited to cross-boundary burning using inter-organization burn teams. The flexible nature of Trex model is demonstrated in the various project goals that defined the individual events this spring—the Yurok Trex focused on a tribal and

community opportunity to provide plant materials for important cultural practices; the Niobrara TREX provided planned fire for the pyric-herbivory focused management for bison herds on a Conservancy preserve; the Taos TREX, hosted by the BLM through the Collaborative Forest Restoration Program in New Mexico, helped build a workforce to be used across the state; and the Ashland TREX supported collaborative city, federal and non-profit organization efforts that focus treatment on a municipal watershed to protect the city's water supply.

Once a landscape hosts a TREX, and successfully co-plans and co-implements priority burns with their partners, they want to repeat the effort, usually immediately. At the moment, this is particularly striking along the New Mexico-Colorado border, where there is a cadre of seven TREX coaches who are working together to help one another lead TREX events—three to five a year—in the Rio Grande watershed and other priority places. Over time, each TREX

develops its own core team of locals, aided by experienced staff from other areas who return every year. The consistency in leadership at each TREX is helping make each burn safer, each training and evaluation more effective, and accomplishment of burn treatments across ownerships more efficient.

An important effort this spring season was the continued focus on diversity, equity and inclusion. Highlighting the place-based nature of fire, cadre are focused on ensuring that Incident Management Teams and modules that make up a TREX organization represent the landscapes and people where the events are hosted. TREX is ahead of the field in attracting and recruiting women as participants and leaders. Beginning last fall, a two-hour harassment awareness training has been incorporated into TREX events, and we're now building a more robust approach and expanding to include formal training from subject matter experts in diversity, equity and inclusion.

Training, Treatments & Outreach

Prescribed Fire Training Exchanges & cooperative training burns provide:

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

TREX events are organized as prescribed fire assignments, managed using the Incident Command System (ICS) and hosted by a combination of federal, state and non-governmental organizations. A typical two-week agenda begins with classroom presentations and field trips where participants learn about local ecology, conservation challenges and opportunities, and tour sites of wildland fires in the area to explore and discuss their impacts. Participants are then divided into modules, and begin training with their assigned equipment and scouting burn units. Over the course of the TREX, the modules work as part of a burn team completing a series of prescribed burns on a variety of ownerships. Through this process, participants learn how to effectively work on interdisciplinary teams, and experience how legal and administrative frameworks for cooperative burning can enable regions to increase the pace and scale of prescribed fire. They also gain experience working for—and leading—firefighters, managers and practitioners from other states, regions and countries, and with a variety of skills, life experiences and backgrounds.



The Central Oregon TREX team facilitated media engagement, and also captured professional quality photos and video footage of prescribed fire planning and implementation for use in public service announcements and social media outreach. *Photo: BLM (Lisa McNee)*



Kept from burning by hot, dry, windy conditions, the Chama TREX crew turned to other work, including a day helping local managers work with community members and complete home safety assessments.

© Chama Peak Land Alliance (Caitlin Barbour)

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 Jeremy Bailey at jeremy_bailey@tnc.org or (801) 599-1394.

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MORE ONLINE

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

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

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.

The Fire Adapted Communities Learning Network (FAC Net) is changing the way we live with wildfire in the U.S. We believe that supporting communities in fire-prone areas in various ways will help build sustainable, long-term, locally driven efforts that will increase wildfire resilience. Lives and livelihoods are at stake, and so everything we do has a sense of urgency. Network member efforts represent holistic approaches that have grown to typically include expanding on-the-ground mitigation work, building constituencies to address the health of the landscapes we live in, planning for wildfire response and recovery, and much more.

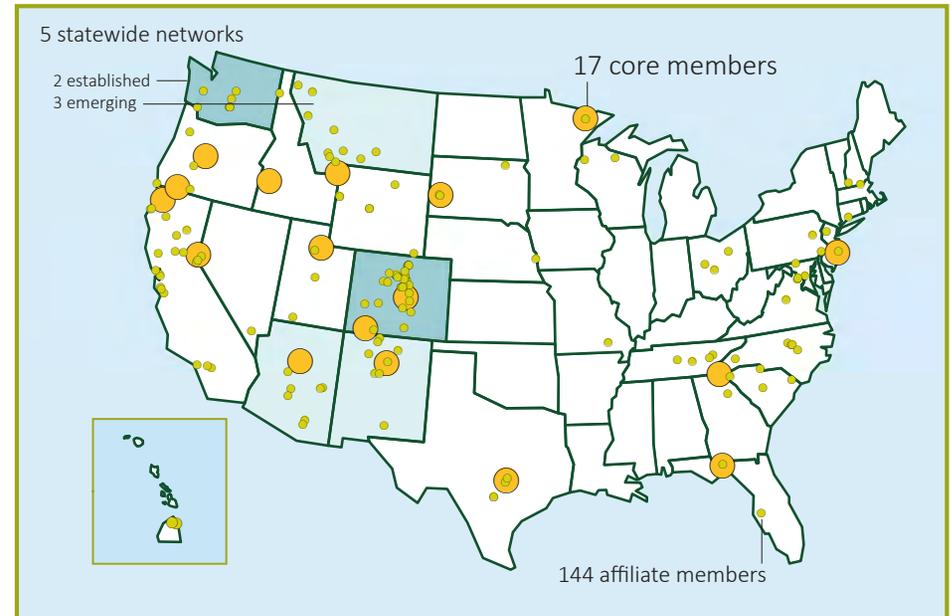
Growing a Network Like No Other

FAC Net connects practitioners to transfer ideas and build relationships for peer support. We provide funding for critical local efforts for which there are no established funding sources. We offer professional development opportunities and support the creation of new resources and tools. We engage in national conversations about changing the country's dominant fire paradigm, offering solutions born and tested in the places where our members work. We are regularly asked to share our perspectives through national news outlets, and we present at and help

design influential meetings such as this year's Cohesive Strategy workshop.

FAC Net touches the ground in 17 core member communities (where more than 1,300 partners are engaged in this work), and where our 144 affiliate members live and work, and in the dozens of communities that participate in the state networks we've helped our members launch. When we look at our map, each dot represents a unique relationship, not just an entry on a mailing list. Our network of people and places is a resource whose potential we have only begun to realize. At first, we were surprised when other national programs started asking us to help them identify potential program participants, grantees and subject matter experts—but then we realized that our effort is organized differently than most, emphasizing the value that comes from the grassroots and a focus on “know-who” as well as know-how.

Together, our network is more than the sum of its parts. Members work together and do more than they could have separately. And staff—and, increasingly, network members themselves—work to make sure the connections that make this possible are tended and grown. Then, through our blog, website and social media channels we amplify the voices in



our network, reaching thousands of people, and influence conversations about how to effect the kind of systems change our wildfire situation requires.

Now everybody is struggling with “What scale we should do this at?”, when five years ago it was just “What should we do?”

Network Relationships Make a Difference

Leading local community wildfire resilience efforts is tough. It takes knowledge, patience, careful communication, faith and persistence. There are the long days and weekend work, plus the stress that comes with knowing what you do—or don't do—can affect lives and livelihoods, and that the work will really never end. Pats on the back may be few and far between, and encounters with vocal

opponents can be common. The work is largely behind the scenes—some members describe their role as “glue” or “connectors.” It can be difficult to keep a positive outlook, and burnout is a real possibility. On the flip side, the work is meaningful and never boring, and the relationships one builds are deeply gratifying. The network serves as a supportive environment for the people doing this work, and a reminder of what is possible if you keep trying. It helps keep the balance between hard work and gratification healthy for the people doing the work.

FAC Net also makes it easier for members to try new things to better serve their communities. New things entail risk—but failures are accepted in our community, as a necessary step in learning. Members share their time—as sounding boards and mentors and peer experts. And since it’s a given that no one has extra time, our members excel at honing approaches and resources that can be shared and then tweaked by others for use in their own local context.

Members also raise the bar for each other. Lately, we’ve noticed more members drawing inspiration from the network to expand their visions of what is possible and address new issues. Numerous members have



How to Fit a NIOSH N95 Adult Mask

FAC Net practitioners are expanding the range of issues they work on in their communities. For example, several members are expanding their smoke outreach programs with an eye toward helping residents avoid or mitigate health impacts. Members in Arizona, New Mexico and Oregon launched or upgraded their smoke-related websites this spring. Oregon’s SmokeWise website includes content from healthcare providers—a pulmonary critical care specialist from a local hospital was recruited to make a video about the Air Quality Index and what to do when smoke levels get hazardous. In another video, Alison Lerch of Ashland Fire and Rescue demonstrates the proper way to don a NIOSH N95 mask for protection from the particulate matter in wildland fire smoke.

Screen captures: <https://www.ashland.or.us/smoke>
<http://www.centraleregonfire.org/wildfire-smoke-your-health/smoke-air-quality/>
<https://vimeo.com/257185210>

local efforts to help residents mitigate smoke impacts, and through the network are learning (and borrowing) from each other, making each effort more robust. A member from Tahoe said that a learning exchange with the Karuk Tribe “revealed the need for us to dissolve our concepts of social and ecological systems as being competing objectives, and to consider instead how prescribed fire can support sustainability and resilience for both



The FireWise of Southwest Colorado Neighborhood Ambassador program has 126 FAC Ambassadors from 11 communities who lead mitigation projects, write Community Wildfire Protection Plans, organize meetings and recruit new partners, together contributing upwards of 20,000 volunteer hours per year to their communities. The program is a model that others in the network are adapting for use in their own communities; most recently, the City of Santa Fe launched its ambassador program in May. © FireWise of Southwest Colorado

communities and landscapes.” With inspiration and guidance from our member in New Jersey, our member in northern Minnesota is planning a wildfire response drill that will include an evacuation exercise for residents of a small community.

Adapting to National and Local Changes

Members are telling us that federal and state funding for local wildfire capacity building is drying up, and FAC Net support is more important than ever. Steady investments from the network have allowed local FAC coordinating groups to take root and flourish. While they hold broad knowledge and diverse talents, showing up day after day after day—picking up the phone to answer a resident’s questions, organizing meetings and outreach events, hosting

field trips, writing grant proposals, spearheading efforts to update CWPPs—is what our members do. This is the less-than-glamorous work that is necessary to bring about change, and it’s difficult to fundraise for such work. But it is the foundation.

April 2018 marked the network’s fifth year of operations. Nearly every network member has told us that their capacity, connections and influence



An asset-based community development (ABCD) approach can help a community identify the resources it already has to address a challenge; this can lead to sustainable efforts that residents own and carry out largely with existing resources. Jana Carp (left, in the foreground) leads a discussion with FAC Net members and partners from New Mexico and Colorado during a community asset mapping workshop in Santa Fe. Working with the Fire Learning Network, she recently completed pilot projects in two northern California communities that are facing serious fire threats, and has been adapting ABCD to wildfire resiliency.

© Forest Stewards Guild (Matt Piccarello)



The Washington State Fire Adapted Communities Learning Network (WAFAC) has spent a good deal of effort cultivating relationships with policymakers as part of the network's response to several bad fire seasons. This work paid off in May, when they hosted Washington Governor Jay Inslee, Regional Forester Jim Peña, Senator Brad Hawkins, Representative Mike Steele, and representatives from the office of U.S. Senator Patty Murray, the Bureau of Land Management and Washington State Department of Natural Resources for a Governor's Roundtable. This gave WAFAC and key partners from the national network a chance to share many of their insights and lessons from years of intensive work in the field. After the roundtable, several of the participants spoke to members of the PERFACT networks at the national Fire Networks Workshop. Governor Inslee (above) shared some encouraging words about proactively addressing wildland fire issues, and the need for climate change mitigation. © WRTC

Input and feedback from other FAC Net members helped us identify new ways to accomplish our goals—and talking with them and helping solve their problems gave new insight on how to approach ours.

have grown considerably as a direct result of their involvement with us. While the wildfire picture nationally has not improved, our members remain hopeful and motivated to continue their work because they are seeing results and are deeply invested in their communities.

When asked how things have changed over the past five years, FAC Net members said they were amazed and gratified to be able to reflect on the positive developments. Local FAC coalitions are getting more done by addressing a wider range of issues, by employing new strategies like developing or formalizing FAC ambassador programs, and enlisting new partners such as health departments and state prescribed fire councils. They're seeing more movement at larger scales as well, perhaps most notably this spring in Washington, where the relationships that the Washington State Fire Adapted Communities Learning Network has carefully tended over the years positioned them to convene a roundtable with the Governor and other key policy-makers.



Austin includes ecosystem health and prescribed burning as community wildfire resilience strategies under the umbrella of their climate change resilience efforts. Austin's Office of Sustainability developed a Climate Resilience Action Plan that highlights wildfire as one of four significant risks to the city: "Greater risk of wildfire could create safety risks for emergency personnel and staff, interrupt utility service where there is a lack of redundant energy supplies, disrupt the transportation system, and challenge egress and ingress routes during major wildfire events." Studying ingress/egress for flood- and wildfire-prone neighborhoods and identifying safety zones for residents is one of the plan's Phase 1 actions. The Austin FD also partners with Austin's Green Building Program to incorporate wildfire resiliency into their rating system; more than 100 homes are now in voluntary compliance.

Screen capture from: <http://austintexas.gov/page/climate-change-resilience-and-adaptation>

Community Wellbeing and Landscape Health Are Deeply Connected

More and more wildland fire professionals and fire adapted communities practitioners are approaching their work with the understanding that there is no line separating work in communities from work in the surrounding landscapes. It's not just that these bodies of work are connected—each is necessary to make the other possible. From a community engagement perspective,

Work with FAC Net has helped us to develop a vision for our landscapes where community fire adaptation and forest restoration are complementary and additive, rather than just compatible.



A group of FAC practitioners from Tahoe learned to weave baskets at a workforce development learning exchange with the Western Klamath Restoration Partnership and the Karuk Tribe this spring; the basket materials they used came from a site they had visited during the week, where cultural burning had been done to improve the quality of the materials.

The Lake Tahoe region is a good example of a place that is thinking differently about the relationship between healthy forests and safe communities because of its engagement with FAC Net. This workshop was particularly important for Tahoe partners, as it helped catalyze a shift in their vision about the relationship between people and place.

© Karuk Tribe (Aja Conrad)

residents care about more than how their homes will fare during a wildfire. They also worry about how fires will impact the views they love, the places they like to play, their sources of water. That calls for more conversations about health of natural places, about ecology and fire management. It's also true that the work that residents do or don't do affects firefighting tactics, and in some cases, land managers' ability to use controlled burning for fuel reduction.

Land management decisions affect communities in numerous ways



New Jersey is facing serious forest health and wildfire issues, so efforts to improve community wildfire resiliency necessarily include discussions about forest management. During a prescribed fire learning exchange between Long Island, New York and the New Jersey Pinelands, foresters with the New Jersey Forest Service described restoration efforts in this Atlantic white-cedar swamp that was impacted by Hurricane Sandy.

© Forest Stewards Guild (Amanda Mahaffey)

beyond wildfire impacts, for example by providing jobs. Communities also have a stake because healthy landscapes draw tourists and recreationists who can support local business. And the arrow between communities and their landscapes goes both directions. For example, local workforce capacity and wood utilization infrastructure help make forest management viable.

Because of this, more FAC Net members are moving beyond a focus on mitigation and preparation in the WUI, and are adding forest health outreach to their plates. In New Jersey, “everybody is concerned about the fires. It doesn’t make any difference if you’re looking at a fuel load [for community safety] or if you are an ecosystem guy. If it burns, all the values suffer.” In northern Georgia, our members have long worked with the Southern Blue Ridge FLN to promote prescribed burning, and are now taking steps to launch a North Georgia

subchapter of the state prescribed fire council. And in Oregon, members partnered on the outreach efforts for the Central Oregon and Ashland TREX, both of which conducted prescribed burns in support of forest health near their communities.

Reducing Wildfire Risk

And finally, in the place where the rubber hits the road, FAC Net members are regularly and increasingly doing the on-the-ground work that is reducing the wildfire risk to their communities.

- In New Jersey, tabletop exercises and live drills helped structural and wildland firefighters understand their roles in a major incident, and helped the community focus on preparedness and prevention efforts; developing a fuelbreak around these areas has become the top prevention priority project. Residents also signed up for alerts, and several people who would need assistance in an evacuation were made known to first responders.
- In Oregon, the Deschutes County FireFree effort has grown to include nine events in a four-county area this spring, collecting more than 32,000 cubic yards of debris from residents implementing defensible space projects on their own property.

- The Rapid City Fire Department used its Veteran Wildfire Mitigation Crew on three projects totaling 200 acres. The 80-acre Springbrook Acres project is on track to have the last piles burned this coming winter, and will help protect more than 250 homes from catastrophic wildfire, while the forest health benefits will enhance recreational trails within the project area.
- FireWise of Southwest Colorado completed four large mitigation projects in Montezuma County.
- The Wasatch Front Fire Adapted Communities Coalition’s “Home Assessment Round Up” gave fire departments a chance to share home assessment tools and compare them in the field; as a result they are working toward using a standard home assessment statewide, rather using different tools with potentially conflicting information.
- Outreach efforts by the City of Santa Fe and Forest Stewards Guild resulted in a spike of activity on www.santafefired.net in April and May. They are now working through the requests for home site assessments, green waste pick-up and defensible space treatments that this generated.



In 2017, FireWise of Southwest Colorado started a defensible space cost-share program across five counties. This spring, the program was even more popular, due to a drought that started in the fall and two large fires—the 416 Fire and Burro Fire—that burned in June. After the 416 Fire, Durango TV interviewed homeowners and the Durango fire chief for a story about defensible space; mitigation work supported by FireWise was credited with helping prevent loss of homes in the fire.

Screen capture from: <https://www.youtube.com/watch?v=4fA2CRgnTJU>

Every encounter and interaction is an opportunity to learn, share and build a relationship.

<http://fireadaptednetwork.org/>
<https://www.facebook.com/FACNetwork>
<https://twitter.com/fireadaptednet>



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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Indigenous Peoples Burning Network

The goal of the IPBN is to achieve fire-related cultural restoration—knowledge and practices—in large landscapes to perpetuate traditions and quality of the environment.

Leaders in the IPBN are beginning to step beyond the Klamath region for tribal partnership opportunities.

Yurok-Hupa-Karuk Landscape

In the Yurok-Hupa-Karuk landscape, controlled burning was traditionally done along family lines. Families maintained specific areas for gathering acorns and other resources by burning in specific ways at specific times. Preparation for burning included training, the right conditions, and the proper mindset. Reaffirming family-led burning is a high priority in this landscape.

In this reporting period, the family-led burning program advanced to a new level. Local coordinators went to work in two of the three tribal territories. These coordinators arranged visits with community members to assess fire needs on private properties. Twenty



This traditional Yurok baby basket was woven from hazel sticks gathered after a recent controlled burn. © Margo Robbins



A Yurok community coordinator (left), who is also a TREX coach, worked with community members to prepare a family-led burn. © Margo Robbins

families expressed interest in bringing fire back to their land for hazard reduction and cultural purposes. Together with the coordinators, the Cultural Fire Management Council designed and delivered two community trainings for interested families. Twelve family-led burns were accomplished this spring, involving people in all three tribal territories. Abundant, high

quality hazel sticks were gathered in areas burned by families last year. Areas burned in the Yurok TREX and the Klamath TREX are also providing weaving materials. Some of the longest sticks are being woven in to traditional baby baskets.

NETWORK EXPANSION

IPBN participants continued conversations with members of several tribes, according to the network's expansion plan. Conservancy staff from various offices also contacted the IPBN. Currently the IPBN leadership team is evaluating possibilities among 12 tribes in California, Minnesota, Oregon and Washington.

Pueblo Tribes of New Mexico

This reporting period, the IPBN transitioned from working in a single landscape to a multi-site network. In March, two members of the IPBN leadership team made the trip from California to New Mexico to meet with tribal community members, the USDA Forest Service, a tree-ring researcher and the collections manager of the Pueblo Indian Cultural Center. Four outcomes resulted from the trip:

1. Plans were made for a youth exchange between the Yurok, Hupa and Karuk communities and Pueblo youth from the Flower Hill Institute.



From top:

Two members of the IPBN leadership team visited with the collections management specialist at the Pueblo Indian Cultural Center in Santa Fe.

The IPBN group was joined by a USFS restoration partnership coordinator on a visit to Santa Clara Canyon to observe the damaging effects of the Las Conchas Fire, and restoration work in progress. They were hosted by the vice-chair and natural resource staff members of the Santa Clara Pueblo.

The IPBN co-lead examined the work of a young basketweaver from the Jemez Pueblo, and offered encouragement. While basketweaving is a widely practiced cultural art in Northern California, it is nearly a lost art in the Jemez tribal community.

© TNC (Mary Huffman)

As a U.S. Forest Service research ecologist, working with the IPBN has enriched and greatly informed my understanding of the fuels and wildland fire values and interest of tribes for collaboratively developing applicable science for evaluating cultural resources, forest management and landscape restoration strategies.

Frank K. Lake
Pacific Southwest Fire and Fuels program

2. Pueblo fire practitioners will go to the Yurok TREX, with the intent of developing a culturally based TREX in New Mexico.
3. A priority shared by the Cibola National Forest and National Grassland and Pueblo communities—restoration of freshwater springs through forest thinning and fire—was discussed.
4. The restoration partnership coordinator for USFS Region 3 is interested in connecting IPBN projects with the Rio Grande Water Fund, a 50-partner, public and private restoration initiative that includes the homelands of 16 Pueblos and the Jicarilla Apache Tribe.



Cultural leaders from the Quinault Indian Nation provided a tour of the controlled burn area of Moses Prairie. © TNC (Mary Huffman)

prairies in need of burning, cultural practitioners indicated that they want to progress further with their cultural revitalization efforts before engaging with the IPBN.

Leech Lake Band of Ojibwe — Sand Plain Pines FLN

A new partnership project was funded in the homeland of the Leech Lake



TNC's Water Recovery Specialist and lead forester from the Leech Lake Band of Ojibwe look forward to success of the new Sand Plain Pines collaboration in north-central Minnesota. © TNC (Mary Huffman)

Band of Ojibwe, which led to the birth of the new Sand Plain Pines FLN. The Sand Plain Pines project will take place on 4,000 acres of a 40,000-acre area of red pine and spruce pine forests in the headwaters of the Mississippi River. Various silvicultural treatments informed by vegetation monitoring will begin returning plantation pine stands to their natural condition,

as described by the Minnesota Department of Natural Resources. The Leech Lake Band is particularly interested in enhancing habitat for snowshoe hares. Though not included at this stage, partners in the project anticipate that fire management will become part of future management prescriptions. The Resource Management Department of the Leech Lake Band, the Chippewa National Forest, timber companies, The Nature Conservancy and the Bureau of Indian Affairs are cooperating in the project. Staff members from the Conservancy's Minnesota Chapter have invited FLN and IPBN staff to provide coaching and facilitation assistance for a series of workshops and field trips associated with the project.

Quinault Indian Nation

In May, another member of the IPBN leadership team and the IPBN director took part in the Annual Symposium of the Intertribal Timber Council, which was hosted by the Quinault Indian Nation in Ocean Shores, Washington. In part, the purpose was to explore any interest by the Quinault community in participating in the IPBN. After the symposium, two cultural practitioners offered a tour of Moses Prairie, a culturally significant site that received controlled burning a few years ago. While there are five such wet

Publications, Presentations and Training

USFS researcher and tribal descendent Frank Lake continued projects that address the juxtaposition of traditional knowledge and Western science. He recently began advocating use of the phrase *traditional knowledge* instead of *traditional ecological knowledge* to affirm the integration of social, spiritual and ecological dimensions of traditional (cultural) fire management.

IPBN leadership team members Bill Tripp and Frank Lake held the session “Moving from Fire Adapted Communities to Fire Dependent Cultures: Traditional Fire Knowledge and Wildland Fire Management” at the National Cohesive Strategy workshop in Reno. Bill Tripp wrote the FAC Net blog post “Integrating Traditional Ecological Knowledge and World Renewal Ceremonies into Fire Adaptation: An Indigenous Stewardship Model” (<https://fireadaptednetwork.org/traditional-ecological-knowledge-world-renewal-ceremonies-fire-adaptation/>).

Frank Lake included the IPBN in the Northwest Forest Plan Science Synthesis, as part of a case study about the Western Klamath Restoration Partnership (https://www.fs.fed.us/pnw/pubs/pnw_gtr966_chapter11.pdf).



Participants produced artwork as they discussed building equitable fire partnerships.

Fire Networks Workshop Session: Building Equitable Fire Partnerships

For this year's annual workshop, IPBN leaders, staff from the Conservancy's Global Diversity, Equity and Inclusion team, and Jana Carp Consulting created the session "Working with Power in the Fire World." Its purpose was to enable indigenous and non-indigenous people to develop equitable partnerships with one another among the four PERFECT fire learning networks (FLN, FAC Net, IPBN and TREX Coaches Network).

For Native American people, the balance of power in fire partnerships is of great importance. During both wildfires and controlled burns, resources embedded in indigenous living culture are affected, as are historical artifacts. Items of living culture include native foods, habitat for regalia species, medicinal plants, ceremonial sites and places where families have ancient stewardship responsibilities.

Today, fires on most land across North America are regulated by federal, state and county governments. For tribal people, sovereign rights to use fire is an important issue. Some fire agencies have rules and practices that enable indigenous peoples to provide input for planning, implementing and evaluating fire management. California's state

fire agency, CAL FIRE, uses a Native American Advisory Council and a leader from the IPBN is participating. On federally managed fires, two avenues for inclusion are used: government-to-government consultation with tribes, and tribal liaison positions on incident management teams. Still, mainstream agencies hold most of the power in those relationships.

In this workshop we explored ways that building equitable partnerships raise the bar for sharing power, making decisions and shaping messages. It requires that everyone involved see fire through multiple ways of knowing. Here is a simple example from Karuk ancestral territory: For millennia, Karuk people burned proactively around their communities and from top to bottom on their mountainsides. Cool fires backed down from ridgetops toward the communities. Until a few years ago, a common firefighting practice was to pull fire away from the community, which in this landscape meant lighting from the bottom to the top. That enabled the fire to gain intensity as it burned upward, causing extensive tree mortality and erosion. In an equitable partnership, who decides which way to light? In this case, tribal liaisons serving on local wildfires and the USFS worked together to curb the practice.

"Working with Power in the Fire World"

In this workshop session participants answered the question: What does equity of power look like? Concepts offered included:

- Establish a shared way of acting; start with an attitude and a mindset.
- An effective leader sets the tone. Make community relationships the first objective in the fire incident plan.
- Create more equity when you are communicating.
- The community will tell you what it needs, so be ready to listen to understand.
- If you are the firefighting agency, make the request for input authentic. Work to overcome the painful past of not listening.
- Recognize that lots of different powers are at play in communities. Pay attention to who is speaking.
- Empower the next generation to model the power sharing we are seeking. (See the Women in Fire TREX, for an example.)
- Have the courage to speak up about tribal resources. It's not unreasonable to point out what is important; don't go along with the story.
- Indigenous elders need to remind others in the community to tell firefighters if they want firefighters to do something.
- Be life-affirming in communities.
- Dig past the data and share stories.



The Indigenous Peoples Burning Network is supported by *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. For more information, contact Mary Huffman (mhuffman@tnc.org). *An equal opportunity provider.*