

Final Report

Promoting Ecosystem Resiliency through Collaboration: Landscapes, Learning and Restoration January 2011 – December 2015

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North America Fire Team

PERC: A Holistic, Cohesive Approach to Fire

The proposal for the PERC cooperative agreement explicitly supported, and was framed around, the nascent Cohesive Strategy. In March 2011, the Wildland Fire Leadership Council was about midway through a three-year strategy development process. With the signing of the PERC agreement that month, we began implementing what would become the Cohesive Strategy's goals.

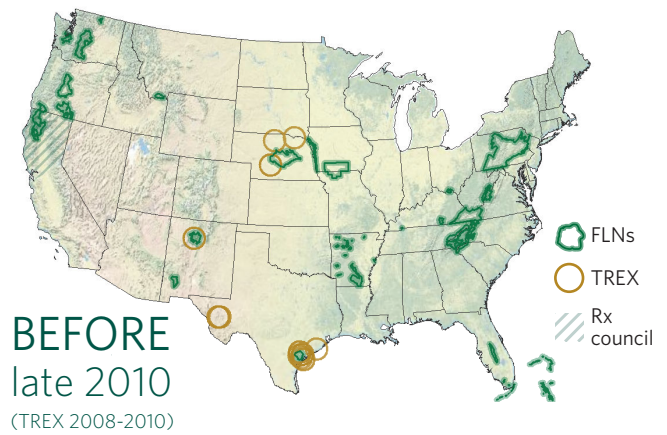
Those goals—resilient landscapes, fire adapted communities, and safe and effective wildfire response—aligned well with what we had learned from work under preceding cooperative agreements. That work had focused largely on resilient landscapes, although in a context of human communities and in close partnership with fire response agencies. It was clear to us that both deeper community engagement and broader partnerships for fire response and management were essential.

Although work under PERC built on and carried forward earlier work, there were some important shifts: We phased out public “education” in favor of community engagement and communication. We stopped offering advanced NWCG courses—those did not turn out to be critical bottlenecks—in favor of experiential training, retaining only those NWCG courses needed to support that. And we began concentrating on growing leverage strategies instead of building programs.

By the time PERC drew to a close and the next agreement (PERFACT) came into effect, a cohesive approach was well established across all efforts.

Adding Strategies to Multiply Effects

A cohesive, integrated approach to fire is exemplified in both the development of bodies of work under PERC, and in the examples of successes in the field: The Fire Adapted Communities Learning Network, launched in 2013, grew from our learning that networks were an effective tool for creating movements for change. Prescribed Fire Training Exchanges, which had begun in 2008, became the focus of our training and capacity building efforts under PERC; their integrated approach to experiential training and capacity building was



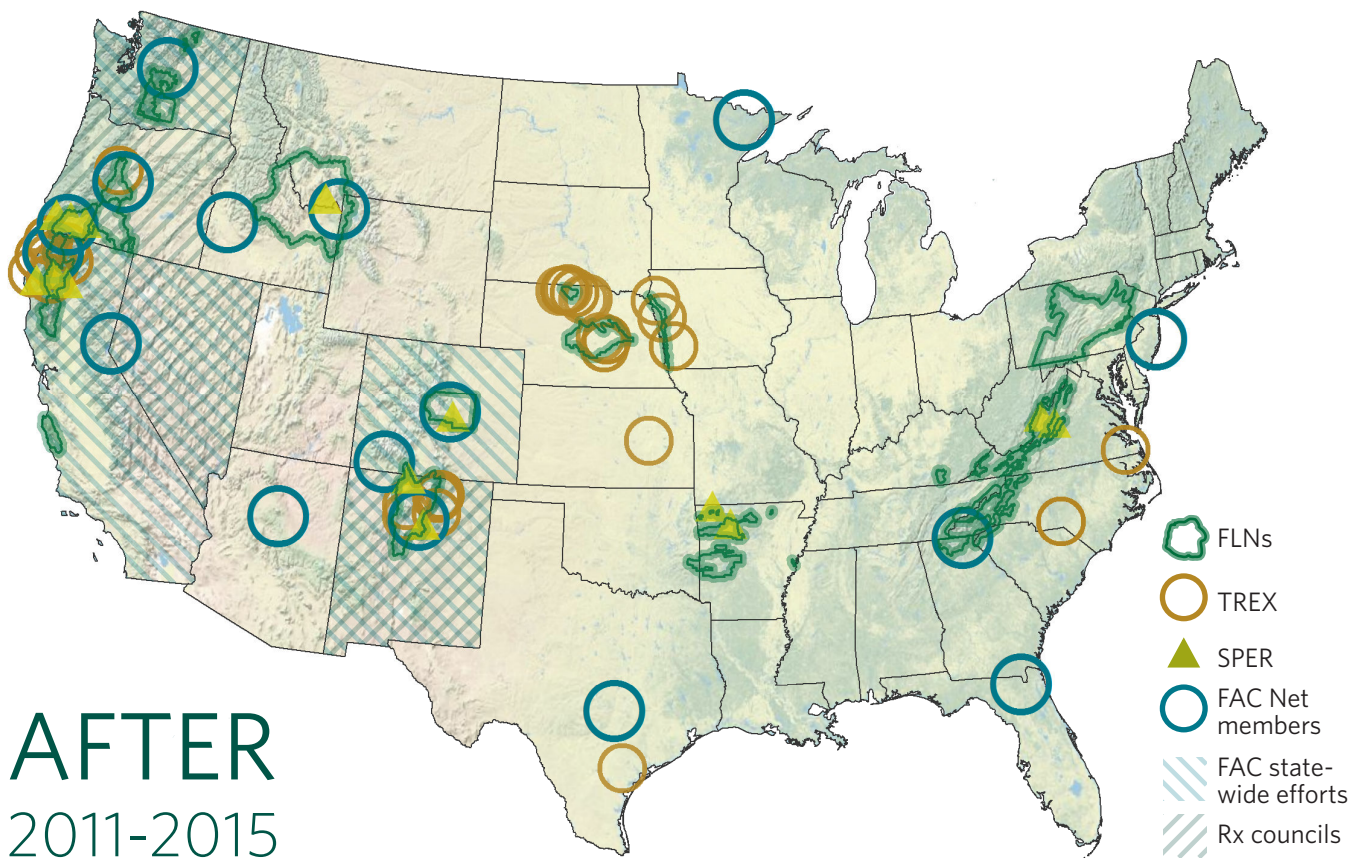
refined and solidified, and spread to sites from coast to coast. Scaling-up to Promote Ecosystem Resiliency funds supported targeted implementation to further cross-boundary landscape resilience, community safety and workforce capacity goals together in priority landscapes.

As the PERC agreement progressed, we learned that layering these multiple efforts allowed them to leverage each other and accelerate progress—in Washington, Oregon, northern California, New Mexico, the Southern Blue Ridge and Central Appalachians, long-established FLNs added some or all of the new strategies offerings to increase their effectiveness.

Building Foundations for Other Efforts

The solid, long-term partnerships developed by FLNs also helped nurture, incubate and otherwise support complementary collaborative and partnership efforts. These include a new generation of prescribed fire councils developing in the West, Collaborative Forest Landscape Restoration Program projects across the country, and species-based work, such as the Shortleaf Pine Initiative across much of the Southeast. The FAC Learning Network shows every indication of being on the way to providing the same core for efforts approaching wildfire from the community side of the equation.

And this agreement is a new prototype of how a cooperative agreement can work at all scales for change. The partners in PERC began to work differently—with agencies and partners truly co-designing, co-managing and co-creating at national, regional and local scales. This has been a game-changer for all of us, and the for places we work and the people we work with.



AFTER
2011-2015

Fire Learning Network: Grounded in Collaboration

The FLN continues to innovate—and to be the foundation for much other work under the agreement, from TREN and SPER, to the launch of the FAC Net, to the recent start of networks to address other needs uncovered by FLN work, including post-burn issues and cultural burning by indigenous peoples.

Collaborative planning has always been fundamental to the FLN. Over the course of PERC, this grew from a four-step conservation planning model to a facilitated holistic model based on the Open Standards but giving equal weight to the ecological and social aspects of the system, which is being applied with FireScope Mendocino and the Western Klamath Mountains Partnership. Increasingly across the FLN, partnerships that once consisted mainly of a range of fire professionals now engage both those professionals and stakeholders from communities. FLN landscapes have expanded as well—for example growing across state and

agency boundaries in the Appalachians and adding landscapes in the Southern Blue Ridge. A new FireScope effort that began with a Ranger District on the Los Padres National Forest has led to another FireScope effort that encompasses the whole Mendocino National Forest, as well as surrounding private lands. FLN partnerships also drive other growing efforts, such as the Shortleaf Pine Initiative that now spans states from Texas to New Jersey.

FLNs have also densified efforts under PERC. The spread of Prescribed Fire Training Exchanges (TREN) to more FLNs changed the game for both the FLN and TREN. Scaling-up to Promote Ecosystem Resiliency (SPER) projects filled critical gaps in some landscapes and gave rise to new ways of working in others—for example, relatively small SPER treatments in the municipal watershed of Ashland, Oregon bridged both geography (by linking treatments) and other projects (by providing continuity between two large complementary

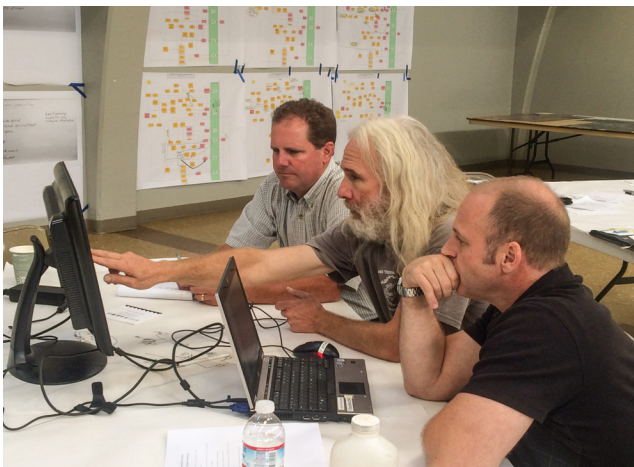
efforts). In the Appalachians, a small mobile fire crew that could work on priority partnership treatments across a large region was able to take advantage of narrow and unpredictable burn windows to get critical work accomplished.

The FLN also continues to model successful application of collaboration and work that spans boundaries and organizations. This has been applied to other programs, including the CFLRP and the Joint Chiefs' Landscape Restoration Partnership. And as the Cohesive Strategy was still being fleshed out and clarified, the FLN was demonstrating its tenets and exemplifying what it could be.

FLNs across the country have built the relationships they need to work effectively together. They have worked out model legal agreements and agency and organizational guidelines needed to support these. The next challenge for many FLNs may be increasing the efficiency of managing a complex net of funding streams for the high-quality implementation they and partners are engaged in, further increasing the scale of landscape and community resiliency to wildfire.



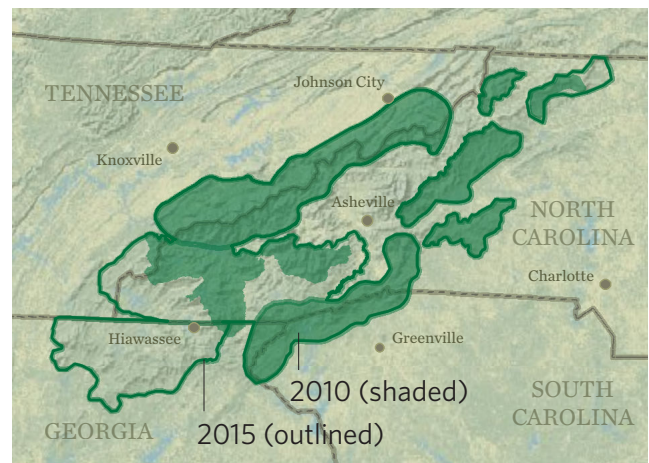
The FLN continues to be a frequently cited exemplar in academic work examining how transformational changes can be spurred. It was one of the 10 case studies in the 2014 book *Connecting to Change the World*. It was also cited as an example or case study in at least six papers and book chapters between 2011 and 2015, including publications in *Ecology and Society*, *Fire Management Today* and the book *Collaborative Resilience*.



A commercial forester, local resident and Forest Service eco-system management staff officer used Google Earth during a FireScape Mendocino workshop to explore possible treatment approaches together.

FireScape Mendocino, which began its collaborative work in late 2013, is using an FLN-facilitated Open Standards process for its foundational planning. Importantly, this group brings together a full range of stakeholders from the landscape, including its human communities. The group has established four workgroups, which address fire-ready communities, landscape-scale vegetation management, fire and recreation infrastructure, and air quality.

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The value of the network to partners in the Southern Blue Ridge FLN has fueled long-term growth in this regional network. Growth has been both through individual landscapes expanding their boundaries, and with the addition of a new landscape in Georgia.

Among the outcomes of this have been numerous “firsts” in cooperative implementation, such as burning across the border between North and South Carolina. This FLN has also been critical to the development and work of the Grandfather CFLRP project and the fuels projects that enabled fire management objectives for the 2015 Bald Knob Wildfire on the Pisgah National Forest to include restoring fire adapted ecosystems, an important decision for the region.

Prescribed Fire Training Exchanges Accelerate

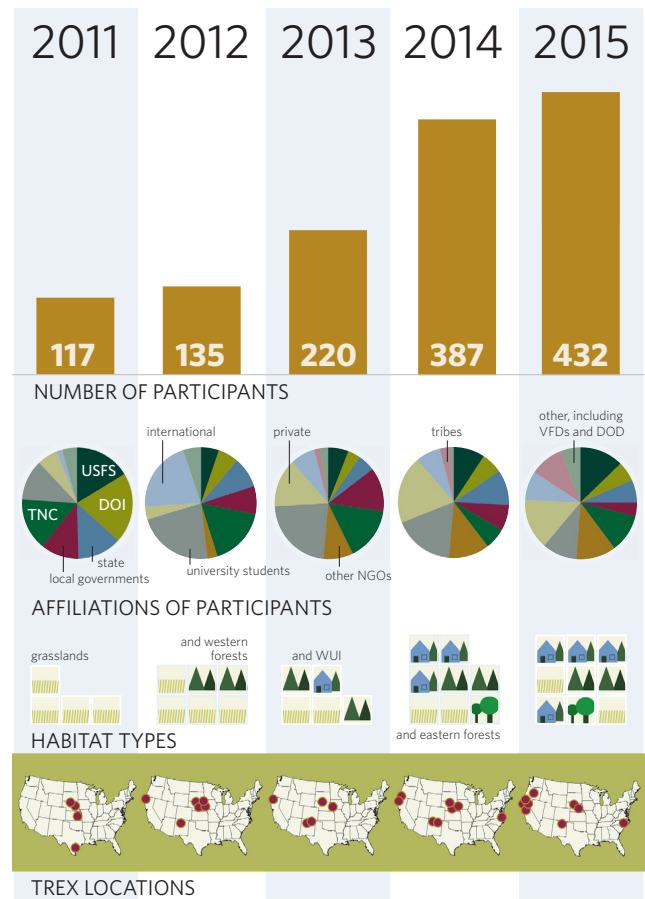
TREX are based on the premise that in order to get more good fire accomplished, more people have to be using fire. Agencies and land-based conservation organizations working alone—or even together—do not have the capacity to meet the scale of the need. By engaging a wider array of practitioners, TREX increases both the number of people able to contribute to the effort and social acceptance of fire.

The first TREX were offered on FLN landscapes in the Great Plains in 2008, where some private burning on grasslands and rangelands was already taking place, and where fire was not seen to pose direct threats to people. TREX leveraged these enabling conditions to develop an innovative model that increased the amount of burning and trained practitioners. With each TREX event and each year, the model was refined; by 2011 or so, the main components that needed to be delivered to yield consistently successful events and effective strategy results were in place.

We began to introduce TREX to new landscapes, bringing in more partners and leaders. In 2012, TREX made the move to its first forest landscape, with a Spanish-language event offered in northern New Mexico. Some of those participants then traveled to California and burned with partners in the California Klamath-Siskiyou FLN. Having overcome the conventional wisdom that prescribed burning couldn't be done in the West—particularly with a crew incorporating non-agency burners—TREX spread rapidly. In 2013, there were two TREX in New Mexico and the FLN and prescribed fire council hosted a TREX in northern California. There are now several TREX a year in California—including some focused on cultural burning by tribes—and others have been held in forested landscapes in Virginia, North Carolina and Oregon.

In addition to spreading to new kinds of landscapes, TREX objectives expanded to include burning in and around communities to enhance community safety. With that, TREX truly became a full embodiment of the Cohesive Strategy, delivering events that address all three of its goals in an integrated package to a diverse set of stakeholders.

Looking ahead, we are now poised to make the next step in TREX evolution, developing a new network of teams who can deliver TREX—and locally-appropriate variations on the model—in even more of the many locations that can benefit from its capacity-building and its lessons.



Top row: The number of TREX participants grew significantly over the course of PERC, and most of the events now have more applicants than can be accommodated. A new TREX leaders' network is being developed to help meet this demand.

Diversity—of several kinds—increased as well.

Second row: Diversity of participant backgrounds and level of experience creates richer learning and new kinds of professional networks. When TREX began in 2008, virtually all participants were from TNC (bright green), USFS (forest green) and DOI agencies (olive). The mix of participants originally envisioned is now being seen on the ground.

Third row and fourth rows: TREX has expanded from burning in grasslands in the central part of the country to adding western forests, wildland-urban interfaces and eastern forests, providing a wider range of learning experiences and treatment types.

TREX Exemplify the Three Overarching, Intertwined Goals of the Cohesive Strategy

- Resilient landscapes: TREX help build the prescribed fire work force, bringing in new practitioners and building the skills of current ones. TREX also expand the realm of what can be done—in terms of who can work together, and on what lands—by looking past “we can’t do that” and getting the agreements and related tools in place to let people work across organizational and other boundaries. Participants implement strategic ecological treatments during the events; TREX avoid having acre targets that can drive decisions away from the most important places toward the easy acres. And the outreach components make sure that the importance of fire in these landscapes gets shared with a broad audience, building local support for active management, which has had a huge impact in changing the narrative.
- Fire adapted communities: TREX help communities better adapt to wildfire in a range of ways. Some are direct, as in fuel reduction treatments that protect houses, buffer communities or protect municipal watersheds. Media outreach efforts also bring more people into the conversation about wildfire preparedness, and help local managers learn to better communicate with stakeholders. The skills and information shared through TREX also empower local landowners and fire departments to take ongoing actions that will help their communities.
- Safe & effective response: TREX provide unique training, skill-building and evaluation opportunities to professional wildland firefighters. The diverse range of participants and breadth of topics addressed in a TREX result in much-needed learning opportunities not available elsewhere that will serve these practitioners well in an increasingly complex fire world. TREX also build the skills of local workforces, including those called upon as first responders to wildfires, such as federal incident commanders, municipal fire departments, volunteer fire departments, and in some of these remote rural areas, sometimes even local community members.



An important piece of the TREX strategy is communication with local communities (and occasionally national audiences) through engagement with the media. Participants craft and share messages about “good fire,” and get practice in communicating them effectively. © TNC/Mary Huffman

TREX Contribute to Adaptive Capacity

In 2015, A. G. Spencer, C. A. Schultz and C. M. Hoffman published the article “Enhancing Adaptive Capacity for Restoring Fire-Dependent Ecosystems: The Fire Learning Network’s Prescribed Fire Training Exchange.” The authors found that “while the trainings cannot overcome all institutional barriers: they incorporate the key components of professional development in fire; foster collaboration, learning, and network building; and provide flexible opportunities with an emphasis on local context in order to train a variety of professionals with disparate needs. The strategy also offers an avenue for overcoming barriers faced by contingent and non-federal fire professionals in attaining training and operational experience, thereby increasing the variety of actors and resources involved in fire management. Although it is an incremental step, the TREX is contributing to the adaptive capacity of institutions in social-ecological systems where fire is a critical ecological process.”

This weaving together of landscapes and communities, professional practitioners and local participants, doing and sharing is the strength of TREX—both in terms of its value to participants, and to its effectiveness as a long-term strategy for changing how we live with fire.

On the Ground: TREX Take Root in Northern California

One of the first TREX held outside of the Great Plains was in northern California. The new Northern California Prescribed Fire Council wanted to have an on-the-ground cooperative burning component to complement their policy and science dissemination work. Among the prescribed fire implementation and management issues they identified were:

- Cross-training—between public and private, or even state and federal practitioners—was hindered by different state and federal standards, so experienced practitioners were unable to share knowledge by working together.
- Many people with important investments in the fire community—administrators, regulators, politicians, reporters—were unable to participate in burns: university students couldn't participate in burns they were studying, air quality regulators couldn't take part in fires they were regulating, and so on.
- There were few trained fire people in remote rural areas—a few agency staff as local experts, but no steady workforce—and much work to be done that required NWCG qualifications. (And on the flip side, the same areas were in need of job training and skills realignment as timber jobs left.)

Council members heard a presentation about TREX—including the key point that TREX already knew how to mix organizations and burn on mixed ownerships. TREX was a tool that could address all three of the issues they had identified.

Forty-seven people from a wide range of organizations took part in the first Nor Cal TREX in late 2013. They burned on 14 units for a total of 389 acres. This was very different from burning in the Great Plains, but the model transferred successfully. This TREX is now an annual event, with participants burning across a range of habitat types from the coast to the mountains.

A couple of the units burned that fall were in the town of Orleans, providing fuel reduction treatments to protect homes. This sparked local interest, giving rise the next year to the now-annual Klamath River TREX, which focuses largely on burning in and around communities along a stretch of the river. And since the spring of 2014, Yurok TREX nearby have focused on burning to meet cultural objectives, and have been one of the threads leading to the development of the Indigenous Peoples Burning Network.



A Forest Service fire planner said of the 2013 Northern California TREX, “Hands down, it was the best training I have ever experienced, with an excellent balance of the science and application of prescribed fire management, and a wonderful group of people to build working relationships with.”

Private landowners whose properties received fuel treatments were also pleased.

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As the fall 2015 TREX approached, California was coming to the end of a particularly devastating wildfire season, a state-wide burn ban was in place, and permits for prescribed fires were not being issued. But the weather was changing, and many of the planned units would clearly be in prescription. The Northern California Prescribed Fire Council was able to use their partnerships at the highest levels of government and work with the chief of CAL FIRE; as a result, local waivers were issued by CAL FIRE and nearly 700 acres of priority treatments for forest and community resiliency were completed.

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On the Ground: FLN Nurtures New Generation of Prescribed Fire Councils in the West

The FLN provided critical support to the Northern California Prescribed Fire Council in the early phases of its development, and has engaged with and supported both it and subsequent councils throughout the West over the last five years. FLN encouragement, funding and staff support of this strategy have been essential ingredients for the formation and success of councils in the West.

While prescribed fire councils got started in Florida in the 1980s and then spread throughout the Southeast, until recently they were largely missing from the West—an interesting paradox, given the scale of challenges in western landscapes. This began to change in late 2009, with the formation of the Northwestern California Prescribed Fire Council, conceived of and supported in large part by the California Klamath-Siskiyou FLN. By the beginning of 2011, the council had expanded to become the Northern California Prescribed Fire Council.

Since then, continuing support and guidance from the CKS FLN—including leadership of the council and key working groups—has driven the growth of this council and inspired further council development in nearby regions and states. By 2014, the FLN was supporting or mentoring developing councils in the Southern Sierra region as well as in New Mexico, Nevada, Oregon and Washington.

Prescribed fire councils fill important niches: They provide a venue for new partnerships and shared learning. They foster new opportunities for training and capacity building. And they are the go-to source for strategic thinking, training and collective action to restore the role of fire in service to ecosystems and people in the region, serving stakeholders ranging from researchers to the California State Assembly. They also enable swift, unified recommendations on policy issues, such as recent changes in EPA ozone standards, which threaten to limit good fire. During the comment period, councils drafted well-argued letters in support of including the benefits of prescribed fire, as well as the smoke, in the final decision-making; the update to the exceptional events rule is expected later this year.

Council efforts are bearing fruit: The last five years have seen a notable shift in the culture and dialogue around prescribed fire in the West—and the consistent, unified, positive voices of councils have played a central role in this where they work. And on the ground, relationship-building with state regulators has opened windows of opportunity for burning that would not otherwise have been done.

Scaling-up to Promote Ecosystem Resiliency

SPER was created to bridge complementary work on federal and non-federal land, bringing it to landscape scale. CFLRP projects (as well as other local and regional federal projects) had a mandate to work collaboratively at landscape scale—but without the ability to work on adjacent or intermixed non-federal lands. FLNs had the partnerships, science and planning in place for moving ahead with the necessary strategic treatments, but had inadequate funding for implementation. SPER provided the initial funding to link work across ownerships.

Several of the projects that began this way—for example, Ashland Forest All-Lands Restoration Project (OR), Mid Klamath Communities (CA), Trinity County Community Protection Project

(CA) and Woodland Restoration (AR/OK)—now receive Joint Chiefs and other funding to continue and expand their work to help restore naturally functioning ecosystems and reduce wildfire risk to resources and communities.

By supporting cross-boundary treatments in places with strategies to sustain their effectiveness, SPER projects increased the amount of prescribed fire and other strategic treatments being accomplished. By strengthening capacity through collaborative burning and incorporating training, SPER projects helped ensure that the efforts can be maintained. Together this sets the stage for more fire use, ultimately by managing wildfires for resource benefit, which is essential for getting to the scale needed.



Above, left: A crew of local practitioners scouts a 70-acre unit for an April 2015 SPER burn, part of the 1,237-acre Big Creek Burn Plan covering the municipal watershed of Hayfork, California. The plan has an all-lands focus and includes CAL FIRE, the Watershed Center, BLM, Hayfork Waterworks District and various private landowners as partners. © WRTC/Piper McDaniel

Above, right: SPER has supported critical communication functions for all-lands work under way in the municipal watershed for the City of Ashland, Oregon. Their work with a range of public stakeholder groups has put to rest the notion that “the public” doesn’t support their forest resiliency work. In addition, through efforts like this 2014 field tour, these partners have been able to share a concrete demonstration of the success of a collaborative, cross-boundary approach to agency and organizational leadership. © TNC



Left: The Virginia project provided S-130/190 training to 24 staff from Virginia Department of Game and Inland Fisheries. This enabled these practitioners to work on cooperative burns with federal partners, which increased both the capacity of the region’s fire workforce and the scope of the lands they can work together on. Over the last several years, cooperative burning has become increasingly common in the Central Appalachians FLN. This has increased the effectiveness of burn programs, by allowing burn units to be planned based on fire needs rather than ownership boundaries, and by making it easier to take advantage of burn windows. © TNC/Robert Clontz

On the Ground: SPER at Work

SPER I (September 2011–December 2013)

Six teams with cross-boundary fire and forest restoration projects in priority landscapes proposed treating a total of 19,767 acres under SPER I. By the end of 2013, they had treated 20,625 acres (104%). Since the treatments were rooted in collaborative partnerships and part of long-term plans, all delivered other benefits as well, from leveraged funds to increased workforce capacity.

SPER II (October 2013–December 2014)

Building on SPER I accomplishments as well as those of FLNs and TREX, SPER II supported five projects that implemented targeted treatments to improve system health and resiliency and contribute to longer term progress by strengthening partnerships and increasing workforce capacity. Three of the projects—in California, New Mexico and Oregon—also provided critical support to fire adapted communities efforts. Together, the five projects proposed 8,368 acres of treatments and completed 9,689 acres (116%) along with another 2,900 acres of site preparations.

SPER III (January 2015–December 2017)

The productivity and flexibility demonstrated by SPER I and II set the stage for a third phase of work, now in progress under the PERFECT agreement. Projects in California, New Mexico and Oregon are working towards accelerating enabling conditions for managed wildfires to benefit watershed health and community safety.

The Fire Adapted Communities Learning Network is Born

Discussions in early 2012 clarified a critical missing piece of effective fire management efforts: to be successful in and around communities, we needed to *enable* communities. And enabling required more than “education” with its one-way flow of information. Communities needed to build their capacity for action, and to do this needed resources—some money, plus people to interact with, rather than PSAs and paper. Having communities as partners in the work would not only increase their adaptation to fire, but support the work of restoring resilient landscapes, including managing wildfires for ecosystem health, which is key to success at a scale that matters.

Our FLN experience suggested that this would only be successful if it was also based on peer-to-peer transmission (and the study that resulted in *Living with Wildfire, The State of Practice in Western Communities* supported this). The time was ripe for launching a community-oriented network: Leads from the Forest Service and TNC had a trusted partnership, based on work together with the FLN. The Forest Service had recently launched a Fire Adapted Communities program and started the Fire Adapted Communities Coalition. Partners at the Watershed Research and Training Center—a long-time member of the FLN—had the critical connections with community-centered work, based on other efforts they were engaged in.

Meeting in Boise, Lynn Decker (TNC), Lynn Jungwirth and Nick Goulette (WRTC) and Tim Melchert and Pam Leschak (USFS) discussed how a peer network could work for communities, and act as a bridge to landscape-oriented work. Shortly thereafter, the Forest Service funded a proposal developed by the WRTC and TNC to design such a network and fund a pilot set of eight community organizations.

With support from the Forest Service FAC program, the new FAC Learning Network set out to accelerate the pace of communities becoming adapted to and resilient in a wildfire environment. This included broadening the concept of FAC from a checklist to a way of being; placing FAC in a whole-system context; leveraging learning from the FLN; supporting a culture of innovating and sharing knowledge; helping communities scale up to reach tipping points; garnering funding to implement plans; and encouraging the viral spread of the network and its ideas.



The FAC Net has national influence in myriad ways: We are documenting that “fire adapted communities” is really about all three of the Cohesive Strategy goals. Our work is recognized as key in ushering in a new wildfire paradigm (for example, see the January 2016 JFSP Fire Science Digest “Scanning the Future of Wildfire”). We gather success stories and lessons from our members and share them through our networks and website and through our partners. Network learning also generates suggestions for improving national policy and appropriations, for example through Nick Goulette’s 2015 testimony before the U.S. Senate Committee on Energy and Natural Resources. © TNC/Liz Rank

Phase One: Building a Base

Eight community organizations—representing geographic, demographic and institutional diversity—took part in a kick-off workshop in 2013. They shared stories of their work and struggles, and all saw the value of connecting to expand their fire adaptation capacities. With the approach validated, and the FAC Net launched, the WRTC and TNC began setting up the infrastructure to support the network, including in-person and online communication systems, net-weaving functions and ways to share learning beyond the core membership. The primary focus was to learn and share more about network members’ practices, to create strong connections among members and to spread their ideas and innovations to other members of the network. Sharing these lessons more broadly with practitioners and stakeholders across the U.S. was an important but secondary aim.

Phase Two: A New Theory of Change

In 2014, the FAC Net added 10 more member communities—again, a diverse group, committed to deepening and sharing their fire adaptation practice. That winter the network’s coordinating team met to

assess the network's trajectory and make adjustments to the theory of change and network operations. Insights from *Connecting to Change the World*, a primer on generative network design, along with feedback from network membership and consideration of the network's purpose, informed the adjustments to the theory of change: there needed to be allowance for more variation in the way the network would grow. Rather than counting on all network members to grow into regional networks, growth needed to come from a variety of catalysts—from states, regional land management agency offices, local communities, and from current network members. With an eye to enabling more diverse participation, the coordinating team set out to deepen the engagement and transparency of the network with its members.

Phase Three: Reaching Outward

The FAC Net needed a way to reach more people and communities without overtaxing members and the network—to figure out how to welcome more members without losing the emphasis on relationships and the comradery already established. To reach this wider group, the network built a new website—an online forum for affiliate members to self-identify and interact. Design and content development during the fall of 2015 led to the launch of www.fireadaptednetwork.org in January 2016, enabling the network to engage with many additional people and communities.

Complementing this new growth strategy, the FAC Net launched eight communities of practice in 2015, centered on needs and interests identified by members. Healthy learning networks have a culture of giving—to other members and to the network as a whole. The communities of practice enable members to advance the practice of FAC and provide opportunities to invest in interactions among network members.

Looking Ahead

With 18 core communities, developing communities of practice, and a website that allows dozens of additional affiliate members to engage, the FAC Net provides value to its members far beyond the modest monetary support they receive from it. Members report that connections to new ideas and other practitioners are the most valuable thing the network offers them. FAC Net members will continue to pioneer the practice of fire adaptation, and the network will be there to support and share their work as our country transitions to a new fire paradigm.

To succeed we needed to rapidly learn how to help build local grassroots capacity for action in all aspects of the Cohesive Strategy. We saw this capacity as complementary to the agency integration described in the Cohesive Strategy and a necessary docking station for technical assistance and other resources of agency partners.

Lynn Jungwirth (Watershed Research & Training Center)
and Lynn Decker (The Nature Conservancy)
on the need for the FAC Learning Network



FAC Net is helping communities define what it means to be fire adapted—for them, in their places, under their conditions— and how to make a plan that will move them toward adaptation. The network's self-assessment tool (FAC SAT) was developed with the help of researchers to guide community groups through an assessment process, and make sense of the results. It was tested in the field by network members in 2014-2015, and member input was meticulously compiled and used to improve the tool, which is now available nationally through the website .

© North Lake Tahoe FPD

Small investments in our members yield big outcomes. Washington state was hit hard by wildfires in 2014 and 2015. FAC Net members and partners in Leavenworth helped greatly with incident communications and post-fire recovery, including creation of the After the Fire toolkit (posted at <http://afterthefirewa.org/>). With the FLN working with communities in Yakima County, PERC efforts have helped bring about big changes in policy, funding and public sentiment related to wildfire resilience and forest restoration.

Investments in this FAC Net member also helped catalyze a growing state-wide network that now has dedicated staff and funding from the BLM.



On the Ground: Multiple Strategies to Multiply Effectiveness

KLAMATH MOUNTAINS, NORTHERN CALIFORNIA

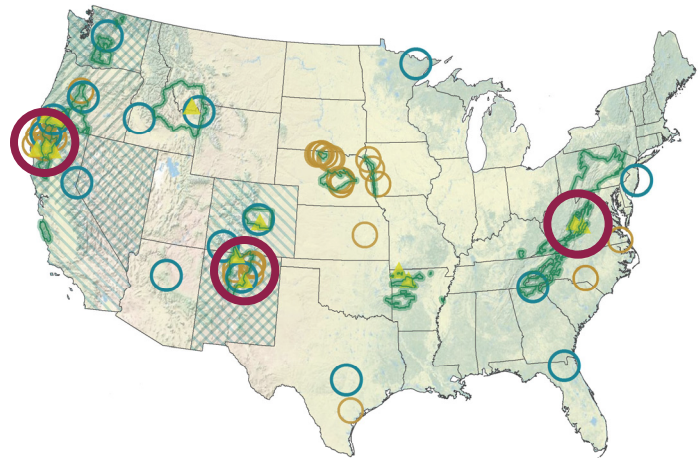
Community leaders in the Western Klamath Mountains—who had long been partners in the California Klamath-Siskiyou FLN—submitted their first proposal for landscape-scale work in 2013. Having learned from the FLN not to scrimp on a good planning process, they embarked on a facilitated collaborative process that incorporated ecological and social factors on an equal basis. By the end of 2015, members of the Western Klamath Mountains Restoration Partnership were in the field together discussing and planning the fuel treatments that will protect their communities and make their forests more resilient.

Adding to—or multiplying—the effectiveness of FLN efforts here, the Karuk Tribe is, in addition to being a partner in WKRP, one of the first cohort of core members in the FAC Net, reinforcing the focus on community aspects of fire work. This FLN also hosted the first Klamath River TREX in 2014, burning 240 acres on 17 units in and around communities along the river. A year later, a second TREX had three crews simultaneously at work, 90 people conducting 400 acres of fuel treatments.

Work here also brought to light a need to be in service to tribal efforts to revive and advance cultural burning practices. The new Indigenous Peoples Burning Network has begun bringing together the Karuk, the Yurok (who have held several small TREX aimed at cultural burning) and the Hupa (also along the Klamath River), an effort which is expected to bear fruit under PERFECT.

Together, these efforts are engaging local communities and agencies in co-learning and co-planning. Good collaboration and planning has drawn the funding needed to support implementation. Active community outreach—including excellent use of social media—is building support among even non-participants and is improving communication and outcomes during wildfires. In short, motivated and able people are proving here that a new shared governance model can lead to dramatically difference results, in a remarkably short time.

Three examples of places where multiple PERC strategies have been combined to yield results greater than the sum of the parts



In the Western Klamath Mountains, planning together is leading to successful working together.

© TNC/Mary Huffman



A crew member on a SPER burn in the Central Appalachians, protects an interpretive sign installed by the FLN.

© TNC/Marek Smith



Media invited to a 2013 TREX in New Mexico helped local communities engage and have their concerns allayed. This paved the way for burning that came after.

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CENTRAL APPALACHIANS

Using FLN, SPER and TREX strategies, the Central Appalachians FLN has harnessed the power of effective partnerships to make impressive strides in cooperative and cross-boundary burning. For example, in early 2011 TNC and USFS were getting started on blacklining for the 6,000-acre Big Wilson burn, collaborating on one of the largest prescribed burns in both organizations' history in Virginia. A year later they completed the first 1,500-acre unit burn together. An early 2013 network update shared a list of almost 18,000 acres of burns that partners had planned for spring, encouraging cooperation. The next update noted that 13,700 of those acres had been completed, and expressed pride about "the increased communication and coordination on burns this past year, with several burns having five or more agencies and organizations participating. Partners also travelled beyond their typical areas of responsibility to assist others across the two states. The ongoing commitment by all involved to training and safety enabled a remarkably productive year."

Virginia partners also hosted a TREX and started SPER II work in 2014. When SPER was slightly behind schedule after the first burn season, the lead suggested an alternative going forward. The proposal was accepted—and very successful: A contract crew was hired for the spring burn season and assigned to priority partnership burns across a wide area. When brief windows opened, the crew was ready and able to seize them. And when eight inches of snow fell in the mountains, barring burning there for a month, the crew lent critical capacity to coastal plain and longleaf pine restoration efforts at a time when the work could not have been completed otherwise. This model proved so effective that partners have continued using it, hiring three such crews (with other funding) for the spring 2016 burn season.

NEW MEXICO

In 2012, partners in the 1.4 million acre Jemez Mountains FLN landscape used climate models to incorporate climate adaptation to their ecosystem resiliency planning. Model projections—along with increasingly serious wildfires like the devastating 2011 Las Conchas Fire—spurred a larger vision. FLN leads from TNC saw that work at a much larger scale was needed, as was an approach that looked at the whole social-ecological system. They conceived of the Rio Grande Water Fund to meet this need. Developed with more than 40 partners and stakeholders, the RGWF aims to restore the resiliency of the 7 million acre watershed that serves about half the state's population. Now underway, the project will generate sustainable funding for a 10-30 year program of large-scale forest and watershed restoration treatments—including thinning overgrown forests, restoring streams and rehabilitating areas that flood after wildfires.

In 2013, the Forest Stewards Guild became one of the first members of the new FAC Learning Network. Their work complements the FLN's, leading efforts in community outreach and a nurturing a program of controlled burning. TREX was introduced to the mix in the fall of 2013; perhaps that event's greatest success was breaking down some of the community resistance to fire—they engaged with one of the most vocal skeptics of the burning in such a way that he volunteered as a community information resource for the next year's burns.

The Guild also received SPER II support and effectively delivered the fuel reduction treatments as proposed—but more importantly set the stage for future success. Intensive work with county permitting agencies led to a breakthrough that allowed them to conduct the first multi-acre pile-burn on private property in Santa Fe County; the county had previously only permitted single piles, a restriction that prevented scaling up to effective levels.

Together, these efforts laid the groundwork for even more integrated work under PERFECT. Ongoing work includes SPER III implementation projects in the RGWF, FAC efforts expanding to the entire state, and a new regional Burned Area Learning Network to address the challenges that come after the inevitable large wildfires.

Appendix: More Detail

This report covers the accomplishments of the five-year period of the PERC cooperative agreement at a high level. For more detail at finer time scales, the following reports and publications are available.

ANNUAL AND SEMI-ANNUAL REPORTS

Seven annual or semi-annual reports for each time frame were submitted according to the requirements of the agreement; in addition, an interim report was submitted in 2013 to cover an odd time span caused by quirks in the funding calendar. Each of these reported in detail on the specifics for the work plans set out in the corresponding modification to the agreement, and provided overviews of accomplishments, lessons learned and other highlights.

- 2011 Annual Report
(January 26, 2012)
[CG]/PERC-Report-2011.aspx
- 2012 Annual Report
(January 29, 2013)
<http://www.conservationgateway.org/Files/Pages/PERC-Annual-Report-2012.aspx>
- 2013 Interim Report: March 1-June 30
(August 16, 2013)
[CG]/PERC-Highlights-Jan-June-2013.aspx
- 2013 Semi-Annual Report: July-December
(January 29, 2014)
[CG]/PERC-report-2013.aspx
- 2014 Semi-Annual Report: January-June
(July 30, 2014)
[CG]/PERC-Report-July-2014.aspx
- 2014 Semi-Annual Report: July-December
(January 29, 2015)
[CG]/PERFACT-Report-Jan-2015.aspx
- 2015 Semi-Annual Report: January-June
(July 28, 2015)
[CG]/PERFACT-Report-Jul-2015.aspx
- 2015 Semi-Annual Report: July-December
(January 27, 2016)
[CG]/ERFACT-Report-Jan-2016.aspx

(if typing URLs instead of using embedded link, replace [CG]/with <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/Pages/>)

FIELD GUIDES

These documents included pages for each FLN landscape and FAC Net member organization (in the later editions). The profiles included a brief overview of their work, highlights of recent accomplishments or work in progress, partner lists and maps.

Fire Learning Network Field Guide
(December 2011; revised March 2012)
<http://www.conservationgateway.org/Files/Pages/fln-field-guide-march-201.aspx>

Learning Networks Field Guide
(January 2015)
(includes FLN, FAC Net, TREX and SPER)
<http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Documents/FieldGuide-Jan2015.pdf>

NOTES FROM THE FIELD

Notes from the Field are produced on an as-needed basis to capture various aspects of the work, accomplishments and lessons of the agreement. They expand on items covered in the Networker, and generally include photos, graphics, maps or other similarly rich content. The topics, length and 'meatiness' vary quite a bit, but taken together, they give a good sense of the range and type of work being done.

FLN Notes from the Field
(issues 1-91 fall within the scope of PERC)
Index: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/USFLNPublications/Pages/Index-FLN-Notes-from-the-Field.aspx>

FAC Net Notes from the Field
(issues 1-5 fall within the scope of PERC)
Index: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/fac/facnet/Pages/Index-FAC-Notes-from-the-Field.aspx>

FLN NETWORKER

This newsletter has been published bi-weekly since 2008. The “News from the Field” section at the top of each issue includes short notes about work by members and partners in the FLN and FAC Net, TREX, SPER and other agreement activities. The Networker links those within our networks, and also goes to numerous other practitioners in the field who have asked to be included.

Issues 72 through 200 cover the period of January 2011 through December 2015. These are archived at <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/FLNNetworker/Pages/fln-networker.aspx>.

FAC LEARNING NETWORK BLOG

FAC Net staff, members and partners post to the network’s blog twice weekly. The blogs cover a wide range of topics, but most are tied to work being done in the network and the lessons that come from it.

Posts are at <http://fireadaptednetwork.org/blog/>.

ACKNOWLEDGEMENT

The outcomes reported here would not have been possible without the work—and belief in this effort—demonstrated by hundreds of partners and colleagues. This has been a truly collective endeavor, the fruit of contributions from people addressing fire challenges at all scales, from national to the backyards of small communities—and from a full range of organizations including federal, tribal, state and local agencies, non-profit organizations, researchers and students, businesses and private citizens, all working together. A full listing would take many pages, but thanks are due to all.

MORE—PERC ONLINE

FLN: <http://www.conservationgateway.org/fln>

TREX: <http://nature.ly/trainingexchanges>

FAC Net: <http://fireadaptednetwork.org>