



FIRE LEARNING NETWORK FIELD GUIDE

March 2017





Copyright 2017 The Nature Conservancy

The Fire Learning Network, Fire Adapted Communities Learning Network, Prescribed Fire Training Exchanges and Scaling-up to Promote Ecosystem Resiliency projects are part of the “Promoting Ecosystem Resilience and Fire Adapted Communities Together” (PERFACT) cooperative agreement among The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior (Bureau of Indian Affairs, Bureau of Land Management, Fish & Wildlife Service, National Park Service).

For more information about the FLN, please visit www.conservationgateway.org/fln
about the FAC Learning Network, please visit <http://fireadaptednetwork.org/>
about TREX, please visit <http://nature.ly/trainingexchanges>

Cooperative Agreement Contacts

FLN Director	Lynn Decker	ldecker@tnc.org	(801) 320-0524
USDA Forest Service	Tim Melchert	tmelchert@fs.fed.us	(208) 387-5512
Dept. of the Interior	Kristin Merony	kristin_merony@ios.doi.gov	(202) 208-3211

The PERFACT Team

The Nature Conservancy North America Fire Team: Lynn Decker, Jeremy Bailey, Guy Duffner, Wendy Fulks, Mary Huffman, Heather Montanye, Liz Rank, Marek Smith
The Watershed Research and Training Center: Nick Goulette, Michelle Medley-Daniel, Lenya Quinn-Davidson, Emily Troisi, Allison Jolley
The Field Guide is compiled and produced by Liz Rank (lrnk@tnc.org). Thanks to the numerous landscape and community leaders and partners who provided text, photos and review for this document, and for their valuable work in the field.

Photo Credits

Front cover (left column, top to bottom): Coalition for the Upper South Platte (Riley Bergseng), TNC (Robert B. Clontz) (2);
(right column, top to bottom) Northern California Prescribed Fire Council (Lenya Quinn-Davidson), Forest Stewards Guild
This page: Jeffrey Kane

Back cover (left to right): TNC (Liz Rank, Katherine Medlock, Chris Topik, Mary Huffman, Liz Rank (2)), Frank Riley, Florida Forest Service, TNC (Guy Duffner)

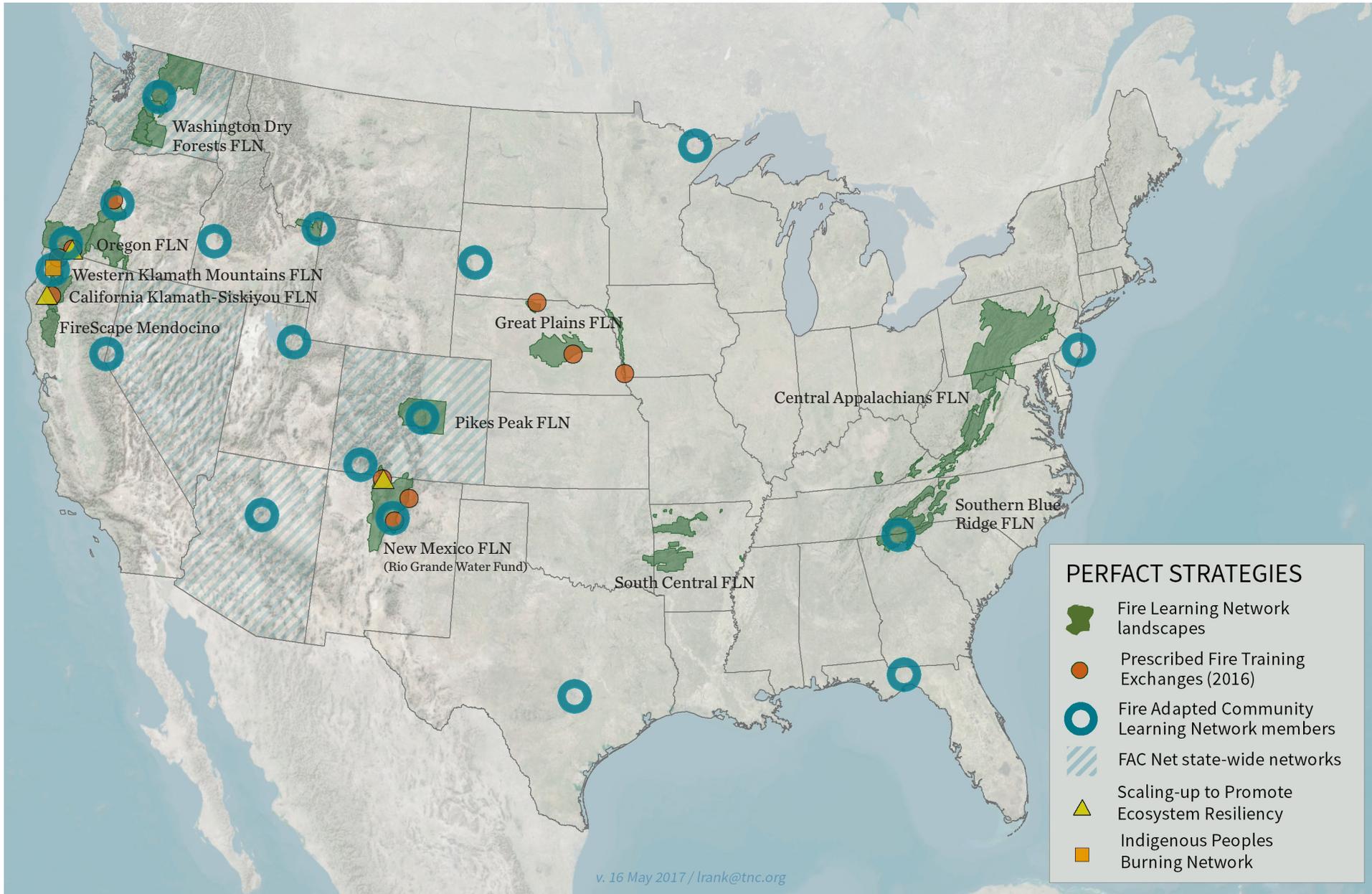
Contents

Map: Where We Work

Fire Learning Network landscapes, Fire Adapted Communities Learning Network members, 2016 Prescribed Fire Training Exchanges (TREX) and Scaling-up to Promote Ecosystem Resiliency (SPER III) projects	1
--	---

Fire Learning Network Regional Networks & Large Landscapes

California Klamath-Siskiyou FLN	3
Central Appalachians FLN	4
FireScape Mendocino	5
Great Plains FLN	6
Island Park Sustainable Fire Community	7
New Mexico FLN	8
Oregon FLN	9
Pikes Peak FLN	10
South Central FLN	11
Southern Blue Ridge FLN	12
Washington Dry Forests FLN	13
Western Klamath Mountains FLN	14



“Stronger relationships among key partners is facilitating successful collaboration at scales we could not have anticipated even two years ago. Investment in these relationships through the TREX and other programs has allowed for much better working relationship on other related issues, and non-fire issues as well.”

“As a result of the longstanding work of the FLN and Prescribed Fire Council, we were asked by the Chief of the state fire agency and the Governor’s Office to lead up a Prescribed Fire Workgroup for the Governor’s Tree Mortality Task Force, a product of an emergency declaration aimed at mitigating the impacts of drought-driven bark beetle infestations impacting areas across the state. This is the only such working group not led by a state agency employee.”

“The FLN has provided a key forum for advancing local discussions about active forest management with diverse stakeholders. The long-term collaborative partnerships in the area make new projects relatively easy to develop with a shared vision.”

California Klamath-Siskiyou Fire Learning Network



The Women in Fire TREX drew participants from 11 states and 4 countries, and from a wide range of agencies and organizations. With a gender ratio reversed from what is typical—about 85 percent women—the WTREX provided opportunities to explore fire management from a different perspective. © Chris Ferner

Since 2013, our work in the Trinity Mountains has been conducted through the multi-stakeholder Trinity County Collaborative Group, organized to be “an inclusive and successful natural resources, land management, and economic development advisory group that supports safe and vibrant communities, thriving economies, and ecological resilience through sustainable resource use and stewardship practices.” In 2015, its Trinity Community Protection and Landscape Restoration Project was awarded Joint Chiefs’ Landscape Restoration Partnership funding to implement projects across public and private lands in the South Fork Trinity and Upper Mad River Watersheds. The project acknowledges the critical role of fire on the landscape and builds on footprints of wildfires that have burned over the past two decades. Strategic mechanical thinning and prescribed burning will create the infrastructure for more extensive burning and allow wildfire to be managed for resource and community protection benefits.

Other projects in support of our landscape strategy include:

- The Trinity Integrated Fire Management Partnership held a prescribed fire training for VFDs in 2015, and regularly integrates local firefighters into prescribed burn events.
- With the FLN, NRCS and UC Cooperative Extension, we are bringing the concept of private prescribed

burn associations to local ranchland owners. This included a 2016 learning exchange with FLN partners from Iowa and Nebraska and ongoing work on a three-county oak woodland restoration and conservation initiative under the NRCS Regional Conservation Partnership Program.

- We are also integrating spatially explicit prescribed burn objectives into a 2016 Community Wildfire Protection Plan update, coupling it with implementation projects supported by SPER, Steven’s Act and the U.S. Fish & Wildlife Service Partners in Conservation program to increase burning in three municipal watersheds in the landscape.
- In the fall of 2016 we supported the Northern California Prescribed Fire Council in hosting its fourth TREX, focused on women in fire. In addition to hundreds of acres of burning and quality fireline training, WTREX participants developed networks and mentorships that will support them throughout their careers.

Further plans include trainings that will allow non-federal partners to work on cooperative burns on Forest Service,

Nick Goulette
Dave Jaramillo
Lenya Quinn-Davidson

nickg@hayfork.net (530) 628-4206
david@thewatershedcenter.com
lquinndavidson@ucanr.edu



BLM and private lands. CAL FIRE has also committed to work on cooperative burns led by others. This agency’s buy-in laid the groundwork for burn permits across the county, helping us thread very tight burn windows; their continued participation will be key to our continued success. Finally, with sponsorship from CAL FIRE, Forest Service Region 5 and the FLN, the Northern California Prescribed Fire Council is developing a statewide program modeled after TREX. These CalTREX will expand TREX to at least six new sites around the state over the next three years.

Landscape Partners

- Bureau of Land Management—Redding Field Office
- CAL FIRE
- Humboldt State University
- Hyampom Volunteer Fire Department and Fire Safe Council
- Northern California Prescribed Fire Council
- Trinity County Collaborative
- Trinity County Fire Chiefs Association
- Trinity County Fire Safe Council
- Trinity County RCD
- University of California Cooperative Extension
- USDA Forest Service—Pacific Southwest Research Station
- USDA Forest Service—Shasta-Trinity and Six Rivers National Forests
- USDA Natural Resources Conservation Service—Trinity Office
- Watershed Research and Training Center
- Weaverville Volunteer Fire Department
- Yager-Van Duzen Environmental Stewards
- and local landowners and residents

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

Central Appalachians Fire Learning Network



The Central Appalachians FLN engages federal, state and private land managers, academic institutions and non-profit organizations in a collaborative effort to enhance capacity to implement ecological fire management in the Central Appalachian Forest, Western Allegheny Plateau, and Cumberlands and Southern Ridge and Valley ecoregions. These landscapes include rolling and mountainous terrain, Appalachian pine-oak forests and woodlands, pine-oak-heath shrublands and barrens, small-patch grasslands including high elevation balds, wet prairies and cedar glades, and have high levels of species endemism.

Over the FLN's decade-long history, increased partnership diversity, communication and coordination have been key to restoring the role of fire at an ecologically meaningful scale. In 2015, Central Appalachians FLN partners conducted controlled burns on over 28,000 acres in Virginia, West Virginia, Kentucky and Pennsylvania.

Key accomplishments include:

- Development of robust fire effects monitoring programs, including for avian community, forest structure and composition, and burn severity;
- Facilitation of interagency training and capacity-building;



Estimating canopy cover using a densitometer in the Warm Springs Mountain Restoration Project. © TNC (Nikole Swaney)

- Mapping of ecological zones across 10.2 million acres in Kentucky, Virginia and West Virginia;
- Development of spatial analysis tools for prioritizing fire restoration and assessing fire effects;
- Implementation of MOUs and cooperation agreements to facilitate cross-agency, all-lands approach to restoration;
- Development of interpretive signs, brochures and other education materials on prescribed fire;
- Posters and oral presentations at national conferences on network success stories and products;
- Facilitation of dendrochronology, soil charcoal and other fire history research throughout the region;
- Use of funding from Scaling-up to Promote Ecosystem Resiliency to fully integrate non-native invasive species control with prescribed fire management activities; and
- Contracting with four-person fire modules to enhance capacity in Virginia and, with the Southern Blue Ridge FLN, in Georgia, Tennessee and the Carolinas.

Sam Lindblom

slindblom@tnc.org

(434) 987-0712

Network Partners

Appalachian Mountains Joint Venture
Arcadia University
Consortium of Appalachian Fire Managers and Scientists
Kentucky Department of Fish & Wildlife Resources
Kentucky Division of Forestry
Maryland Department of Natural Resources
National Park Service—Shenandoah National Park
National Weather Service
National Wild Turkey Federation
New River-Highlands RC&D
Pennsylvania Department of Military and Veterans Affairs at Fort Indiantown Gap
Pennsylvania Game Commission
Radford University
The Nature Conservancy—Kentucky, Maryland, Pennsylvania, Virginia, West Virginia
University of Kentucky—Forestry



University of Maryland
University of Tennessee
U.S. Fish & Wildlife Service
U.S. Geological Survey—Virginia Cooperative Fish and Wildlife Research Unit
USDA Forest Service—Daniel Boone, George Washington and Jefferson, and Monongahela NFs; Northern Research Station
USDA Natural Resources Conservation Service
Virginia Department of Conservation and Recreation—Natural Heritage, State Parks
Virginia Department of Forestry
Virginia Department of Game and Inland Fisheries
Virginia Tech
West Virginia Department of Forestry
West Virginia Department of Natural Resources
West Virginia University

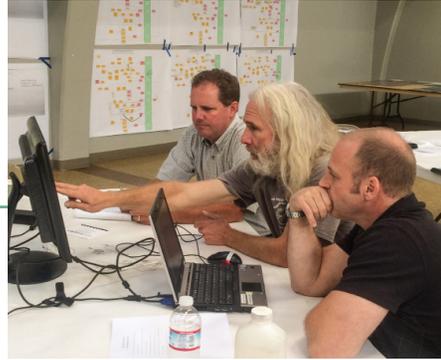


A breakout session at the January 2017 kick-off workshop of the Potomac Headwaters landscape provided hands-on practice in a spatial planning exercise using maps of the Sideling Hill WMA. Participants visited the WMA the next day for discussions of area fire history. © TNC (Severn Smith)

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

FireScape Mendocino

Fire Learning Network



FireScape Mendocino began its collaborative work in late 2013. Using the Open Standards for the Practice of Conservation for foundational planning, the group has identified its geographic scope, landscape vision, a suite of enduring shared values—ecological, cultural and economic—and a robust set of strategies designed to improve the health and viability of these values. The group has since worked toward realizing its vision of a resilient landscape that provides sustainable habitats for people and animals while supporting the social and economic needs of communities in and around the Mendocino National Forest.

The multi-stakeholder collaborative now has four active work groups—Fire Ready Communities, Landscape-Scale Vegetation Management, Fire and Recreation Infrastructure, and Air Quality—and numerous efforts under way.

- FireScape Mendocino is currently focused on participating in the planning for the Pine Mountain Project of the Upper Lake District, and several participants are involved in management planning for the Berryessa Snow Mountain National Monument.
- The Fire Ready Communities subgroup is grappling with the effects of

large fires that burned more than 2,000 homes in Lake County in 2015 and 2016. With the help of a social and ecological resilience planner, FireScape Mendocino is also testing an approach to developing an expanded Fire Ready Communities effort designed for low-resource communities.

- The Landscape-scale Vegetation Management workgroup is holding field sessions designed to elevate the science input to vegetation management, with a focus on shaping management of old growth forests to survive climate change. That workgroup is also looking ahead to Forest Plan Revision, which is scheduled to begin in 2017. The collaboration is also learning about the issues inherent in managing areas of dry forests that are under drought stress, including beetle and disease infestation.

In addition to this work, there are efforts to grow the collaborative group itself, with a small group developing concepts for increasing engagement of tribes in FireScape Mendocino, and the Mendocino National Forest dramatically expanding its efforts at community engagement.

Kimberly Baker
Don Amador
Lauren Johnson

kimberly@wildcalifornia.org
damador@cw.com
laurenjohnson@fs.fed.us

(707) 822-7711
(925) 625-6287
(530) 934-1165



Top of page: A commercial forester, local resident and Forest Service ecosystem management staff officer used Google Earth to explore possible treatment approaches at a 2014 workshop.

Above: Landscape-Scale Vegetation Management working group members reviewed the results chains developed to test the logic of several potential strategies. © TNC (Mary Huffman)



Landscape Partners

Blue Ribbon Coalition
CAL FIRE
California Wilderness Coalition
Central Valley Regional Water Quality Control Board
Crane Mills
Environmental Protection Information Center
Lake County Fire Safe Council
Lake Pillsbury Homesite Association
Office of Congressman Doug LaMalfa
Office of Congressman Jared Huffman
Robinson Rancheria
Round Valley Indian Tribes
Sierra Pacific Industries

Tehama County Resource Conservation District
The Nature Conservancy—California Tuleyome
Upper Little Stony Inholders Alliance
USDA Forest Service—Mendocino National Forest; Region 5

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

Great Plains Fire Learning Network

Throughout the Great Plains fire is recognized as an important factor for sustaining landscapes that are resilient and ecologically, economically and socially healthy. The extent to which fire can be applied at an appropriate scale has been limited, however, by capacity issues that plague the region.

Over the years the Great Plains Fire Learning Network has focused on working with partners at a local and regional level to increase capacity through collaborative experiential trainings and cooperative burning. This cooperation has been done in the spirit of “neighbors helping neighbors,” an approach that has its roots in the sparsely populated rural areas of the region. Not surprisingly it is also where the prescribed burn association model is embedded, with 59 associations currently active.

With partners that include private landowners, county and state agencies, non-governmental organizations, private entities, volunteer fire departments, universities and federal agencies, the spirit of cooperation is strong—but can be challenging, given the sometimes disparate levels of required and achieved fire qualifications.

FLN strategies to support increased fire implementation in the Great Plains include continuing to enhance a



Participants engage in a sand table exercise in the field at the 2014 Spring Break TREX in the Niobrara Valley. © Jose Luis Duce



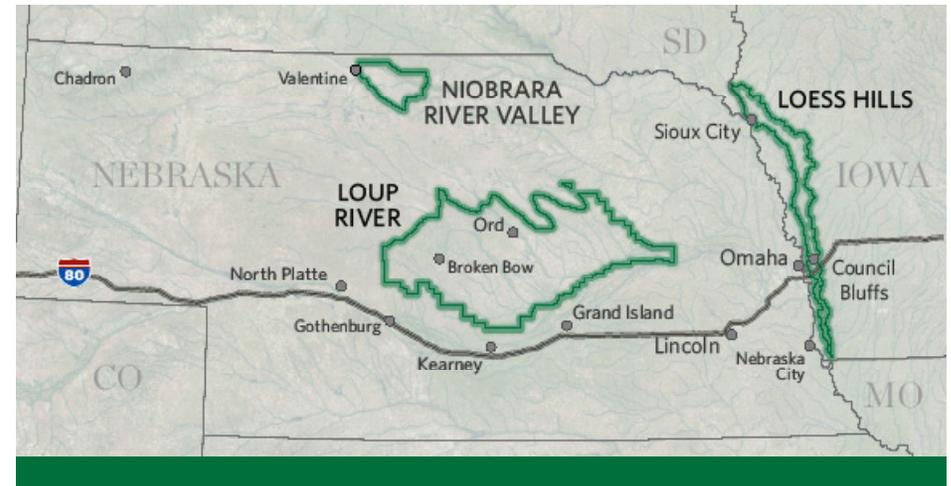
Because the hills of fine silt, or loess, in western Iowa and eastern Nebraska are unsuitable for most agriculture, they still hold valuable natural diversity. However, steep terrain and fragmented ownership make burning challenging. The partnerships and extra capacity of TREX make landscape treatments, like those during the 2015 Loup River TREX (above) possible. © Stéfano Arellano

network of training exchanges and cooperative burning in the region and promoting independent private landowner action, while seeking ways to learn and share successes with other regions through various networks. The durability and longevity of these strategies has been the key to strengthening existing partnerships, creating new partnerships, and keeping training and burning opportunities available to private landowners in these landscapes.

Emily Hohman

ehohman@tnc.org

(712) 568-2596



During the 2014 Lower Loup TREX, a crew lights a 730-acre unit to reduce invasion by eastern redcedar. © TNC (Jeremy Bailey)



Firefighters monitor a 223-acre prescribed burn on private land in Monona County, IA during the Loess Hills Cooperative Burn Week in April 2016. The goals of the burn were to improve the quality of this native prairie for wildlife and livestock. © TNC (Emily Hohman)

Network Partners

Great Plains Fire Science Exchange
Iowa Department of Natural Resources
—State Forests, Parks, Wildlife
Iowa Natural Heritage Foundation
National Park Service—Niobrara
National Scenic River
Nebraska Forest Service
Plymouth County Conservation Board
Pottawattamie County Conservation Board
Tallgrass Prairie & Oak Savanna Fire
Science Consortium
The Nature Conservancy—Iowa,
Nebraska
University of Nebraska—Lincoln
U.S. Fish & Wildlife Service

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

Island Park Sustainable Fire Community

Matthew Ward
Liz Davy

mward@tnc.org
edavy@fs.fed.us

(208) 821-8388
(208) 652-1203

The Island Park Sustainable Fire Community (IPSFC) is a collaborative group of concerned citizens and representatives from businesses, non-profit organizations and local, state, and federal government agencies. Working in the communities of Island Park (Idaho) and West Yellowstone (Montana), the group is focused on developing a fire adapted social and ecological community that is resilient and accepting of fire, insect and disease disturbances.

A member of both the Fire Learning Network and Fire Adapted Communities Learning Network, the collaborative worked through an Open Standards strategic planning process in 2014, and has updated the strategic plan twice since its inception. Through that process they identified as conservation targets the three interconnected goals of the National Cohesive Wildland Fire Management Strategy: fire adapted communities, resilient landscapes and effective wildfire response.

A key strategy has been to engage the community in wildfire mitigation efforts. Over the last two years IPFSC has reached out to more than 2,000 residents in the Island Park community—and done more than 312 home evaluations, picked up more than

2,570 cubic yards of debris on slash pick-up days, and helped complete 45 fuels reduction projects on private land. In the surrounding landscape, the Forest Service has implemented mechanical fuels treatments on 200 acres, and effectively managed the 800-acre Partridge wildfire on the Island Park Ranger District in the late summer of 2015.

In the summer of 2016, IPSFC, the Caribou-Targhee National Forest and The Nature Conservancy worked together to conduct the Conservancy's first controlled burn in the state of Idaho at the Flat Ranch preserve. This small burn—70 acres—benefitted the grasslands and riparian areas of the preserve, of course. But even more importantly, it served as a demonstration of the good that fire can do in the landscape and as a training exercise for local Forest Service fire staff. The project also had a strong outreach component that included an area where the public could view the burning, smell some smoke in the air, talk to fire practitioners about what was happening, and enjoy some refreshments with their neighbors.

During Wildfire Awareness Week, IPSFC also hosted a mock fire camp. This gave visitors a taste of what



In the summer of 2016, IPSFC hosted a public tour of the 2015 Partridge Fire. That fire had been managed by the Forest Service “in such a way as to allow the fire to play its natural role in the ecosystem,” an important step for both the natural and human communities in this landscape.

© TNC (Matthew Ward)

happens during a real fire, with community members playing various roles associated with a fire, from Incident Commander to Food Unit Leader. Smokey Bear also visited with families as they enjoyed lunch and learned about wildfire and how to mitigate its effects around their homes.

In the summer of 2017, IPFSC is adding several workshops in selected neighborhoods that will help the communities answer the question “Are we ready?” With these and other actions, IPSFC will continue to build on past successes to more fully integrate their three priorities to scale up work across the larger landscape, moving closer to the goal of social and ecological resiliency.

MORE:
<http://islandparkfirecommunity.com/>



Network Partners

Bills Island HOA
Bureau of Land Management
Farm Bureau Insurance
Fremont County
Greater Yellowstone Coalition
High Country RC&D
Idaho Department of Homeland Security
Idaho Department of Lands
Stonegate HOA
USDA Forest Service—Caribou-Targhee National Forest
The Nature Conservancy—Idaho, Montana
and local homeowners

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

New Mexico Fire Learning Network



Top: Wetlands at the Valles Caldera National Preserve in the heart of the Water Fund landscape.

Bottom: A properly-thinned stand of ponderosa pine is more resilient to wildfire.

© Alan W. Eckert for The Nature Conservancy

Improving the health of headwater forests is a critical climate change adaptation strategy in a warming Southwest, where fire seasons have become longer and more severe, and water security is a primary concern for all communities.

In New Mexico, the FLN is now a key part of a wildfire and water source protection fund program, the Rio Grande Water Fund (RGWF). The RGWF vision is to secure clean water and healthy forests for New Mexicans for generations to come. Its goal is to scale up forest thinning and prescribed fire treatments from about 6,000 acres per year to 30,000 acres per year in northern New Mexico. We will do this by developing a sustainable source of funding from water users, government, donors and investors, and facilitating payments to upstream land managers to help them reduce wildfire and debris flow risk in high priority areas and to maintain those areas for the long-term. In 2015, the RGWF distributed over \$1 million to accelerate ongoing landscape planning and restoration treatment projects on national forests and private lands.

The seven-million acre Rio Grande landscape includes 1.7 million acres of forest, of which 600,000 acres are treatable. FLN supported activities include engaging with the Fire Adapted

Communities Learning Network and working with on-the-ground federal, state, tribal and private land managers to accelerate fire and thinning treatments that build forest resilience.

While forest restoration moves forward, we also face a legacy of large and severely burned areas that continue to create flooding and debris hazards for downstream communities. To meet this challenge, the FLN is also developing a new collaborative Burned Area Learning Network, made up of scientists and other partners who are addressing the restoration of these burns.

MORE: Rio Grande Water Fund
Fire Adapted Communities

Anne Bradley
Laura McCarthy

abradley@tnc.org
lmccarthy@tnc.org

(505) 946-2038
(505) 946-2024

Charter Signatories: Rio Grande Water Fund

Albuquerque Bernalillo County Water Utility Authority
Albuquerque Metropolitan Arroyo Flood Control Authority
Arid Land Innovation
Bernalillo County
Bohannon Huston
Bosque Ecosystem Monitoring Program
Bureau of Land Management
Chama Peak Land Alliance
City of Santa Fe
Ciudad Soil and Water Conservation District
Claunch-Pinto Soil and Water Conservation District
Coronado Soil and Water Conservation District
Dekker/Petrich/Sabatini
Edgewood Soil and Water Conservation District
Forest Stewards Guild
LOR Foundation
Los Alamos County
Middle Rio Grande Conservancy District
New Mexico Acequia Association
New Mexico Association of Conservation Districts
New Mexico Business Water Task Force
New Mexico Coalition of Conservation Districts
New Mexico Department of Game & Fish
New Mexico Environment Department
New Mexico Forest and Watershed Restoration Institute
New Mexico Forest Industry Association
New Mexico Interstate Stream Commission
New Mexico Land Grant Consejo
New Mexico Land Grant Council
New Mexico Museum of Natural History and Science
New Mexico State Land Office
New Mexico Watershed and Dam Owners Coalition
Presbyterian Healthcare Services



Rocky Mountain Youth Corps
Sandoval County
Sierra Club
Souder Miller and Associates
Taos Community Economic Development Council
Taos County
Taos Land Trust
The Nature Conservancy
Town of Taos
Trout Unlimited
University of New Mexico
U.S. Army Corps of Engineers
U.S. Fish & Wildlife Service
USDA Forest Service—Region 3
USDA Natural Resources Conservation Service
Valles Caldera National Preserve
Village of Taos Ski Valley

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

Oregon Fire Learning Network

The Oregon FLN continues to focus its restoration efforts on the eight million acres of fire-adapted forest across southwest, central and eastern Oregon that have been identified as needing active restoration. Of that total, more than half is federal forestland where local collaborative groups are working together to address locally relevant barriers to increasing the quality, pace and scale of restoration.

FLN efforts in this arena include:

- development of landscape treatment prioritization strategies like the Rogue Basin Cohesive Forest Restoration Strategy;
- production and testing of innovative technologies to increase the efficiency and effectiveness of restoration treatments on the Fremont-Winema National Forest;
- development and use of new mixed-conifer forest and fire history research to guide collaborative forest restoration recommendations for the Deschutes and Rogue River-Siskiyou National Forests;
- coordination, with partners, of a Forest Restoration Implementation Efficiencies Workshop to facilitate peer-to-peer learning and sharing on cutting-edge strategies and tools to increase the quality, efficiency and cost-effectiveness of restoration treatments in southwest and eastern Oregon;

- innovative strategies and tools to increase community engagement with forest restoration and prescribed fire use to build understanding, awareness and support in southwest and central Oregon; and
- development and testing of a forest restoration dashboard to track statewide progress toward restoration goals.

Addressing the challenges in these landscapes at ecologically relevant scales is only possible by engaging with the communities and diverse partners that live in and depend on the forests for economic and social well-being. We continue to use our unique position as a trusted partner to diverse—and sometimes competing—people and organizations to bridge interests and values, explore common ground, and use innovative strategies, tools and partnerships to advance ecologically-based restoration.



Outreach efforts include unconventional partnerships (for example with Goodlife Brewing in Bend) and innovative print collateral (like beer coasters), as well as more typical media like videos and public service announcements in support of prescribed fire for forest and community resiliency.

Pete Caligiuri
Darren Borgias
Mark Stern

pcaligiuri@tnc.org
dborgias@tnc.org
mstern@tnc.org

(541) 388-3020 x 304
(541) 770-7933 x 1
(503) 802-8133

Network Landscapes

Rogue Basin
Upper Deschutes Basin
Lakeview Stewardship Unit / Fremont-Winema NF



A morning briefing before burning in the Deschutes National Forest during the May 2015 TREX.

Network & Landscape Partners

Applegate Partnership & Watershed Council
Bureau of Land Management—Medford
Central Oregon Fire Management Service
Central Oregon Intergovernmental Council
Cities of Ashland, Bend and Sisters
Deschutes County
Josephine County Stewardship Group
Klamath Tribes
Klamath-Siskiyou Wildlands Center
Lake County Resource Initiative
Lomakatsi Restoration Project
Oregon Department of Fish & Wildlife
Oregon Department of Forestry
Oregon State University Extension
Oregon Watershed Enhancement Board
Oregon Wild
Project Wildfire
Sierra Club
Southern Oregon Forest Restoration Collaborative
Southern Oregon University



The Nature Conservancy—Oregon
The Wilderness Society
Umatilla Forest Collaborative Group
Upper Deschutes River Coalition
U.S. Fish & Wildlife Service
USDA Forest Service—Forest Health Protection; Pacific Southwest Research Station; Region 6
USDA Forest Service—Deschutes, Fremont-Winema and Rogue River-Siskiyou National Forests
USDA Natural Resources Conservation Service
Warm Springs Confederated Tribes

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

Pikes Peak Fire Learning Network

Jason Lawhon

jlawhon@tnc.org

(303) 541-0331

The Pikes Peak Regional FLN is a focused on increasing public understanding of and support for the use of fire in forest management, expanding local fire management capacity and demonstrating the safe and effective use of fire in high priority landscapes.

Partners in this network build on the great work already being implemented by local organizations, including Fire Adapted Communities Learning Network efforts in Woodland Park. This is accomplished by building an effective stakeholder network, hosting public workshops on fire ecology and the use of fire for management, facilitating training opportunities for fire practitioners, and implementing prescribed fire.

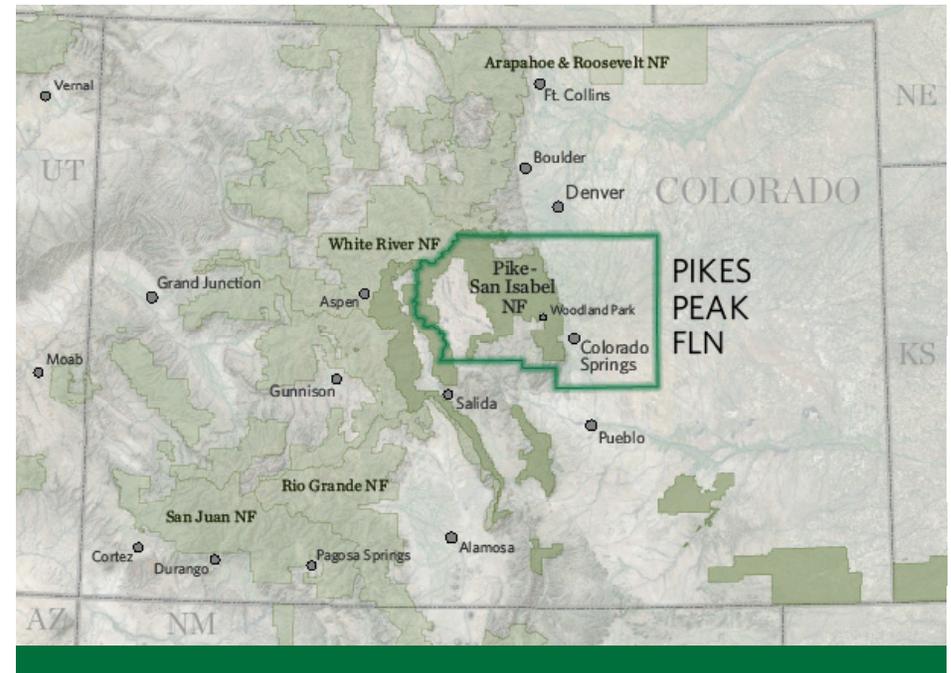
The FLN's work also builds on the accomplishments of the Upper Fountain Creek Watershed Restoration Initiative (supported by Scaling-



Two views of the Conservancy's Southern Rockies Wildland Fire Module at work on the Little Sand Fire in southwest Colorado in July 2012.

© TNC (Jeff Crandall)

up to Promote Ecosystem Resiliency), and will contribute to the goals of the Front Range Roundtable project, Colorado Prescribed Fire Council and Southern Rockies Fire Science Network.



Landscape Partners

Coalition for the Upper South Platte
Colorado Department of Natural Resources—Parks and Wildlife
Colorado Division of Fire Prevention and Control
Colorado Springs Fire Department
Colorado Springs Utilities
Colorado State Forest Service
El Paso County

Larkspur Fire Protection District
Northeast Teller County Fire Protection District
Pikes Peak Wildfire Prevention Partners
Rocky Mountain Tree-Ring Research
The Nature Conservancy—Colorado
U.S. Fish & Wildlife Service
U.S. Geological Survey
USDA Forest Service

Far left: Webster Park in the Upper Monument Creek project area. © Peter M. Brown

Left: A field tour to the project area. The Conservancy's Colorado chapter delivered a report to the U.S. Forest Service with a set of collaboratively developed, science-based management recommendations for the 67,000-acre Upper Monument Creek landscape in the FLN core project area. © TNC (Rob Addington)

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

South Central Fire Learning Network



The South Central FLN is a catalyst for restoration, supporting scientific knowledge exchanges, and the development of monitoring protocols and current and desired ecological conditions for the region. It is a long-term, diverse coalition—a community of practice—where restoration practitioners, scientists and policy makers can work together to restore and manage lands with prescribed fire and timber management techniques for the long-term health of the lands for wildlife and water quality benefits.

The regional FLN partnership has secured implementation funding from State Wildlife Grants, non-profits, private foundations and state and federal agencies for restoration and management on a portfolio of multi-ownership lands throughout the region. Since 2001, more than \$8.5 million in federal funding has been awarded to this collaborative partnership for ecosystem management across the Interior Highlands. The first project was the 60,000-acre Woodland Ecosystem Project, a demonstration project that continues to be a model for landscape-scale ecosystem restoration. The scale of both projects and implementation funding has since grown. The partnership includes two CFLRP projects—on the Ozark-St. Francis and Ouachita National Forests—that

Current Projects

- Indiana Bat Habitat Restoration Project
- Ozark Highlands Ecosystem Project (CFLRP)
- Shortleaf-Bluestem Community Project (CFLRP)

will total more than a million acres of restoration over 10 years, as well as the 80,000-acre Happy Bat Project on the Sylamore Ranger District of the Ozark-St. Francis National Forest.

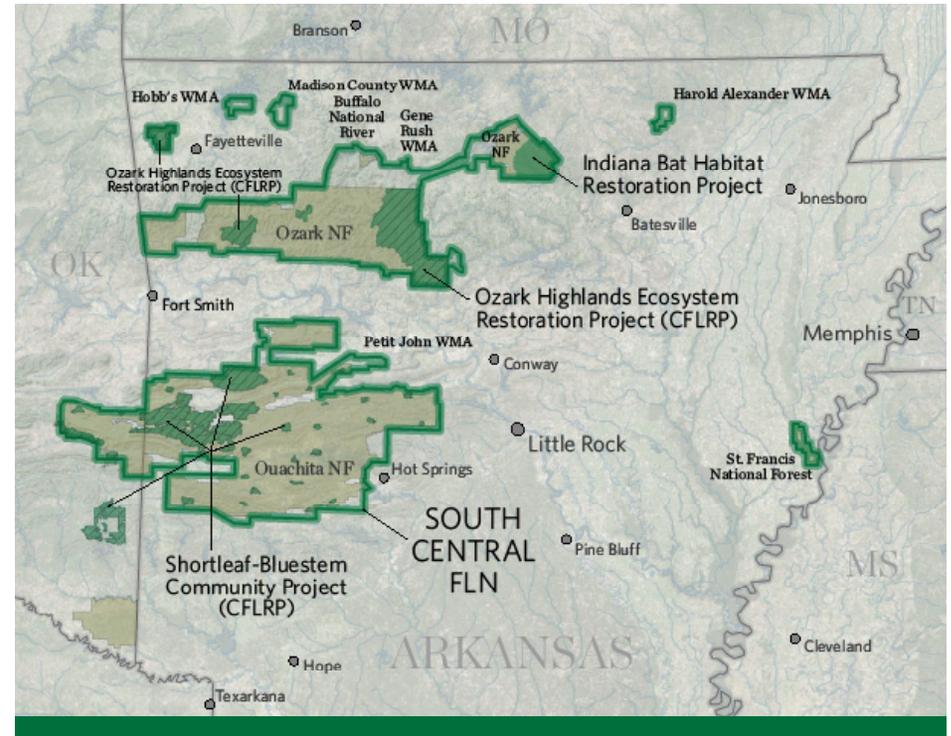
With its place at the epicenter of the range of the shortleaf pine (*Pinus echinata*), the SC FLN partnership is also playing a key part in launching and growing the new Shortleaf Pine Initiative. The Initiative has developed a range-wide conservation plan for the twenty-three states where this species and associated fire-adapted communities are in steep decline. The FLN holds regional workshops focused on shortleaf pine across its range to move this work forward.

On an ongoing basis, this FLN continues to bring partners together for field tours and learning, meetings, and project proposal development for large collaboratively based restoration projects, and to help partners institutionalize restoration programs and public demonstration areas throughout the region.

McRee Anderson
Martin Blaney
Jessica Hawkins
Steve Cole

wanderson@tnc.org
mblaney@agfc.state.ar.us
jessicamhawkins@fs.fed.us
sncole@fs.fed.us

(870) 861-5131
(877) 967-7577
(479) 964-7207
(870) 867-2101



Network Partners

- Arkansas Audubon Society
- Arkansas Forestry Commission
- Arkansas Game and Fish Commission
- Arkansas Natural Heritage Commission
- Arkansas Wildlife Federation
- Central Hardwoods Joint Venture
- National Forest Foundation
- National Park Service—Buffalo National River
- National Wild Turkey Federation

- The Nature Conservancy—Arkansas
- University of Missouri, Columbia
- U.S. Fish & Wildlife Service
- USDA Forest Service—Ouachita National Forest, Ozark-St. Francis National Forest (Big Piney Ranger District)

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

Southern Blue Ridge Fire Learning Network



Signage for #goodfire. © CAFMS (Jen Bunty)

The Southern Blue Ridge FLN (SBR FLN) is a collaborative regional network of eight landscapes encompassing 6 million acres, 3.2 million of which are managed by landscape partners. The SBR FLN engages a wide range of state, federal and private partners and scientists to inform fire and restoration needs through peer-to-peer learning. Partners work together to develop, share and apply the best available science for restoration of fire-adapted ecosystems across one of the most biologically significant regions of the country. The network includes the Grandfather CFLRP project (Central Escarpment landscape) and the Towns County Fire Adapted Communities (FAC) Learning Network site (Georgia Blue Ridge landscape).

The SBR FLN has increased the pace and scale of prescribed burning in the region, with a record 49,000 acres treated with fire in 2016. To assist with capacity, three interagency modules were funded through Region 8 of the Forest Service, and in North Carolina The Nature Conservancy hired an on-call burn crew. The FLN and CAFMS partnership also offered \$130-190 training in the SBR Escarpment to increase partner capacity. State agencies partnered with the National Park Service for a large landscape burn along the Blue Ridge Parkway. And

Network Landscapes

Central Blue Ridge Escarpment
Georgia Blue Ridge Mountains
Nantahala & Balsam Mountains
New River Headwaters
Northern Escarpment
South Mountains
Southern Blue Ridge Escarpment
Unaka & Great Smoky Mountains

the Forest Service and state agencies burned over 800 acres in the Georgia Blue Ridge landscape under their All Lands Interagency Agreement.

Increasing interagency burn planning for large burns is also important in the SBR FLN. For example, in the SBR Escarpment landscape, state agency partners in the Carolinas are planning for a burn across state lines, a first in the region. In the Unaka and Great Smoky Mountains landscape, the Forest Service and National Park Service have completed conservation forecast planning to prioritize and address fire needs that will inform partner burns in the coming years. Interagency restoration efforts are increasing between the Georgia Blue Ridge and SBR Escarpment landscapes through the Joint Chiefs funding for the Cherokee Foothills Project. Such planning would not have been possible without the foundation of recent spatial

Margit Bucher
Beth Buchanan

mbucher@tnc.org
bbuchanan@fs.fed.us

(919) 794-4368
(540) 265-5129

analyses that provided the tools and information to identify and prioritize restoration needs.

Outreach and education efforts include several Fire Learning Trails, developed in partnership with CAFMS, that first went live in the Grandfather CFLRP project area in the spring of 2016. Plans are underway for additional driving and walking tours in the SBR FLN and beyond. Grandfather partners also started using the hashtag #goodfire which has been picked up by fire managers across the world. FAC partnerships begun in Towns County, Georgia are being expanded up the Appalachians to SBR landscapes and communities in North Carolina.

Network Partners

Chestatee-Chattahoochee RC&D
Clemson University
Consortium of Appalachian Fire Managers and Scientists (CAFMS)
Foothills Conservancy of North Carolina
Forest Stewards
Georgia Department of Natural Resources—Tallulah Gorge State Park; Wildlife Resources Division (Game, Nongame)
Georgia Forest Watch
Greenville Water
Mainspring Conservation Trust
Mountain True
National Park Service—Blue Ridge Parkway, Great Smoky Mountains NP; Southeast Regional Office



North Carolina Division of Parks and Recreation—Gorges, Lake James, South Mountains, Stone Mountain State Parks
North Carolina Forest Service
North Carolina Wildlife Resources Commission
South Carolina Division of Natural Resources
South Carolina Forestry Commission
South Carolina Department of Parks, Recreation and Tourism—Devils Fork, Keowee-Toxaway, Table Rock State Parks
The Nature Conservancy—Georgia, North Carolina, South Carolina, Tennessee
The Orianne Society
Towns County
USDA Forest Service—Chattahoochee-Oconee, Cherokee, Nantahala, Pisgah, Sumter NFs; Region 8 Regional Office; Southern Research Station
Western Carolina University

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

Washington Dry Forests Fire Learning Network

More than three million acres of dry forests in central and eastern Washington need restoration. Intensifying wildfires threaten wildlife habitat, clean water, recreation and local livelihoods, and require increasingly large sums to suppress. This FLN provides leadership in the North Central Washington Forest Collaborative, Tapash Sustainable Forest Collaborative and Washington Prescribed Fire Council, which work to increase the pace and scale of restoration and increase community resiliency.

Two complementary tools can be used to restore forests and reduce the social, ecological and economic costs of wildfires: mechanical thinning and controlled burning. The key barrier to using fire to these goals is cultural, with a historically strong cultural bias against fire in the state—many see fire as too risky or as bad for people, wildlife, air and water; others view fire as wasteful, using up harvestable resources. Legislative establishment of the Forest Resiliency Burning Pilot in 2016 marks the turning of a corner and more conversations across the state about actively using and living with fire.

Prescribed Fire Council

To initiate this cultural shift, in 2010 this network took a lead role in



About 25 practitioners from partner agencies took part in a May 2016 training in preparation for a 100,000-acre Tapash Sustainable Forest Collaborative restoration project. © Hannah Letinich

expanding what was then the North Central Prescribed Fire Council into a statewide organization. The Council now brings together a diverse set of people representing clean air, homeowner, industry, policy and land management perspectives. It works to address policy barriers and support training opportunities to expand the safe use of controlled burning.

Fire Adapted Communities

The FLN is also integrating social and ecological aspects of wildland fire by engaging community members and fire professionals through a framework of fire adapted communities (FAC)—working with those living with, and those responsible for management of, fire in the wildland-urban interface. The FLN works closely with the FAC Learning Network community of Leavenworth as they test approaches for mobilizing community members in their various roles. This network also helped start the Yakima Valley FAC Coalition, complementing the long-term work of the Tapash Collaborative

Reese Lolley rlolley@tnc.org (509) 248-6697
Ryan Anderson ryan@washingtonrncd.org (509) 454-5736 x 104



Forest Landscape Restoration Project, and is facilitating development of another FAC Coalition in the upper Kittitas County area of the landscape.

Burned Area Learning Network

Recent severe wildfire seasons in Washington, with large fires across multiple jurisdictional and land use boundaries, have affected communities in ways that hamper long-term economic and ecological vitality. A variety of efforts are underway to address these effects. But with no clear consensus on the best post-fire management approaches to take, the need arose for a coalition to develop shared approaches and response capacity. To that end, this FLN is using a network learning approach through the new Burned Area Learning Network to help accelerate effective and efficient post-fire practices in burned landscapes and communities.

Landscape Partners

Bureau of Land Management
Cascadia Conservation District
Center for Natural Lands Management
Chumstick Wildfire Stewardship Coalition
Kittitas County Conservation District
Kittitas County Fire Adapted Communities Coalition
National Weather Service
North Central Washington Forest Health Collaborative
Northwest Fire Science Consortium
Okanogan Conservation District
Sustainable Northwest
Tapash Sustainable Forest Collaborative
The Nature Conservancy—Washington
U.S. Fish & Wildlife Service—Turnbull National Wildlife Refuge
USDA Forest Service—Okanogan-Wenatchee National Forest; Region 6
Washington Department of Fish and Wildlife
Washington State Department of Natural Resources
Yakama Nation—Fisheries, Forestry
Yakima County Fire
Yakima Valley Fire Adapted Communities Coalition

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

Western Klamath Mountains Fire Learning Network



The Western Klamath Mountains

FLN is focused on scaling up the use of prescribed fire by developing a community-based Type III Incident Management Team as part of the Klamath River Prescribed Fire Training Exchange (TREX) to bring good fire to all corners of the 1.2-million-acre planning area. Through the Western Klamath Restoration Partnership, we have also initiated three ambitious pilot projects—on the Salmon River, in Somes Bar and in Happy Camp. The projects demonstrate collaboratively agreed upon strategies of creating strategic fuelbreaks with manual and mechanical treatments, then implementing large-scale prescribed burns in the wildland-urban interface. Some of these projects use prescribed fire as an initial treatment to bring fire back to forests that have not seen it in over a century, while others seek to work with recent fire footprints to create resilient, landscape-scale fuelbreaks and heterogenous forests.

Extensive outreach to community members and other stakeholders has created a grassroots movement to re-shape how we manage fire in the Klamath Mountains, while at the same time saving taxpayer funds and creating resilient forests and communities.



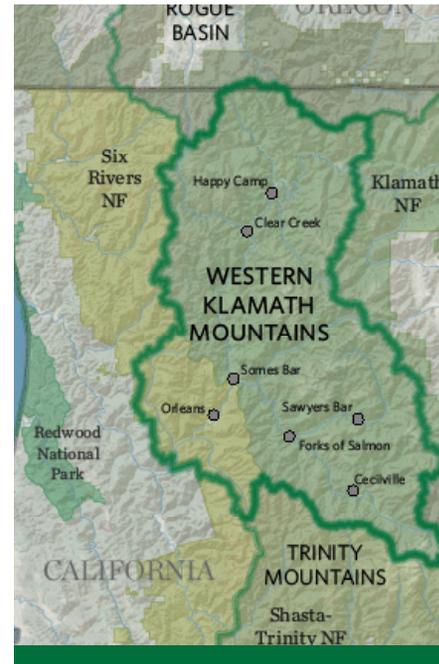
Innovative programs and products from our FLN include the Klamath River TREX that is rapidly creating co-ownership of prescribed fire; a Community Liaison Program that has greatly improved relations between fire management teams and local communities through information sharing; and a firelines geodatabase, a collaboratively developed GIS product that allows fire managers to characterize fuelbreaks across the landscape based on factors that determine when and how each should be used. We are also supporting the efforts of the Indigenous Peoples Burning Network, networking with partners to address key barriers to implementing prescribed fire at larger scales.



Will Harling
Bill Tripp

will@mkwc.org
btripp@karuk.us

(530) 627-3202
(530) 627-3446 x 3023



Landscape Partners

California Environmental Protection Agency—State Water Resources Control Board
Deer Creek GIS
Karuk Tribe—Department of Natural Resources
Mid Klamath Watershed Council
National Oceanic and Atmospheric Administration—Fisheries
Northern California Prescribed Fire Council
University of California, Berkeley
U.S. Environmental Protection Agency
U.S. Fish & Wildlife Service
USDA Forest Service—Klamath National Forest; Six Rivers National Forest
USDA Forest Service—Pacific Southwest Research Station
USDA Natural Resources Conservation Service—Fortuna Service Center; Yreka Service Center

SEE MORE

“Catching Fire: Prescribed Burning in Northern California,” highlights work by the prescribed fire council, the Karuk Tribe and the Orleans/Somes Bar Fire Safe Council.
<http://www.youtube.com/watch?v=LWriDpfZnXQ>

From the fall 2016 Klamath River TREX:

- Numerous videos (many with participant interviews) on the klamathmedia YouTube channel: https://www.youtube.com/channel/UCogIL7tRYooQEGp_CW_izvQ
- Interview on Jefferson Public Radio: <http://ijpr.org/post/fire-training-fire-prone-klamath#stream/0>

Top: A temporary sign alerted drivers to prescribed burning during the fall 2015 Klamath River TREX. © TNC (Jeremy Bailey)
Left: Supporting cultural resources, including food and fiber, was an important objective of the East Simms burn, conducted during the fall 2016 Klamath River TREX. © Stormy Staats

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

