

FLN Networker No. 155: April 2, 2014

The FLN Networker is a publication of the Fire Learning Network—a partnership of the USDA Forest Service, Department of the Interior (BIA, BLM, National Park Service, US Fish & Wildlife Service) and The Nature Conservancy—intended to foster communication within the network and among its friends. Submit comments, links and subscription requests to Liz Rank.

For more about the FLN, visit www.conservationgateway.org/fln or contact Lynn Decker.

News from the Field

Fire Adapted Communities Learning Network: The **FAC Network** has just brought on **ten new members**—pilot communities and their hub organizations—bringing the total number to 18. The new communities are in Arizona, California, Colorado, Florida, Idaho, Montana, New Jersey, Oregon and Texas. For more information (including a map and links to the hub organizations), see the [story](#) about the expansion on the **network's new blog**.

All FAC practitioners are encouraged to **visit the blog** (www.facnetwork.org) and **sign up** for e-mail updates, learn about FAC Learning Network participants and activities, and **contribute** to online discussions

Arkansas: After TNC-Arkansas staff visited Zambia in 2010 and 2012, they have reciprocated, **hosting four Zambian fire managers** on a **staff exchange** last month. In the report on the trip (attached), the first item under “Application to the Zambia Scenario” is the note that “**enhanced collaboration amongst various stakeholders** will promote use prescribed burning for the management of our ecosystems.” For more information, contact **McRee Anderson** (wanderson@tnc.org).

California: A quick summary of the recent planning workshop in **FireScape Mendocino**—including the landscape **vision and the conservation targets** they've identified—can be found in the attached *Notes from the Field*.

Nebraska: The **media field day** at the **first prescribed fire training exchange of the season**, in Nebraska's **Niobrara Valley**, yielded some good coverage in local papers—the reporters clearly had a great learning experience on the fire, and told **excellent stories** that reflected this. Articles from the [Ainsworth Star-Journal](#) and [Valentine Midland News](#) are available online. There is also a good **radio interview** about this event, where **Jeremy Bailey** spoke with [KBRB radio](#).

Nebraska: The **second prescribed fire training exchange of the season** is underway in the **Lower Loup** area of Nebraska. Because of windy weather, participants were engaged in non-burning learning experiences on Friday when they saw smoke. Their **offer to assist** local responders was accepted, and so they proceeded to help contain what became a **7,000-acre grass fire**. The local **TV news** heard about them there, and did a nice [story on the prescribed burning](#) they're doing.

North Carolina: A [recording](#) of the **restoration needs analysis webinar** presented by **Marissa Ponder** (marissa.ponder@duke.edu) for the **SBR FLN** last week is now available. For more information about this project on the Nantahala-Pisgah National Forest, see the [project page](#) on the Conservation Gateway (which includes a link to the latest version of Josh Kelly's report (December 2013)), or contact **Megan Sutton** (msutton@tnc.org).

Virginia: FLN partners conducted their **first cooperative burn in Douthat State Park** recently. Some details and photos of this Scaling-up to Promote Ecosystem Resiliency (SPER) project are in the attached *Notes from the Field*. More burning is getting underway this week, as the **Central Appalachians** hosts its first **prescribed fire training exchange**.

Opportunity for Input: Quadrennial Fire Review

Quadrennial Fire Review: Every four years the state of wildland fire management is assessed in a **joint effort** of the U.S. Forest Service, Bureau of Indian Affairs, Bureau of Land Management, Fish & Wildlife Service, National Park Service and other state, local, tribal and NGO partners to identify impacts and inform strategies that will help address some of its most difficult challenges. You are invited to help **identify future challenges, risks and opportunities** in five areas:

- Changing climatic conditions' effects on landscapes
- Evolving risk in public and firefighter safety
- Water quality & quantity
- Technology and program infrastructure
- Wild card issues—what else aren't we seeing?

To share your forward-thinking ideas about the **future of wildland fire management**, visit <http://qfr.ideascale.com> before **April 11**. You can also **read others' suggestions** there.

Resource: Results Chains

Results Chains: The **Conservation Measures Partnership** has unveiled a new [Conservation Actions and Measures Library](#), an open-source **library of Miradi results chains** for the most common conservation actions. Each action contains a generic results chain, as well as standard objectives and indicators. These can be used as **starting points for developing your own** specific results chains, and can also form the basis for selecting common indicators to assess action effectiveness.

Articles & Reports: Spatial Optimization / Birds & Habitat

Spatial Optimization: Modeling work of **Alan Ager** is featured in the latest Forest Service "Science Findings" [report](#). His **models** take into account **budget** factors (i.e. that constrain treatment sizes) as well as the **multitude of possible objectives**—which may call for very different approaches—to allow managers to explore options on a **large scale**, such as a national forest.

Birds & Habitat: Authors of the [article](#) "Breeding Bird Response to Habitat and Landscape Factors across a Gradient of Savanna, Woodland, and Forest in the Missouri Ozarks" found that "bird densities were more strongly related to **habitat structure, fire history, and landscape composition** than simply whether a site was managed or non-managed."

Reports—Climate Change: AAAS / IPCC

AAAS: An **American Association for the Advancement of Science** committee released a new report on global warming a couple of weeks ago. According to a *New York Times* [article](#) about it, "For anybody who was already paying attention, the report contains no new science. But the **language ... is sharper, clearer and more accessible** than perhaps anything the scientific community has put out to date." It also shows "a recognition among scientists that they bear some responsibility for the confusion—that their well-meaning attempts to convey all the nuances and uncertainties of a complex field have obscured the core message about risks. The report reflects their resolve to try again, by clearing the clutter." As the report itself puts it, "... we present **key messages for every American** about climate change."

The authors also make a concise statement of the **role of science in such issues**: "As scientists, it is **not our role to tell people what they should do** or must believe about the rising threat of climate change. But we consider it to be **our responsibility** as professionals to ensure, to the best of our ability, that **people understand what we know**: human-caused climate change is happening, we face risks of abrupt, unpredictable and potentially irreversible changes, and responding now will lower the risk and cost of taking action."

If you're ever required to communicate about climate change, the [report](#) ("**What We Know**") is well worth a read—it is written in (mostly) plain English, with good use of metaphors (steroids & home runs; the 2008 economic bubble collapse). Various supplemental materials are available on the website <http://whatwewknow.aaas.org/>.

IPCC: The **Intergovernmental Panel on Climate Change** released a **final draft of its latest report** summarizing climate science on Monday. Now available is a [suite of draft documents](#), sorted by system/sector and geography; also available are a [press release](#) about the report and [an article](#) in the *New York Times*, which calls the report "the **most sobering yet**" issued by the panel. The final published version of the report will be available in the fall.

In the News: Restricting Risk

Restricting Risk: Though avoiding building in areas at high risk for flood, hurricane—or wildfire—seems like a great idea, the *New York Times* [article](#) "**No Easy Way to Restrict Construction in Risky Areas**" lays out some of the pitfalls of putting it into practice.

Just for Fun: Fire Whirl

Yikes: A fire whirl—with lots of flying vegetation—was [caught on video](#) during a prescribed burn in Colorado. (You may wish to turn the sound off.)

Webinars

April 9

Predicting Local Smoke Dispersion during Low-Intensity Wildland Fires in Forested Environments

noon Pacific / 1:00 Mountain / 2:00 Central / 3:00 Eastern

Warren Heilman will present this JSFP / IAWF / Wildland Fire LLC webinar.

Information: <https://www1.gotomeeting.com/register/463246376>

April 16
new listing

The Southwest Fire Season: 2013 Overview and 2014 Outlook

noon Pacific / 1:00 Mountain / 2:00 Central / 3:00 Eastern

This Southwest Fire Science Consortium webinar will review the eight largest fires of 2013 in the Southwest, based on the recent report from ERI and SWFSC. Chuck Maxwell, meteorologist with Predictive Services, will also discuss the 2014 outlook for the Southwest. (If you are not familiar with Predictive Services modeling methods, [view the video](#) on their methodology before the webinar.)

Register: [https://www.eventbrite.com/e/the-southwest-fire-season-2013-overview-and-2014-outlook-registration-](https://www.eventbrite.com/e/the-southwest-fire-season-2013-overview-and-2014-outlook-registration-11156903599?utm_campaign=6fb41be808-fire_season_webinar)

[11156903599?utm_campaign=6fb41be808-fire_season_webinar](https://www.eventbrite.com/e/the-southwest-fire-season-2013-overview-and-2014-outlook-registration-11156903599?utm_campaign=6fb41be808-fire_season_webinar)

April 17

GIS Migration from Desktop to Web

10:00 Pacific / 11:00 Mountain / noon Central / 1:00 Eastern

In this Southern Fire Exchange webinar, Justin Shedd will discuss natural resource management examples and lessons from moving GIS applications from the desktop environment to a web platform.

Log on: <https://ufifas.adobeconnect.com/a1048984014/r6r7ew5iz58/>

April 23

Customizing Data (LANDFIRE)

9:00 Pacific / 10:00 Mountain / 11:00 Central / noon Eastern

In this Northern Rockies Fire Science Network / Southern Rockies Fire Science

Network offering, Don Helmbrecht will look at how one can use LANDFIRE Data in the Rockies Region, with a focus on fuels examples.

Register: <https://www.eventbrite.com/e/landfire-northern-southern-rockies-fire-science-networks-customizing-data-registration-10555438601>

May 15

Remote Fire Monitoring

7:00 Pacific / 8:00 Mountain / 9:00 Central / 10:00 Eastern

In this webinar of the Cherokee NF Landscape Restoration Initiative, **Rob Klein** (regional fire ecologist, National Park Service) will discuss tools being used in the Smokies and explain the efforts to learn more about how best to put them to use.

Marek Smith (Allegheny Highlands program director, The Nature Conservancy—VA) will share his FLN experiences with the tools on the George Washington NF. FLN members and partners are invited to join the webinar.

Log in: <https://nethope.webex.com/nethope/j.php?MTID=m8dad8817a781538ba837365ed5fe30c>

FLN Workshops

April 15-17

Klamath Fire Ecology Symposium / Orleans, CA

The fourth Klamath fire symposium will focus on the nexus between fire science and fire management in the Western Klamath Mountains, and how it relates to people and place. Online registration is now open.

Information: <http://www.mkwc.org/programs/fire-fuels/klamath-fire-ecology-symposium/>

April 23
new listing

Fire Science Field Day / Redwood National Park, CA

The California Fire Science Consortium, Redwood NP, UC Cooperative Extension and Northern CA Prescribed Fire Council are hosting this field tour, which will focus on research and management in the Bald Hills, with a special emphasis on tree mortality and fire (including small conifer mortality during prescribed fire; using fire to thin second growth; and interactions between drought, tree stress, and fire management).

Information: see attached flyer

April 24

Georgia Blue Ridge Landscape / Blairsville, GA

Information: **Malcolm Hodges** (mhodges@tnc.org)

April 28-30

Western Klamath Mountains / Happy Camp, CA

In the sixth workshop in their Open Standards series, network participants will focus on implementation planning and monitoring for adaptive management

Information: **Mary Huffman** (mhuffman@tnc.org)

May 13
new listing

Parashant Partnership / St. George, UT

Partners will also meet by phone conference on April 11 and June 3.

Information: **Eli Lauren-Bernstein** (eli.bernstein@nau.edu)

May 20-22
updated

Southern Blue Ridge FLN / Cashiers, NC

Register by **May 1** to reserve a space at this workshop, themed “Managing Lands with Multiple Objectives: How does Fire Fit in?”

Information: <http://sbrflnworkshop9.weebly.com/> or contact **Helen Mohr** (helen@cafms.org)

Training, Conferences & Workshops

April 2-3

New Mexico Wildland Urban Interface Summit / Taos, NM

Subtitled, "Creating Fire Adapted Communities," this summit will include a session on the Fire Adapted Communities Learning Network on the first day. The second day will have concurrent sessions for community members, leaders, and incident response.

Info: <https://www.regonline.com/builder/site/Default.aspx?EventID=1483287>

April 8-9

Central Oregon Fire Science Symposium / Bend, OR

April 10

Oregon Prescribed Fire Council

The first meeting of this new prescribed fire council will be held in conjunction with the Central Oregon Fire Science Symposium at OSU.

Info: <http://centraloregonfiresymposium.org/> or oregonrxfirecouncil@gmail.com

April 16-17

Colorado Wildland Fire Conference: The True Cost of Wildfire / Glenwood Springs, CO

This conference is intended for planners, municipal managers and elected officials from the Colorado Western Slope, eastern Utah and southern Wyoming. SAF continuing education credits will be available.

Information: <http://www.wildfire-colorado.com/>

**April 30-May 1
updated**

Relationships between Fire Management and Quality of Foraging Habitat for Bats: A Workshop for Scientists and Managers / Mammoth Cave NP, KY

This workshop will feature a synthesis of JFSP research on the topic, and is aimed at land stewards and scientists across the Appalachians and Oak Woodlands consortia. Full details and registration information are now online.

Information: <http://www.cafms.org/node/74>

**May 5-8
new listing**

Ignition Planning & Prescribed Fire Techniques for Wildlife / Jacksonville, FL

The Wildlife Society (Florida chapter), Florida Forest Service, and Florida Fish and Wildlife Conservation Commission will host this training for foresters, wildlife biologists and land managers. The training combines classroom lectures, panel discussions and field exercises, and includes sections on developing and implementing ignition plans to meet wildlife objectives while minimizing risk.

Information: <http://www.fltws.org/new-events/2014/5/5/ignition-planning-prescribed-fire-techniques-for-wildlife>.

May 19-23

Large Wildland Fires: Social, Political & Ecological Effects / Missoula, MT

This conference will be co-hosted by the Association for Fire Ecology and the International Association of Wildland Fire.

Information: <http://largefireconference.org/>

**September 16-18
new listing**

State-and-Transition Simulation Modeling Conference / Ft. Collins, CO

Co-sponsored by the USGS, TNC and Apex Resource Management Solutions, there will be an optional one-day training on ST-Sim software, and two days of presentations on modeling land use/land cover change; forest, rangeland and wetlands management; fuels planning; ecological restoration; invasive plant management; wildlife habitat management; climate change and carbon modeling, and discussion of future directions for STSM tool development. This is a chance to learn who's doing what (and how), and provide input for future developments.

Information: www.stsm2014.org

Send News, Links & Comments

Lynn Decker – ldecker@tnc.org – Lynn is in Taos, NM April 1-4; Boulder, CO April 14-18.

Jeremy Bailey – jeremy_bailey@tnc.org – Jeremy is in Virginia April 6-13.

Wendy Fulks – wfulks@tnc.org – Wendy is out April 4 and April 10-14.

Mary Huffman – mhuffman@tnc.org – Mary is in Portland April 15-17.

Heather Montanye – hmontanye@tnc.org – Heather is in the office.

Guy Duffner – gduffner@tnc.org – Guy is in the office.

Liz Rank (Networker Editor) – lrnk@tnc.org – Liz is in the office.

To stop receiving the FLN Networker, please reply to this message and include your request in the body of the message.

Full Links

News from the Field—Niobrara TREX—Newspaper:

<http://www.etypeservices.com/SWF/LocalUser/Ainsworth1/Magazine49161/Full/index.aspx?id=49161#/1/zoomed>

Radio: <http://www.kbrbradio.com/audio%20clips/Jeremy%20Bailey%20Fire%20Training%203-12.mp3>

News from the Field—TREX TV: <http://www.khastv.com/story/learning-through-fire-20140328>

News from the Field—SBR webinar: <https://nethope.webex.com/nethope/lsr.php?RCID=59dfff19de374e94b17de8c73a199624>

Needs analysis webpage: <http://www.conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/NetworkProducts/Pages/SBR-Rest-Need.aspx>

Resource—Results chains library: <https://www.miradishare.org/>

Articles & Reports—Spatial optimization: <http://www.fs.fed.us/pnw/sciencef/scifi159.pdf>

Reports-Climate Change—AAAS report in NYT: http://www.nytimes.com/2014/03/18/science/scientists-sound-alarm-on-climate.html?ref=science&_r=0

Report itself: <http://whatweknow.aaas.org/wp-content/uploads/2014/03/AAAS-What-We-Know.pdf>

Reports-Climate Change—IPCC: <http://ipcc-wg2.gov/AR5/report/final-drafts/>

New York Times article: http://www.nytimes.com/2014/04/01/science/earth/climate.html?hp&_r=0

In the News—Restricting risk: <http://www.nytimes.com/2014/03/29/us/governments-find-it-hard-to-restrict-building-in-risky-areas.html>

Just for Fun—Fire whirl: <http://youtu.be/wcUnE0tHcal>

The Fire Learning Network is supported by *Promoting Ecosystem Resiliency through Collaboration: Landscapes, Learning and Restoration*, a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior.

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Zambia – Arkansas

FIRE STAFF EXCHANGE PROGRAMME



8th – 19th March 2014



1.0: Introduction:

The Nature Conservancy (TNC) – Arkansas Chapter and the Zambia TNC, have partnered with the Government of Zambia through Zambia Wildlife Authority (Kafue National Park), Zambia Environmental Management Agency (ZEMA) and the Forestry Department (FD) in the implementation of fire management activities that will ensure the ecological dignity of protected areas in selected parts of the country. In this regard, TNC has facilitated and held exchange visits with ZAWA in Kafue National Park (KNP) in 2011 and 2012. The aim of these visits was to review fire management strategies for KNP and expose ZAWA staff to various techniques and equipment used in fire management. Issues of carbon sequestration and stakeholder involvement in fire management were also discussed.

The purpose of the exchange visit was to assist the staff from ZAWA, ZEMA and the Zambia Forestry Department with the continued development of fire ecology, fire management planning and specific skills associated with controlled burning, and its application in woodlands and savanna ecosystems, taking into account the similarities in the ecosystems found in Arkansas and Zambia.

This report highlights observations and lessons learnt on a follow up training fire management for 4 Zambians held in Little Rock, Arkansas (USA) between 7th March to 20th March 2014. TNC Arkansas Chapter and the Zambian Programme invited two ZAWA officers from the Kafue National Park, one officer from the Forestry Department, Kazungula District and one officer from ZEMA which regulates environmental activities including those related to land degradation due to unplanned fires.

TNC Arkansas Chapter uses fire to manage different types of ecosystem



Rick Evans Grandview Prairie managed by TNC on behalf of US Forest Service

mainly to restore degraded areas. TNC owns some land where fire is used as a management tool, in the restoration and conservation of nature. It also provides technical support to various partners such as the US Forest Services, the Arkansas State Heritage Commission; and the Fish and Game Commission.

2.0: Exchange Participants

Zambian Participants

- Mr Clive Chifunte, Zambia Wildlife Authority
- Mr Luke Zyambo, Zambia Wildlife Authority
- Mr Gift Sikaundi, Zambia Environmental Management Agency
- Ms Josephine Mbewe, Zambia Department of Forestry

The Nature Conservancy Staff

- McRee Anderson – TNC/Arkansas
- Mike Melnechuk – TNC/ Arkansas
- Roger Mangham – TNC/ Arkansas
- Douglas Zollner – TNC/Arkansas

3.0: Goals and Objectives of Exchange visit

The goal of this exchange visit was to assist the Zambia Wildlife Authority, the Zambia Environmental Management Agency, Forestry Department and other partner's country wide in the development of fire ecology, fire management planning and other skills associated with controlled burning and how these would be applied in the restoration of woodlands and savanna ecosystems. It has been noted that similarities do exist in the vegetation types of the Arkansas Prairies and the Savannas of Zambia, and therefore, lessons learnt in the use of fire for restoration and conservation of nature in Arkansas would be applicable in Zambia. The following were specific objectives:

- To review current and projected fire management programs in Zambia, particularly in the Kafue national park
- To begin formulating the basic ecological components and processes that make up the fire adapted ecosystem managed by ZAWA

- To visit sites in Arkansas where fire is being used as an ecological management tool for increasing biodiversity and maintaining sustainable resources including wildlife management
- To review the prescribed burn process, i.e components of the burn plan
- To participate in the prescribed burns in woodlands and savannas and other fuel models in Arkansas
- To develop skills associated with post fire effects monitoring
- To build relationships between fire managers, coordinators and other personnel involved in fire management
- To develop a new fire management plan which breaks the park into fire management blocks
- To develop the Kafue National Park into an international fire management learning center

4.0: Objectives of fire management activities in Arkansas

Prescribed burning activities in Arkansas State are done for the purpose of achieving various management objectives which are mainly focused at restoration of indigenous ecosystems, conservation of nature; and research and development. Some of the lessons learnt in the various activities were:

4.1 Planning of Prescribed burning activities

- The team learnt the importance of having specific objectives for any burning operation. The objectives would then guide the timing and frequency of burning in a given habitat. Planning burning operations also takes into consideration weather parameters and resource availability. Planning includes communication with other stakeholders and parties, especially those that would be affected during burning operations. These would need to be communicated to prior to any burning activity.
- Communication amongst crew members form an important aspect of prescribed burning as crews got briefing prior to and after any burning activity. This enables them to coordinate throughout the burning operation and also to evaluate the activity. Roles and responsibilities are assigned to all members participating in the burning activity.

4.2 Ecological restoration of ecosystems

- **Restoration of the grassland ecosystem in Grand View Prairies:** Fire in this ecosystem is used to enhance the growth of native grass by inhibiting growth and spread of the invasive Red Cedar species. The Red Cedar species forms a thicket that would suppress growth of grass. It was observed that this intervention has resulted in native grass regeneration, thereby causing an increase in biodiversity. Rotation burning is done in blocks to promote growth and establishment the preferred grass species and to leave enough forage for game animals.



Grandview prairies that have been restored using fire management

- **Restoration of food lots at Hope Upland Wildlife Management Area:** The Native Warm Season Grass Project (NWGP) is managing Pine-Oak woodland ecosystem aimed at maintaining food lots by eliminating non native grass and replacing it with native grass. The ultimate goal is to maintain game animal populations and sustain game viewing and hunting. Fire in conjunction with herbicides is used to kill of the foreign grass in the food lots, and indigenous grass replanted for wild life.
- **Restoration at Ozark and Ouachita National forests:** The Ecosystems in these national forests are restored through forest thinning, reduction of the mid storey by cutting and burning in three (3) to four (4) year cycles. This aims at

maintaining short-leaf pine and the blue stem grass habitats in the National forests. Fire is also used to maintain the habitat for Turkey and the habitat for the Red-cockaded Wood Peckers in the Ouachita National Forest. which is a protected bird species in the Ouachita forest. The use of fires in these habitats has resulted in increased biodiversity, increased numbers of red-cockaded wood peckers, Turkeys and other biodiversity.

- **Middle Fork Barrens Natural Area:** This is a state heritage site owned by the Arkansas Natural Heritage Commission. The site has glades with unique vegetation protected by the State. Prescribed burning is used to protect the unique glades from encroachment by the Red Cedar, therefore the burning objective is to protect these glades. The team observed that prescribed fires has successfully restored and preserved these glades.



Creating a fire guard using a blowing machine to protect the glades

4.3 Use of Local Taxes to fund conservation:

Arkansas state has devised a tax system where $1/8^{\text{th}}$ of the tax component of all sales is directed towards conservation of nature in the state. This ensures availability of finances aimed at nature conservation activities, which include use

of fire for conservation and restoration of habitats. This approach could be a potential source of financing for our protected areas such as introduction of conservation taxes through hunting licenses, charcoal production, fishing activities, etc

5.0 Research and Monitoring (Post burning evaluation)

The team was exposed to various aspects of research and post burn evaluation techniques that are being used in the various ecosystems that are under management. Aspects learnt in different ecosystems were:

- *Ouachita National forest*: Plots have been created in the forest to enable monitoring of fire effects on the forest. Parameters monitored include plant diversity and richness. A control plot has also been set within the forest to provide control information
- The US Forest Service has devised a policy for Postgraduate graduate students that encourage conduction of various ecological research activities within these ecosystems. Such research works enables management to make informed forest management and ecosystem restoration decisions.
- The Zambian team learnt that the post-burn monitoring was done 3-4 days after the burn to ensure that sufficient time had elapsed after the fire to allow leaf scorch to appear but before sprouting could occur. In addition to this two transects are walked through the burn unit and the burn severity data is collected at every 25cm along the transects. The transects are oriented so that the greatest variety of plant communities, fuel models, and topography is evaluated. The transects should probably not be parallel unless that is the best way to capture the greatest variation in the burn unit.
- It was also learnt that at each point of 10m radius a circular plot is defined, and observations are recorded on scorch percent for the over-storey, mid-storey, scorch height, char height and degree in over-story. Also within a 5m radius observations are recorded on the burn severity of the organic substrate and vegetation. This is done to determine whether the objective of the burn was achieved. The ecological objective of the burn should be listed and accompanied by numerical and narrative results and these objectives should come out clearly in the burn plan with an overall summary of the effects of the burn concluding the report.



Post burning evaluation at the Middle Forks Barrens Natural Area

6.0 Institutional Partnerships in resource management

The visiting Zambian team learnt that institutional partnership has been a key strategy in the management of natural resources and conduction of prescribed burning in the restoration and conservation of nature in the State of Arkansas. This allows pulling of resources and expertise from various stakeholders in natural resources management. In this manner, Stakeholders collaborate easily and have the sense of responsibility in all natural resources projects in the State. Some of the key partners TNC works with are: the US Forest Service (USFS); the Arkansas Game and Fish Commission; the Forestry Commission; the Arkansas Natural Heritage Commission and many others.



US Forest Service staff explaining importance of partnership with TNC and other partners in the management of *Ouachita* National Forest

7.0 Equipment

The team saw a variety of fire management equipment that increases efficiency and effectiveness in fire management. The country should invest in this kind of equipment, if wild fires have to be properly managed in Zambia.



The ZAWA exchange participants looking at fire equipment on the RTV

7.0: Application to the Zambia Scenario

- i. Enhanced collaboration amongst various stakeholders will promote use prescribed burning for the management of our ecosystems.
- ii. Creation of burning blocks and fire management objectives for each vegetation type will help maintain the ecological dignity of the protected areas.
- iii. Importance of signage for public awareness and outreach.
- iv. Improvement of road infrastructure to easy the fire management operations.
- v. Restoration of degraded areas such as GMAs and areas affected by invasive plants, maybe achieved by proper use of fire management. This strategy could be tried in Lochnivar National Park, to fight the Mimosa Pigra.
- vi. Early burning practices which will support the regeneration of big trees especially in the northern parts of the country, where most of the big trees have been cut.

7.0: Recommendations

1. Legal framework for fire management at national level should be established, to address issues of bush fires in both on protected and customary land.
2. Revising the Fire Management Plan in KNP that will localize fire management efforts in specific habitats
3. Creating an education and research centre for fire management at KNP
4. Implementing fire burning techniques using blocks especially in protected areas.



Fire Learning Network Notes from the Field

Blue Lake, California

FireScape Mendocino Workshop 2

February 2014

Thirty-four stakeholders in the FireScape Mendocino landscape met on February 19 and 20 for the second planning workshop in a series using the Open Standards for the Practice of Conservation. At this workshop, participants:

- solidified the project’s geographic scope, vision statement and targets, based on the homework completed following the first workshop;
- identified the “key ecological attributes” of the targets, and assessed their current viability;
- used case study maps to explore where the targets occur on the landscape; and
- conducted a threats analysis for each target, including threat rankings.

The next steps for the group will be to develop strategies and action plans. The core team is also considering its first fuel reduction project.

We need people...

- ... With local community perspectives
- ... With Timber & Ranching experience
- ... Who enjoy outdoor recreation (camping, hunting, hiking, OHV, etc.)
- ... With perspectives on living with wildfires
- ... Who manage land - whether its a ranch, timberlands or their backyard
- ... With thoughts about community and landscape planning
- ... With enthusiasm and an interest in the future of our local landscapes

The flyer for this workshop successfully called for participation from a wide range of stakeholders in the landscape.

For more information, contact:

Mary Huffman
mhuffman@tnc.org

Participating Agencies & Organizations

- Blue Ribbon Coalition*
- Bureau of Land Management—Ukiah Office*
- California State Parks, Off-Highway Motor Vehicle Recreation Division*
- California Wilderness Coalition*
- Congressman Doug LaMalfa’s office*
- Earth Island Institute*
- Lake Pillsbury Homesite Association*
- Paskenta Band of Nomlaki Indians*
- Robinson Rancheria Pomo Indians*
- Sierra Pacific Industries*
- South Lake Fire Sirens*
- Spring Valley Campground Committee*
- Sunflower Coordinated Resource Management Plan*
- Tehama County Resource Conservation District*
- Tuleyome*
- USDA Forest Service—Mendocino National Forest*
- USDA Natural Resources Conservation Service*
- West Ecosystems Analysis*
- Westlake Resource Conservation District*
- Yolo Audubon Society*

The Fire Learning Network is supported by *Promoting Ecosystem Resiliency through Collaboration: Landscapes, Learning and Restoration*, a cooperative agreement between The Nature Conservancy, USDA Forest Service and agencies of the Department of the Interior. For more information about the FLN, contact Lynn Decker at ldecker@tnc.org or (801) 320-0524.

Landscape Vision: A resilient landscape providing well managed resources with sustainable habitats for people and animals while supporting the social and economic needs of our communities.

Shared Landscape Values (Targets):

- Fire-resilient forest mosaic
- Fire-adapted human communities
- Cultural heritage: past, present and future
- Economic opportunities based on a working forest landscape
- Outdoor recreation opportunities
- Riparian and aquatic habitat, species and function
- Water quality and quantity
- Terrestrial species, structure and function



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Fire Learning Network Notes from the Field

Blue Suck Controlled Burn Douthat State Park

Bath County, Virginia

March 2014

In the Central Appalachians FLN, 36 staff from five agencies conducted the partnership’s first-ever burn in Douthat State Park on March 24 as part of their work under Scaling-up to Promote Ecosystem Resiliency (SPER). The burn was conducted to control encroachment of undesired trees species and promote regeneration of oaks, pitch pines and

fire-dependent species such as Table Mountain pine. The 175-acre Blue Suck burn—named for a prominent waterfall—took place near one of the most popular trail sections in the park; with 250,000 visitors a year at the park, the effects of the burn should provide excellent forest restoration outreach opportunities in the coming months and years.

Participating Agencies

- The Nature Conservancy
- USDA Forest Service
- Virginia Department of Conservation and Recreation
- Virginia Department of Game and Inland Fisheries
- Virginia Department of Corrections



Burn boss Sam Lindblom (fire manager for TNC VA) led the morning briefing covering safety precautions, communications, burn objectives and assignments. *Marek Smith/TNC*

Fire is as much a part of the natural processes as rain. Like rain, fire can be beneficial or damaging depending on its strength and duration. Our goal is to use controlled burns to safely reintroduce fire into ecosystems for their restoration and enhancement.
Al Cire, Resource Specialist, Virginia State Parks



Division B holding crew held its briefing after the main briefing. This team was responsible for monitoring and holding fire lines on the southern edge of the burn. *Marek Smith/TNC*



Nikole Swaney and Sam Truslow welcomed perfect mop-up weather—two inches of snow the day after the burn. *Sam Lindblom/TNC*



Staff ignited the burn by hand with drip torches, after members of the ignition team—Ryan Klopf (VA DCR), John Moncure (USFS), Nikole Swaney (TNC) and Tyler Urgo (VA DGIF)—went over the ignition plan. *Marek Smith/TNC*



Top: Members of the fire team monitor burn progress in a section of pine-oak heath habitat. *Bottom:* View of the Blue Suck burn from across Douthat Lake, a poplar feature in the highly visited state park. *Katie Shepard/VA State Parks*

For more information, contact:

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The CA Fire Science Consortium, Redwood National Park, UC Cooperative Extension, & the Northern CA Rx Fire Council present



Redwood National Park Fire Science Field Day



April 23, 2014, 10 am – 4 pm

Redwood National Park has the most active burn program in the North Coast, which makes it a perfect place to learn about fire effects and the long-term success of restoration efforts. Join us on April 23rd to explore the park and find out more about the research and management that's going on there!

Description

This field tour will focus on restoration, research, and management taking place in the Bald Hills of Redwood National Park. The Bald Hills are home to 4,000+ acres of oak woodlands and prairies, and they are ringed by conifer forest. Park staff have used fire for over 20 years to restore and maintain the prairies and woodlands, and they've recently been exploring the use of fire for thinning the surrounding second-growth stands.

Field tour themes:

- **Using fire and mechanical treatments to restore prairies and woodlands**
- **Killing small conifers with Rx fire: what do we know?**
- **Using fire to manage second growth: new research in RNP**
- **Considering drought-related tree stress in fire management planning**

Field tour hosts will include Eamon Engber, Fire Ecologist with RNP; Phil van Mantgem, Research Ecologist with USGS; John McClelland, Rx Fire/Fuels Tech with RNP; and Lenya Quinn-Davidson with UC Cooperative Extension/CA Fire Science Consortium/Nor Cal Rx Fire Council

Logistics

This event is free!

To sign up,
email Lenya at
lquinndavidson@ucanr.edu
by April 21, 2014

Bring water, lunch, and
hiking shoes for the field

Check out other CFSC
events and resources at
www.cafiresci.org

Hope to see you there!

