6th International

Fire Ecology and Management Congress

Advancing Ecology in Fire Management

Knowledge Transfer through
Workshops, Presentations, and Meetings

Association for Fire Ecology

16–20 November 2015
Wyndham Riverwalk Hotel
San Antonio, Texas, USA

FIRE CONGRESS COMMITTEE MEMBERS

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Karen Stafford, Texas A&M Forest Service (Co-Chair)
Catia Juliana, Association for Fire Ecology
Timothy Ingalsbee, Association for Fire Ecology
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Leda Kobziar, University of Idaho
Citlali Cortés Montaño, AFE Latina, KfW México Office
Micah-John Beierle, Association for Fire Ecology
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Seth Pearson, Texas Parks and Wildlife Department
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Ron Masters, University of Wisconsin, Stevens Point
Tom Waldrop, US Forest Service Southern Research Station
McRee Anderson, The Nature Conservancy
Deanna Boesch, National Park Service
Mark Kaib, US Fish & Wildlife Service
Colin Campbell, Student Association for Fire Ecology (SAFE)
Mike Lloyd, Texas Parks and Wildlife Department

Program Details

Opening Plenary Sessions Coordinator: ***Brian Oswald, Karen Stafford, Bob Gray,*** and ***Citlali Cortés Montaño***
Closing Plenary Coordinator: ***Brian Oswald***
Poster Session Coordinator: ***Randy Balice***
Banquet Coordinator: ***Neil Sugihara***
Attached Meetings Coordinator: ***Geoff Babb***
Special Sessions Coordinator: ***Louisa Evers***
Workshops Coordinator: ***Robert Gray***
University and Continuing Education Credits: ***Ron Masters***

Conference Logistics and Details

Fire Congress Website
Catia Juliana
Brett Cole

Facilities and Venue
Brian Oswald
Sandra Hanzak-Rideout
Timothy Ingalsbee
Catia Juliana

Moderator Coordinator
Tom DeMeo

Student Activities Coordinator
Timothy Ingalsbee
Colin Campbell

Student Volunteer Coordinator
Micah-John Beierle
Leda Kobziar

Registration
Catia Juliana

Budget
Timothy Ingalsbee
Catia Juliana
Brandy Newton
Brian Oswald

Sponsorship
Timothy Ingalsbee
Catia Juliana
Paul Hessburg
Bob Keane
Mark Kaib
Jim Guldin

Marketing and Outreach
Timothy Ingalsbee
Catia Juliana

Field Trip Coordinators
Citlali Cortés Montaño
Karen Stafford

Cover design credit: ***Jennifer Touchette;*** cover photo credit: ***Brett Cole***
Program compiled and proofread by ***Catia Juliana*** and ***Timothy Ingalsbee;*** program format and layout by ***Laurie Burk***

Program for the Sixth

International Fire Ecology and Management Congress

Advancing Ecology in Fire Management

Wyndham San Antonio Riverwalk Hotel
San Antonio, Texas, USA
16–20 November 2015

Hosted by:

Association for Fire Ecology

GOOD STUFF TO KNOW! General Conference Information

Wifi. The hotel offers complimentary wifi in your guest room and the lobby. Wifi is not available in the meeting rooms unless arranged through the workshop or attached meeting coordinator in advance.

Mobile Conference App. This conference has gone Mobile! We are using Event Board for our mobile app. To access, download the app "eventboard" from the Apple App Store or Google Play Store. The Fire Congress will be listed under "conferences." Select and enjoy. *Or...* simply scan this nifty QR code with your phone and get it even faster!

Parking at the Hotel. Parking is available at a discounted rate of $18 per day for our conference attendees.

Get The San Antonio App! Get information, coupons, and maps to make your visit to San Antonio even better. Look for the app "SAVE in San Antonio" with your iphone or android device.

Show Us Your Badge! Handouts will be given out at the cofernece. Check out this list of discounts, freebies, and extras that you can get from participating business, just by showing them your conference name tag!

Tweet All About It! Using our hashtag #afeFireCon.

Poster Presenter Info. Posters will be in the Fiesta Pavilion in the Lower Level. Presenters can hang their posters between 1 pm Monday and 4 pm Tuesday. Posters must be down by 1 pm Thursday.

Exhibitor Booth Info. Exhibitor Booths will be on Level 2 and Exhibitor Tables will be on Level 3. Exhibitors can set up their space from noon to 5 pm on Monday, and must have their space cleared by 5 pm Thursday.

Proceedings. We will be publishing a digital proceedings of this conference, and all oral presenters are invited to submit to the proceedings. Your submission may be an extended abstract, a pdf of your PowerPoint presentation, a full paper, a peer-reviewed paper, or other supporting documents. The deadline to submit your proceedings is 31 December,2015. More information on our website.

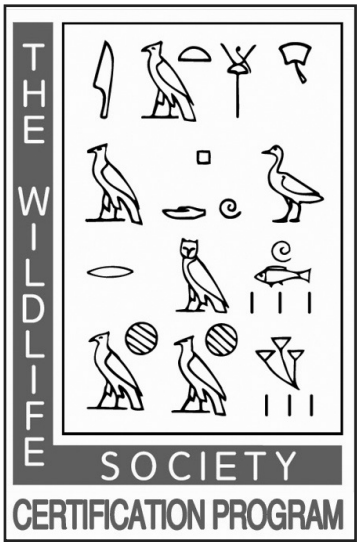
CFEs and CEUs. The Wildlife Society will allow a maximum of 27 contact hours in Category I of the Certified Wildlife Biologist Renewal/Professional Development Certificate Program for participation in the 6th International Fire Ecology and Management Conference. We are awaiting confirmation about Continuing Forestry Education (CFE) credits through the Society of American Foresters and Continuing Education Units (CEU) through Society for Range Management. More details on this will be available as the Conference Program develops.

Fire Circles—What Are They? This conference will be the first to feature Fire Circles, AFE's new Group Recognition Benefit. If you are attending the Fire Congress as a group of 8 or more, we will officially recognize your group! A group can be based on job title, geographic location, specific office, organizational, or academic affiliation (including alumni status), etc. Details on our website.

Mike da Luz Scholarship Fund. In 2013, AFE lost an esteemed member of our board of directors, ***Mike da Luz.*** Mike was instrumental in helping to strategize the financial growth and future direction of AFE. In cooperation with his family, AFE has created the Mike da Luz Memorial Student Scholarship to help fund student travel to attend AFE conferences. AFE is honored to continue to foster Mike's vision of knowledge transfer and fire ecology education through this award. And we're deeply touched by the generosity of his friends and family who have given to this fund. If you'd like to contribute, we accept donations at: www.fireecology.org.

Presentation Upload Information (full details are on our website): Talks should be in PowerPoint 2010 or 2013, and need to have this ***required file name:*** DayofWeek_Rm_24hourTime_LastName (day of week =first 3 letters only, 24 hour time has no colon). If you haven't already uploaded your talk via Dropbox (deadline was Sunday), then you will need to upload it from a thumb drive at the Presentation Loading Station on the second floor lobby. No presentations will be accepted by email. ***Presentations must be uploaded the day before your talk*** during the following hours: Monday: 8 am to 3 pm and 6 to 8 pm; Tuesday: 8 am to 4 pm; and Wednesday: 8 am to 4 pm.

A note about late presentations: If you are unable to load your presentation the day before you're scheduled to talk, be prepared for the possibility that you will need to use your 20 minutes to load your talk, and in the event that the file doesn't load properly for any reason, you may need to give your talk without your prepared visuals.



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ABOUT THE ASSOCIATION FOR FIRE ECOLOGY

The Association for Fire Ecology (AFE) is a nonprofit organization dedicated to improving the knowledge and use of fire in land management. The AFE vision is a membership of respected professionals from around the world who together play a key role in wildland fire ecology research, education, management, and policy in order to enhance our knowledge and management of fire as a fundamental ecological process. Every two to three years, AFE organizes and hosts its International Fire Ecology and Management Congress. In addition, it annually hosts smaller fire ecology conferences on regional or topical themes. AFE publishes a peer-reviewed E-journal called *Fire Ecology,* recognizes outstanding fire ecologists with our Lifetime Achievement and Student Excellence awards, and provides formal certifications for wildland fire professionals and academic programs.

Our members include scientists, educators, students, managers, practitioners, policymakers, and other interested citizens. Anyone can become a member of AFE, and through active involvement in our events, programs, and projects can help shape the emerging profession and growing field of fire ecology. For more information, visit AFE's website at www.fireecology.org.

MORE ABOUT AFE: Services and Benefits

Membership

Join AFE! Membership is open to anyone interested in fire ecology. AFE members have access to the many services and benefits. And as an AFE member, you can become active in shaping the direction of the profession of fire ecology. In addition to our annual conferences, AFE hosts many venues for networking and collaborating with fellow fire ecologists, and our members play an integral role. Becoming a member is easy and affordable, with discounts for students, retirees, and international members. Applications and secure payment can be made on our website.

Fire Ecology Journal

The journal publishes peer-reviewed articles, opinion pieces, responses, and book reviews, as well as occasional reprints of "classic" fire ecology articles. The journal's current editor is the esteemed ***Dr. Jim Agee,*** and we have over 30 associate editors representing scientists on five continents. Issues are published three times per year: April, August, and December. We are now celebrating our tenth year, and have published scientific papers of over 520 authors. The journal is now indexed by all of the leading indexing institutions: Thomson Reuters ISI Web of Science, AGRICOLA, Biosis Reviews, Current Contents, Google Scholar, Scopus, and the Science Citation Index. These indicate that *Fire Ecology* has joined the ranks of the most prestigious international journals, and will be the journal of choice for significant research in fire ecology.

Wildland Fire Professional Certification Program

This program is designed to further ecologically based fire science and management, and to meet the increasing demands for effective analysis, decision-making, and workforce development in a changing fire landscape. The goals of the program are to formally identify fire careers as vital professions; to set standards for the preparation of future fire professionals; and to document the education, experience, and training qualifications of members of the fire ecology and management profession. There are six levels of certification: Wildland Fire Technician, Wildland Fire Practitioner, Wildland Fire Manager, Senior Wildland Fire Manager, Wildland Fire Ecologist, and Senior Wildland Fire Ecologist. Certification is for current AFE members only.


Association for Fire Ecology

WILDLAND FIRE CERTIFICATION PROGRAM

Your Name Here

has been determined by the Association for Fire Ecology to qualify for the title of

Wildland Fire Professional

Awarded this 24th day of January, 2011

AFE Wildland Fire Certificate holders must meet specific requirements pertaining to their level of education, training, and experience. All Certificate holders are expected to maintain the highest standards of professional conduct and to adhere to the AFE Code of Ethics.

AFE member since January 1, 2008
Certification # 1234567WFP

Brian Oswald
Brian Oswald, AFE President

Wildland Fire Academic Certification Program

The complexity and importance of wildland fire science, management, and decision-making is at an all-time high across our Nation and worldwide. To meet current and future challenges of workforce development, analysis, and sound decision-making, AFE has developed a process for recognizing academic programs which prepare future fire professionals. Our overarching goal is to support fire ecology and ecologically based fire management while advancing fire science and its application.

AFE's Conferences and Events

AFE hosts events at least once a year, from regional workshops and conferences to our international fire congresses. These events provide opportunities for learning, networking, collaborating, and socializing with colleagues from other agencies, universities, regions, and nations. AFE's Fire Congresses are among the largest gatherings of fire scientists in the world, bringing together some of the top fire researchers, managers, and policymakers from dozens of countries across six continents to share their discoveries, experiences, and initiatives in fire ecology. At our events, we present three different Lifetime Achievement Awards to people who have made significant contributions to fire ecology and management in the US, as well as Student Excellence Awards to undergraduates and graduate students who show exceptional promise in the field of fire ecology. We also award the Mike daLuz Memorial Student Travel Scholarship.

Upcoming Events

Beyond Hazardous Fuels: Manging Fire for Social, Economic, and Ecological Benefits
Loews Ventana Canyon Resort,
Tucson, Arizona, USA
28 November–2 December 2016

7th International Fire Ecology and Management Congress
Buena Vista Palace Spa and Hotel,
Orlando, Florida, USA
28 November–2 December 2017

2015 BOARD OF DIRECTORS AND STAFF

AFE Officers

President: ***Dr. Brian Oswald,***
Denman Distinguished Professor and Regents Professor, Stephen F. Austin State University
Vice-President: ***Dr. Karin Riley,***
Research Ecologist, US Forest Service
Financial Secretary: ***Dr. Adam Watts,***
Assistant Research Professor,
Desert Research Institute

AFE Staff

Co-Directors:
Catia Juliana, M.S.
Dr. Timothy Ingalsbee
Administrative Assistant:
Micah-John Beierle, M.S.
Accounts Manager:
Brandy Newton
Webmaster:
Brett Cole

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Vice-President: ***Kristen Miller,*** Mississippi State University
Secretary: ***Brian Gorman,*** University of Wisconsin, Stevens Point

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Dr. Bob Keane, Research Ecologist, US Forest Service
Dr. Leda Kobziar, Associate Professor, University of Idaho
Dr. Gus Smith, District Ranger, Superior National Forest
Dr. Brandon Collins, Fire Ecologist, US Forest Service and University of California, Berkeley
Sam Lindblom, Fire Manager, The Nature Conservancy
Dr. Ron Masters, Associate Professor, University of Wisconsin, Stevens Point
Dr. Francisco Seijo, Lecturer in Political Science, Middlebury College C.V. Starr School, Spain
Dr. Jessica R. Miesel, Assistant Professor, Michigan State University
Dr. Dave L. Martell, Professor, University of Toronto

WELCOME TO THE GREAT STATE OF TEXAS!

The Association for Fire Ecology (AFE) welcomes you to the 6th International Fire Ecology and Management Congress in San Antonio Texas, USA. If you have not already done so, please take some time to explore a truly unique American city. With the Alamo only a few blocks from here, I am glad that you followed the famous quote by Davy Crockett: *...you may all go to hell and I will go to Texas!*

AFE and sponsors of this conference recognize that, during today's difficult economic times, it takes an extraordinary level of effort and commitment on your part to participate in this event. We thank all of you and applaud your commitment to the science and management of wildland fire, and trust that your efforts will be rewarded by a rich program of events.

This fire conference is unique in that it is being held in Texas, a state with an incredible range of ecosystems and fire issues. It all does not look like a John Wayne movie. We have the pineywoods in the east, deserts in the west, coastal prairies along the Gulf of Mexico, and high plains to the north. We are hopeful that this location has encouraged participation from not only state agencies within Texas and adjoining states, but also our fire colleagues in Mexico.

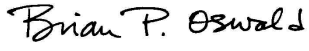
A heartfelt thanks to our partners and all those individuals who have volunteered to serve on planning committees, dedicating their time and energy to do the hard work needed to put this conference together. Without the dedication of the core members of the committees, staff, volunteers, and sponsors, we would have no conference. Thank you!

The theme of this fire conference is *Advancing Ecology in Fire Management.* A diverse mix and broad sweep of the international wildland fire community has come to San Antonio to share the latest research findings and management applications concerning the ecology and management of wildland fires here in the US and across the globe. We have an exciting breadth of presentations from outside the US that I hope you will be able to hear.

The ability to meet with each other face-to-face in a conference setting is invaluable to meeting the challenges of fire management. Take advantage of opportunities to share with, learn from, and get inspired by fellow attendees gathered here from all across the globe. Enjoy your reunions with old friends and colleagues—and look forward to meeting new ones, too.

On behalf of the board of directors and staff of the Association for Fire Ecology, I'd like to welcome you all to San Antonio and to thank you for your participation in this event and your ongoing support of AFE.

Sincerely,



Brian Oswald, Ph.D.
Association for Fire Ecology Board President

FIRE CONGRESS SUPPORTING ORGANIZATIONS

SPONSORS

Diamond Sponsor

USDA Forest Service, Pacific Northwest Research Station

Gold Sponsors

Joint Fire Science Program
USDA Forest Service Fire & Aviation Management

Silver Sponsors

Fire Learning Network/Fire Adapted Communities Learning Network
Texas Parks & Wildlife Department
USDA Forest Service, Pacific Southwest Research Station, Fire & Fuels Program
USDA Forest Service, Rocky Mountain Research Station
USDA Forest Service, Southern Research Station

Bronze Sponsors

Arthur Temple College of Forestry and Agriculture, Stephen F. Austin State University
Caesar Kleberg Wildlife Research Institute at Texas A&M University-Kingsville
Forests Journal
FRAMES: Fire Research and Management Exchange System, University of Idaho
FUSEE: Firefighters United for Safety, Ethics, and Ecology
University of Idaho, College of Natural Resources
US Fish and Wildlife Service – Southwest Region ~ Fire Management
Wildland Restoration International

EXHIBITORS

Geos Institute/John Muir Project
Great Basin Smokejumpers
Great Plains Fire Science Exchange
International Association of Wildland Fire
Oak Woodlands & Forests Fire Consortium
SAFE: Student Association for Fire Ecology
Southern Fire Exchange
Southern Rockies Fire Science Network
Southwest Fire Science Consortium
USDA Natural Resources Conservation Service, Central National Tech Support Center
Wildland Fire Management Research, Development, and Application

DONORS

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Mike daLuz Memorial Student Travel Scholarship Donors

Stephen J. Pyne, Cynthia Gomez, Robert Gray, Louisa Evers, Tom DeMeo, Joe Scott, Elias Weldemariam, Phillip Dye, Paul Hessburg, John Bailey, Mike Tiller, Sarah Otterstrom

Fire Circles

AFE Latina
JFSP Fire Science Exchange Network
LANDFIRE Program
University of Idaho Alumni and Friends

FIRE CONGRESS SUPPORTING ORGANIZATIONS

SPONSORS

Diamond Sponsor

USDA Forest Service, Pacific Northwest Research Station (PNW)

The Pacific Northwest Research Station (PNW), USDA Forest Service, generates and communicates science information and technology to help people make informed choices about natural resources and their sustainability. Public interest in fire research in particular continues to increase as severe wildfires drive the need for effective management and restoration of fire-prone ecosystems. Society's concerns about communities in the wildland-urban interface, smoke and air quality, and the role of fire in forested ecosystems guide our fire research, which covers a wide range of issues, including fuels management, fire behavior, smoke and emissions, and the effects of climate on fire ecology, wildfire risk, and human communities. To meet the rapidly increasing need for science-based applications and tools, the station established the Pacific Wildland Fire Sciences Laboratory, although fire-related research is underway at all of the station's labs and centers in Alaska, Washington, and Oregon.

Gold Sponsors

Joint Fire Science Program (JFSP)

Mission: Provide credible research tailored to the needs of fire and fuel managers. Engage and listen to client needs and then develop focused, strategic lines of new research responsive to those needs. Solicit proposals from scientists who compete for funding through a rigorous peer-review process designed to ensure the best projects are funded. Focus on science delivery when research is completed with a suite of communication tools assures that managers are aware of, understand, and can use the information to make sound decisions and implement projects.

USDA Forest Service, Fire and Aviation Management

The USDA Forest Service Fuels and Fire Ecology Program supports the goals of the National Cohesive Wildland Fire Strategy: restore and maintain resilient landscapes; develop fire-adapted communities; and respond to wildfire safely, effectively and efficiently. We seek to create resilient landscapes in which fire can more nearly play its ecological role, by working collaboratively across agency and ownership boundaries to build on common goals of protecting human life, sustaining communities, and creating healthy ecosystems. We focus restoration efforts on fire-adapted ecosystems to reduce the uncharacteristic intensity, severity, and adverse impacts of wildfire, particularly in dry forests proximate to communities, or important water supplies or other highly valued resources that are adversely impacted by fire, or located strategically to provide opportunities to manage wildfire to achieve resource benefits.

Silver Sponsors

Fire Learning Network and Fire-Adapted Communities Learning Network

The Fire Learning Network (FLN) engages dozens of multi-agency, community-based projects to accelerate the restoration of landscapes that depend on fire to sustain native plant and animal communities. Collaborative planning, implementation, adaptive management and the sharing of lessons learned are at the core of the FLN. Workshops, peer learning, and innovative fire training are just a few of the mechanisms the network uses. The Fire Adapted Communities Learning Network encourages the development and sharing of best practices and innovations in order to accelerate the adoption of fire-adapted community concepts nationwide. The network supports members across the US that have committed to implementing, assessing, and sharing the work that they are doing to increase their communities' resilience to wildfire. The Network is stewarded by the Watershed Research and Training Center and The Nature Conservancy.

USDA Forest Service, Pacific Southwest Research Station (PSW)

The Pacific Southwest Research Station is a world leader in natural resources research through our scientific excellence and responsiveness to the needs of current and future generations. Our mission is to develop and communicate science needed to sustain forest ecosystems and their benefits to society. The mission of the PSW Fire and Fuels Program is to provide scientific findings that will improve management actions intended to enhance resiliency and sustainability of wildland ecosystems affected by fire and reduce the potential for adverse effects resulting from wildland fire, including loss of life and property. Research includes decision-support models that analyze risk, resource allocation economics, and fire danger forecasting. We conduct real-time remote sensing of large fires to support operations and provide data for model validation. Following fires, our research helps analyze post-fire stabilization practices and their effectiveness. On the ground, researchers study how different silvicultural treatments reduce fuel loading and restore landscapes to more resilient conditions. URLs: www.fs.fed.us/psw/ and www.fs.fed.us/psw/programs/ff/

Bronze Sponsors

Caesar Kleberg Wildlife Research Institute

The Caesar Kleberg Wildlife Research Institute at Texas A&M University, Kingsville, is the leading wildlife

research organization in Texas and one of the finest in the nation. Its mission is to provide science-based information for enhancing the conservation and management of wildlife in South Texas and related environments.

Fire Research and Management Exchange System (FRAMES)

FRAMES (www.frames.gov) strives to provide a convenient, systematic exchange of information and technology within the wildland fire research and management community. Developed by the University of Idaho in collaboration with the USFS Rocky Mountain Research Station, FRAMES includes a searchable online database of wildland fire-related documents, tools, videos, projects, and data; Collaboration Space for user groups; Online Training and Certifications developed by NWCG, WFMRDA, LANDFIRE, and the University of Idaho; the FRAMES Emissions & Smoke Portal with educational materials on air quality and smoke management developed by the NWCG Smoke Committee (SmoC) and the University of Idaho; and Archived Webinars from JFSP Regional Consortia, IAWF, and the Wildland Fire Lessons Learned Center. FRAMES is located in the Department of Forest, Rangeland, and Fire Sciences in the University of Idaho College of Natural Resources in Moscow, Idaho.

Firefighters United for Safety, Ethics, and Ecology (FUSEE)

Firefighters United for Safety, Ethics, and Ecology (www.fusee.org) is a nonprofit organization promoting safe, ethical, ecological fire management. FUSEE members include current, former, and retired wildland firefighters; other fire management specialists; fire scientists and educators; forest conservationists; and other citizens who support FUSEE's vision and mission. As an independent voice in the wildland fire community, FUSEE conducts public education, media outreach, and policy advocacy in support of the new, emerging paradigm that seeks to holistically manage wildland fire for social and ecological benefits instead of simply "fighting" it across the landscape. Inspired by Aldo Leopold's Land Ethic, FUSEE advocates a new Fire Ethic in fire management policies and practices: A thing is right when it contributes to the safety of firefighters and the public, ethical use of public resources, environmental protection of fire-affected landscapes, and ecological restoration of fire-dependent ecosystems. It is wrong when it tends otherwise.

University of Idaho, College of Natural Resources

The Fire Ecology and Management Program at the University of Idaho is the leading program in the nation. Our students examine why and how fires burn and how fire affects vegetation, animals, and people. Our 11 highly respected and innovative fire science faculty collaborate with leaders in research and management. Our undergraduate program includes studies in fire behavior using the only university-housed wildfire combustion laboratory in the US, a prescribed burning course, and draws on faculty expertise in field and remote sensing of fire effects. Our MS and PhD students advance fire science through their research widely shared with scientists and managers. We offer 14 online courses as part of our professional Master of Natural Resources program that students are completing online or on campus.

US Fish and Wildlife Service

The US Fish and Wildlife Service (FWS) is the principal federal agency responsible for conserving, protecting, and enhancing fish, wildlife, and plants and their habitats for the continuing benefit of the American people. Fire is essential to managing the majority of the Service's 150 million acres, which includes 560 national wildlife refuges, 38 wetland management areas, a network of national fish hatcheries, and numerous other sites in the United States and its territories. The Service's team of fire management professionals has significant expertise not only in fire planning and operations, but in a range of scientific and technical areas including fire ecology and fire science, smoke management, hydrology, wildlife and fisheries biology, forestry, range conservation, soil science, and water resources. Restoring and maintaining all FWS lands in desirable condition by increasing prescribed burning and wildland fire use overall is our most cost-effective, long-term fire management strategy.

Wildland Restoration International (WRI)

The WRI is a non-profit conservation organization focusing solely on fire management. Our mission is to help humanity manage fire for the greatest benefit to people and wildlife. We work across the US and overseas to deliver integrated fire management implementation and training. Our operational hub in Gainesville, Florida, serves as both a high-productivity prescribed fire operation and a training destination for highly reliable fire management. Our domestic projects span coast to coast, and international projects involve nations in the Caribbean and Africa. The WRI is uniquely suited to close the gaps that exist everywhere between fire management needs and the real capacity of agency and private land managers. We have the flexibility to meet you where you are and help you reach your fire management goals. For more information, visit our website at wildlandrestoration.org. WRI. Outcomes that matter.

EXHIBITORS

Geos Institute

Geos Institute (www.geosinstitute.org) is a science-based organization leading the way to climate solutions that matter. Our Forest Legacies program publishes groundbreaking science ranging from temperate rainforests of the world to dry forests of western North America. We work with hundreds of scientists to inspire decision makers and the public to conserve federal forests for their myriad biodiversity, ecosystem, and climate benefits such as: long-term carbon uptake and storage, clean water, and irreplaceable fish and wildlife habitat. Two of our recent books received academic awards and extensive media coverage—*Temperate and Boreal Rainforests of the World: Ecology and Conservation* (Island Press); and *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix* (Elsevier).

Great Basin Smokejumpers

Selecto Labor Amare Nunquam Laboro Dias.

Great Plains Fire Science Exchange

The Great Plains Fire Science Exchange exists to assist land managers and the fire community to make sound decisions based on the best possible information. Through this information sharing process, we hope to strengthen collaboration within the Great Plains fire community, in addition to making information available for policy makers. Those who produce fire science as well as those interested in applying the science are all welcome in the Exchange. Researchers, managers, landowners, and practitioners who work with fire are important participants in our fire community. We subscribe to the set of core values outlined by the Joint Fire Science Program the fire science network, including being a neutral science partner. We are focused on grassland systems with an emphasis on private lands. Fire is an inherent component in grassland systems; thus, the need for fire science in managing the Great Plains private and public lands is great.

Oak Woodlands and Forests Fire Consortium

The Oak Woodlands and Forests Fire Consortium (OWFFC) is one of 15 fire science exchanges (Fire Science Exchange Network) funded by the Joint Fire Science Program, serving much of the Central Hardwoods Forest Region in the eastern US. The OWFFC's mission is to provide fire science information to resource managers, landowners, and the public about the use, application, and effects of fire. The fire science needs of oak ecosystems in the eastern US are primarily related to management and restoration as opposed to protection. These characteristics set a unique stage for the fire topics addressed and activities offered by the OWFFC. The Fire Science Exchange Network's efforts are guided by principles emphasizing inclusiveness, neutrality, and innovation.

Southern Fire Exchange

The Southern Fire Exchange (SFE) is a wildland fire science delivery program located in the southeastern US dedicated to improving the access to and application of relevant science by regional fire and natural resource managers. The SFE is part of the Joint Fire Science Program (JFSP) Fire Science Exchange Network and is administered by the University of Florida, North Carolina State University, Tall Timbers Research Station and Land Conservancy, and the USDA Forest Service Southern Research Station.

Southern Rockies Fire Science Network

The Southern Rockies Fire Science Network is a federally funded grant program offering services for researchers, managers, and communities to share science-based knowledge about wildfire, supporting solutions, and sound decisions to improve wildfire management in the Southern Rockies Region.

Southwest Fire Science Consortium

The consortium is a way for managers, scientists, and policy makers to interact and share science. Our goal is to see that the best science is used to make management decisions, and that scientists are working on the questions that managers need answered. The Southwest is one of the most fire-dominated regions of the US, and the Consortium is the only regional organization focused on fire research and information dissemination across agency, administrative, and state boundaries. We try to bring together localized efforts to develop scientific information and to disseminate that to practitioners on the ground through an inclusive and open process. Please join us by attending a field trip or workshop, reading and sharing the materials on our website, and/or contributing to the fire conversation by submitting a proposal for an event or product.

Wildland Fire Management RD&A The Wildland Fire Management Research, Development & Application is comprised of 19 individuals that live and work throughout the United States, funded by the US Department of Agriculture and the Department of Interior. With over 300 years of combined past fire management experience, representation in all federal fire agencies and geographic areas, our mission is incident support, development of decision support tools, and technology transfer of science applications to the interagency fire community. More about our staff, our charter, and our annual accomplishments, as well as decision support guidance is found on our website: www.wfmrda.nwcg.gov

FIRE CONGRESS EXHIBITOR IDENTIFICATION NUMBERS

ID#	Exhibitor Booths in Second Floor Preconvene Area
1	FUSEE: Firefighters United for Safety, Ethics, and Ecology
2	Fire Learning Network / Fire Adapted Communities Learning Network
3	US Fish and Wildlife Service, Southwest Region Fire Management
4	Southern Fire Exchange
5	USDA Forest Service, Pacific Northwest Research Station
6	FRAMES: Fire Research and Management Exchange System
7	Great Plains Fire Science Exchange
8	University Of Idaho, College of Natural Resources
9	USDA Natural Resources Conservation Service, Central National Technology Support Center
10	Wildland Restoration International

	Exhibitor Tables in Third Floor Lobby
11	Great Basin Smokejumpers
12	Wildland Fire Management Research, Development, and Applications
13	SAFE: Student Association for Fire Ecology
14	Geos Institute / John Muir Project
15	USDA Forest Service, Fire and Aviation Management
16	Joint Fire Science Program
17	Southwest Fire Science Consortium
18	Southern Rockies Fire Science Network
19	Oak Woodlands and Forests Fire Consortium
20	International Association of Wildland Fire
21	Caesar Kleberg Wildlife Research Institute at Texas A&M University, Kingsville
22	Texas Parks and Wildlife Department

	Sponsors without Exhibits
	Arthur Temple College of Forestry and Agriculture, Stephen F. Austin University
	Forests Journal
	USDA Forest Service, Pacific Southwest Research Station
	USDA Forest Service, Rocky Mountain Research Station
	USDA Forest Service, Southern Research Station

AFE THANKS OUR SILVER, GOLD, AND DIAMOND SPONSORS!

The core work of the PNW Research Station, in the broadest sense, is forest and range ecosystem science. We focus on the biological, physical, and socioeconomic aspects of terrestrial, aquatic, riparian, and urban systems in Oregon, Washington, and Alaska. Our research is organized into five research emphasis areas (REAs) that serve as our major research lines: climate change, inventory and monitoring, natural disturbance, resource management and landscape resilience, and socioeconomic dimensions. The REAs provide a stable yet flexible framework for responding to urgent, interdisciplinary, and policy-oriented demands. These areas of work span all locations, cross research programs and teams, and tie directly to the USDA Forest Service Strategic Plan and Forest Service Research and Development Strategic Program Areas. For more information about the work of the PNW Research Station, please visit us at http://www.fs.fed.us/pnw/.

USDA Forest Service
Pacific Southwest Research Station

The Pacific Southwest Research Station is a world leader in natural resources research through our scientific excellence and responsiveness to the needs of current and future generations. Our mission is to develop and communicate science needed to sustain forest ecosystems and their benefits to society.

http://www.fs.fed.us/psw/

PACIFIC SOUTHWEST RESEARCH STATION
FIRE AND FUELS PROGRAM

The mission of the Fire and Fuels Program is to provide scientific findings that will improve management actions intended to enhance resiliency and sustainability of wildland ecosystems affected by fire and reduce the potential for adverse effects resulting from wildland fire, including loss of life and property.

http://www.fs.fed.us/psw/programs/ff/

- Fire and Aviation Management
- Pacific Northwest Research Station
- Pacific Southwest Research Station
- Rocky Mountain Research Station

FIRESCIENCE.GOV

Research Supporting Sound Decisions

Our Mission

- Provide credible research tailored to the needs of fire and fuel managers
- Engage and listen to clients and then develop focused, strategic lines of new research responsive to those needs
- Solicit proposals from scientists who compete for funding through a rigorous peer-review process designed to ensure the best projects are funded
- Focus on science delivery when research is completed with a suite of communication tools to ensure that managers are aware of, understand, and can use the information to make sound decisions and implement projects

The Program is uniquely positioned to tailor wildland fire research in response to the emerging needs of policymakers and fire managers. An annual cycle of proposal solicitation, review, and funding ensures timely response to evolving conditions. Research projects complement and build on other federal research programs, such as those in the Forest Service Forest and Rangeland Research Stations, US Geological Survey, and National Fire Plan. Synthesis of research findings and targeted delivery to managers are essential components of the Program.

More than 90 colleges and universities have also collaborated on and partnered with JFSP-sponsored research projects. By engaging masters and doctoral candidates in these projects, we are training the next generation of resource managers and scientists. This collaboration extends to private, non-profit organizations and tribal, state, county, and local governments as well. In all, nearly 200 organizations have become partners in JFSP-sponsored research.

OPENING PLENARY SPEAKERS

Thomas E. (Tom) Spencer has been with Texas A&M Forest Service (TFS) since 1979. His background is in forestry, having received a BS degree in Forestry from Stephen F. Austin State University in 1978. Spencer served as district forester for the TFS for almost 20 years. In 1999, he was appointed the agency's Predictive Services Department Head and was responsible for monitoring drought, weather, wildland fuels, and fire danger conditions across the state. He has received much recognition for his achievements, including the Award for Technical Forestry, the Award in Excellence for Professional Services, the Texas A&M University System Regents Fellow (the highest honor given by the Board of Regents), the Award of Excellence from the Southern Group of State Foresters, and the Fire Adapted Communities Fire Leadership Award. Spencer is deeply interested in how climate affects local weather and fuels conditions, particularly long-term climate trends that affect citizens of Texas.

Jeff Sparks earned his bachelor's degree in Wildlife Management and his master's degree in Environmental Sciences/Forestry from Oklahoma State University. Jeff is a Certified Wildlife Biologist through The Wildlife Society. He has more than 20 years of experience in planning and implementing prescribed fires in three states and diverse habitat types ranging from pine-hardwood forests to coastal prairie to high desert. Jeff has worked for Texas Parks and Wildlife Department since 1998 and currently oversees all wildland fire operations on Texas State Park managed lands. He also has served on the governing board of the Oak Woodlands and Forests Fire Consortium for the past three years. Jeff and his wife, Jennifer, have two daughters and are active in their local community. His hobbies include coaching youth soccer, student ministry, international missionary work, and herding cats (firefighters).

OPENING PLENARY PANEL:

An Exploration of Gender Equality and Sexual Harassment Issues in the Wildland Fire Profession

Dr. Citlali Cortés Montaño is a senior biodiversity and forest management expert for the German Development Bank (KfW México Office). She has more than 15 years of experience working in research and outreach in forest, biodiversity, and protected area management; fire ecology; and community silviculture in México. Biking, hiking (preferably to the top of mountains), and river trips are among her favorite things to do outside the office. Her work is inspired by ***Aldo Leopold's*** reflections on México's northwestern sierras, summarized in this 1937 quote: *I can only hope that Mexico will find ways so far unfound by us to use these mountains without destroying them.*

Dr. Christine Eriksen is a Research Fellow with the Australian Centre for Cultural Environmental Research at the University of Wollongong, Australia. She focuses on social dimensions of disaster vulnerability and resilience, and the ways people learn, communicate, and engage with social and environmental uncertainty in everyday life. Christine's research examines the trade-offs people make between risks and benefits. A major part of this work focuses on the culturally and historically distinct relations that underpin wildfire management and coping capacity. Her book, *Gender and Wildfire: Landscapes of Uncertainty* (2014), follows people's stories of surviving, fighting, living, and working with wildfire in Australia and the USA. Her work has also focused on fire as a land management tool in Africa, and the place of local and indigenous environmental knowledge in global frameworks. Christine was selected by the International Social Science Council as a World Social Science Risk Interpretation and Action Fellow in 2013, and was awarded a prestigious Discovery Early Career Research Award by the Australian Research Council in 2015.

Dr. Pat Stephens Williams joined the faculty of the Arthur Temple College of Forestry in 2004. She is a Human Dimensions in Natural Resources specialist, and teaches courses in the Master of Science in Resource Interpretation program, as well as in the undergraduate recreation program. Previously, she was an Assistant Professor in the School of Forest Resources at the University of Arkansas,Monticello, teaching recreation and human dimensions classes, serving as the faculty advisor for the SAFE student chapter, and working with constituency groups to learn about and resolve issues concerning forestry related activities. Her professional projects show the diversity of challenges under the umbrella of Human Dimensions and include, but are not limited to, a wildlife study concerning stakeholders' attitudes about elk, oral histories of the Arkansas Post delta region, African-American recreation participation in our national parks, current education practices in preparation of our natural resource professionals, and utilizing natural resource professionals to improve public education about forestry.

Bequi Livingston started her career in 1979 with the USFS on the Smokey Bear Ranger District in Ruidoso, New Mexico. She started with the Young Adult Conservation Corps and was later converted to a seasonal FS employee on a firefighting hand crew. Bequi has participated on fire engines, helitack crews, hotshot crew, fire prevention, fire lookout, law enforcement, dispatcher, Assistant FMO, and Prescribed Fire Operations Specialist for the Southwest Fire Use Training Academy. She has worked in Regions 3 and 5 for the USFS and Lake Powell NRA with the NPS. She was one of the first women on the Sandia helitack crew and one of two first women on the prestigious Smokey Bear hotshot crew in 1988. Bequi was awarded the prestigious Paul Gleason–Lead By Example award in 2008 for her outstanding motivation and vision in the wildland firefighting community. Bequi is a certified Personal Fitness Trainer and certified Integrative Health Coach. One of Bequi's passions is the creation and implementation of the Women In Wildland Fire Boot Camp, to get new recruits into the workforce while setting them up for success rather than failure.

Tim Sexton is currently the Program Manager for the Wildland Fire Research Development and Applications Program. His responsibilities include management of the Wildland Fire Decision Support System as well as facilitating technology transfer of new science associated with wildland fire to the field. Tim started his fire career as an engine and fuels crew member on the Shasta-Trinity National Forest (NF) at Weaverville Ranger District. His other work experience includes: District Ranger, LaCroix RD, Superior NF; Fire Use Program Manager for the US Forest Service, NIFC; Fire Ecologist for the NPS; Deputy Regional Fire Management Officer for the Intermountain Region of the National Park Service in Denver; District Fire Management Officer for 11 years on the Winema NF; Hotshot Superintendent at Redmond, Oregon (Deschutes NF); Fire Operations Specialist for the BLM at NIFC; suppression and fuels on the Shasta-Trinity, Gifford Pinchot, and Umpqua national forests; Type I Incident Commander on Great Basin IMT 1, and Type II IC on Rocky Mountain IMT 2. He also served on Fire Use Management Teams as IC, Planning Section Chief, Operations, and Fire Use Manager.

Andrea Medina Rosas was born in Guadalajara, México, and received her bachelor's degree in Law at ITESO in Guadalajara. During her undergraduate studies, she started to work for access to justice for victims of sexual violence and women's rights defense. The lack of adequate laws to address these issues led her to propose legislation that was presented through popular initiatives and other social processes, while also providing advice to local and federal legislators. Implementation of new legislation allowed her to specialize in law and gender training for justice operators, leading and facilitating processes to include gender as a crosscutting perspective in government and civil society–led initiatives in México. Her conviction and leadership in disseminating legal and feminist knowledge has allowed her to participate in different local, national, and international processes in favor of human rights of women. She currently lives in México City and works as an independent consultant while serving as a member of the Project for Economic, Social, and Cultural Rights and assisting human rights defenders.

Speaker bios continued on page 11.

Speaker bios continued from page 10.

Jane Park is the fire and vegetation ecologist for Banff Field Unit in Banff National Park. Jane has been involved with resource conservation and active fire restoration with Parks Canada for the past 13 years. She obtained her MSc from the University of Calgary in Forest Ecology. Her interests include the use of prescribed fire for ecosystem management in protected areas, vegetation restoration and ecological effects of fire on various ecosystem components. Jane has worked in several national parks across western and northern Canada including Banff, Yoho Kootenay National Parks, Haida Gwaii National Park Reserve, and Vuntut National Park in the Arctic. Parks Canada's fire program in Banff has been a leader in the implementation of prescribed fire in Canada for the past 30 years. The Banff prescribed fire program has implemented over 30,000 ha of prescribed fire since 1983, with many units being landscape level stand replacing fires with complex terrain and nearby values at risk. Jane is currently an Operations Section Chief on a Parks Canada National Incident Management Team.

BANQUET SPEAKER

Mary R. Huffman received her BS in Resource Conservation from the University of Montana, her MS in Botany from Miami University, and her PhD in Forestry (Fire Science) from Colorado State University. Mary's career in applied research and fire management has provided adventures in fire from the Arctic to the Tropics, working with many partners in a variety of fire cultures. Whether serving as a land manager, researcher, burn boss, or director, she enjoys connecting with people, landscapes and ideas—especially about fire. Mary began working for TNC in 1986, reintroducing fire to the Kitty Todd Preserve in Ohio. Later she served as a TNC project director in Florida, building partnerships and citizen support for prescribed burning. Assisting her mentor, ***Ron Myers,*** with community-based fire management in southern Mexico, she became intrigued by the complexity of traditional fire knowledge about tropical pine-oak forests. This became the subject of her dissertation. Mary now serves as a TNC staff member of the Fire Learning Network, where she provides coaching and facilitation to land managers and communities to work together to shape their future with fire.

CLOSING PLENARY SPEAKERS

Marthin Kasaona is the Senior Conservation Scientist at Etosha Ecological Institute within the Ministry of Environment and Tourism. His primary role is a fire coordinator responsible for the implementation of Patch Mosaic Burn within Namibia protected areas. Mr. Kasaona holds a master's degree in Environment and Development, having majored in Environmental Management Stream at the University of KwaZulu-Natal, South Africa; and a B-Tech degree in Nature Conservation from Nelson Mandela Metropolitan University in South Africa. In addition, Mr. Kasaona has a National Diploma in Natural Resource Management: Nature Conservation from Polytechnic of Namibia. He is also an Advisory Board Member and Collaborator on Bats without Borders, a Charity Organization registered in Scotland. He is an adjunct lecturer who teaches courses related to Community Based Conservation issues with special focus on southern Africa and Namibia as a model case study.

Scott Stephens is a Professor of Fire Science and Chair of the Ecosystem Sciences Division at UC Berkeley. He is also the director of the UC Center for Fire Research and Outreach, co-director of the UC Center for Forestry, and is the leader of California Fire Science Consortium. Stephens' areas of expertise focus on interactions of wildland fire and ecosystems. This includes how prehistoric fires once interacted with ecosystems, how current wildland fires are affecting ecosystems, and how climate change and management may change this interaction. He is also interested in wildland fire policy and how it can be improved to meet the challenges of the next decades.

Patrick Brose has been a research forester with the USDA Forest Service, Northern Research Station, since 2000. His primary interest is the role of fire in eastern oak forests and he has published and presented extensively on this topic. One of his most recent publications is the *Fire-Oak Synthesis Guidebook,* published in 2014 by the Northern Research Station.

POSTER PRESENTATIONS

The following posters will be on exhibit beginning Tuesday, 17 November, at 5:30 PM in the Fiesta Pavilion, on the lower level of the hotel. A poster identification number is provided next to the presenter's name. Abstracts for poster presentations and biographical information for presenters is available in a separate document entitled "Poster presentations" available on the conference website.

Student poster contributions are those listed below on gray backgrounds.

#	Presenter	Title
1	***Marianne Blackburn***	*Changes in Surface Fuels and Regeneration Following the Mountain Pine Beetle Epidemic in Ponderosa Pine Forests along the Colorado Front Range*
2	***Kori Blankenship***	*1 Year, 5 People, 2,000 Models: The Story of One Team's Effort to Improve Understanding of Fire and Vegetation Ecology*
3	***Matthew Dickinson***	*Consequences of the "Mesophication" of Mixed-Oak Forests in the Appalachian Plateau of Ohio—Effects of Litter Source and Topography on Fuels and Combustion*
4	***Darcy Hammond***	*Long-Term Burn Severity and Edge Effects on Conifer Seedling Survival Following Large Widlfires*
5	***Joshua James***	*Red Pine Prescribed Burn Experiment*
6	***Kathryn Kidd***	*Hardwood Sapling Allocation to Bark Thickness, Height, and Radial Growth 3 Years Post-Wildfire in the Southern Cascades*
7	***Deborah Nemens***	*California Black Oak Resprouting across Recurring Fire Severity Gradients*
8	***Martha Schmidt***	*Long-Term Effects of Burn Severity on Non-Native Plant Cover*
9	***Jane Dell***	*Quantifying the Effects of Burning on the Diversity of Arthropods in a Fire-Adapted Longleaf Pine (*Pinus palustris*) Forest*
10	***John Foshag***	*Fire Effects on Great Lake States Small Mammal Populations*
11	***Lauren Steinkamp***	*Fire Effects on Great Lakes Vegetation*
12	***Lisa Holsinger***	*Barriers to Wildland Fire Spread: The Role of Past Fires, Weather, Topography, and Fuel*
13	***Sharon Hood***	*Lick Creek Demonstration-Research Forest: 25-Year Fire and Cutting Effects on Vegetation and Fuels*
14	***Xinyan Huang***	*Response of a Horizontal Smouldering Fire to a Step-Change Increase of Moisture Content in Superficial Peat Layers*
15	***Desirée Ramos***	*Tolerance to Heat Shock Is Better Predicted by Seed Dormancy than by Habitat Type for Grass Species from Brazilian Open Savannas and Wet Grasslands*
16	***Sasha Berleman***	*Effects of Micro-Scale Fire Treatments on Population Dynamics of Medusahead and Focal Species Fecundities*
17	***Doug Cram***	*Using Broadcast Fire to Manage Mixed Conifer Forests*
18	***Benjamin Hart***	*Fire in the Future, Lessons from the Past: Perspectives from Forest Fire Reduction Treatment Impacts on Ectomycorrhiza Diversity*
19	***Robert Klein***	*Landscape Assessment of Burn Severity in the Appalachian Mountains, USA*
20	***Leda Kobziar***	*Can We Restore Resilient Savanna Plant Communities in the Modern Landscape?*
21	***Duncan Lutes***	*FFI-Ecological Monitoring Utilities*
22	***Carmen Tubbesing***	*Linking Pre- and Post-Thinning Stand Structure with Post-Fire Recovery: Mortality and Seedling Regeneration in the American Fire Footprint*
23	***Erika Garduño***	*Natural Regeneration of a Coniferous Forest after Geological and Environmental Catastrophic Events*
24	***Quentin Hays***	*Continued Use of a Post-Fire Landscape by Mexican Spotted Owls in New Mexico*
25	***Scott Ritter***	*The Impact of Crown Fire on Dwarf Mistletoe Populations Thirty Years Post-Fire*
26	***Michael Stambaugh***	*Three Hundred Years of Changes in Fire and Vegetation at Bastrop State Park, Texas*
27	***Anna Talucci***	*Conceptualization of Early Successional Pathways after Wildfire in Lodgepole Pine Dominated Forests with High Mortality from Mountain Pine Beetle*
28	***Timothy Ingalsbee***	*A "Leopoldian" Fire Ethic to Inspire Ecological Fire Management*
29	***Emily Booth***	*Post-Wildfire Legacy Effects in a Pine-Oak Woodland*
30	***Shana Gross***	*Caples Creek Watershed Fuels Reduction and Meadow Restoration Project*
31	***Ilana Abrahamson***	*Syntheses of Historical Fire Regimes and Contemporary Changes*
32	***David Peterson***	*Minimal Impacts of Post-Fire Logging on Understory Plant Cover and Diversity 18 Years after Wildfire in Dry Coniferous Forest*

POSTER PRESENTATIONS, CONTINUED

#	Presenter	Title
33	***Blanca Céspedes***	*Simulating Fire and Vegetation Dynamics in Mountainous Mediterranean Forests*
34	***Sandra Haire***	*Landscape Characteristics of Forest Refuges in Northern New Mexico following Multiple Fire Events*
35	***Nancy French***	*Mapping Fire Occurrence, Severity, and Impacts on Land Surface Albedo in Tundra Regions*
36	***Steven Norman***	*High Frequency Monitoring of Fire Regimes and Ecological Resilience across the Okefenokee National Wildlife Refuge*
37	***Jaron Adkins***	*The Role of Fire Severity of Post-Fire Ecosystem Carbon Dynamics*
38	***Patricia Oliva***	*Estimation of Area Burnt Using VIIRS 375 m Active Fire Product*
39	***Mamta Bhatta***	*Forest Fire Risk in Chitwan by Using Remote Sensing and GIS*
40	***Bonni Corcoran***	*Post-Fire California Chaparral Soil Seedbank Diversity*
41	***Leslie Fowler***	*Soil Thermal Conductivity and the Relationship Between Fire Radiative Energy and Soil Heat Flux*
42	***Dale Hamilton***	*Fire Monitoring and Assessment Platform (FireMAP): A More Responsive, Affordable and Safe Method for Mapping Wildland Fires*
43	***Ruth Herrera***	*Past Fires Chronology in Angangueo, Michoacán, México*
44	***Roger Ottmar***	*Fire and Smoke Model Evaluation Experiment (FASMEE)*
45	***Suzanne Owen***	*Are Ponderosa Pine Forests Regenerating after Severe Wildfires?*
46	***Jonathan Bontrager***	*Long Term Vegetation Recovery Following Post-Fire Mulching*
47	***Jessica Haas***	*A Framework and GIS Tool for Integrating White-Headed Woodpecker Habitat Models into Fire and Land Management Planning Scenarios*
48	***Stephen Howard***	*US Fish and Wildlife Service Fire Atlas Project*
49	***Natalia Lederer***	*Effects of Different Techniques of Treating Pruning and Thinning Residues on Some Soil Properties of Afforestations of Patagonia Located in a Precipitation Gradient: Preliminary Results*
50	***Kat Morici***	*Fuel Treatment Longevity in the Blue Mountains of Oregon*
51	***Joseph Restaino***	*Pile Age and Season of Burning Influence Combustion and Fire Effects*
52	***Heath Starns***	*Flammability Characteristics of Select Native Prairie Species*
53	***Nicole Vaillant***	*Fuel Accumulation and Forest Structure Change following Fuel Treatments in California*
54	***Tamara Wood***	*Soft Mast Production following Application of Prescribed Fire in Restored Pine Woodlands in the Ouachita Mountains of Western Arkansas*
55	***Daniel Vega-Nieva***	*Developing of a Fire Danger System for Mexico*
56	***Sam Amato***	*Simplistic Tools Used to Support Incident-Level Decision-Making: The Three Day Fire, Alaska*
57	***Kristen Shive***	*"Weed-Free" Rice Straw Mulch Introduces Exotic Species in California's 2013 Rim Fire*
58	***Jessica Haas***	*Investigating Temporal Trends in Wildfire Hazard*
59	***Christopher Stockdale***	*Extracting Ecological Information from Oblique Angle Terrestrial Landscape Photographs: Performance Evaluation of the WSL Monoplotting Tool*
60	***Kate Wilkin***	*Climate Change Refugia Need Fire Management*
61	***Paul Klockow***	*Modeling Surface Fuel Loading from Standing Dead Trees following a Major Drought in East and Central Texas, USA*
62	***Brett Davis***	*Predicting Fire Severity: Informing Fire Management Decision-Making*
63	***Jesse Kreye***	*The Impact of Fuelbed Aging on Laboratory Fire Behaviour in Masticated Woody Fuels*
64	***Matthew Panunto***	*Mapping the Potential for High Severity Wildfire in the Eastern United States*
65	***Birgit Peterson***	*Integration of GLAS and Landsat Data for Canopy Structure Mapping in Alaska*
66	***Gus Smith***	*Prioritizing Lightning Ignitions in Yosemite National Park with a Biogeophysical and Socio-Politically Informed Decision Tool*
67	***Brian Kelley***	*Managed Fire in Southwestern Forests*
68	***Elizabeth Moore***	*Invasive Plant Proliferation and Persistence following Fuel Treatment Projects in Piñon-Juniper Woodlands*
69	***Jay Lininger***	*Reference Conditions for Ecological Restoration of Fire-Adapted Conifer Forest, Kaibab Plateau, USA*
70	***Peter Lahm***	*Smoke, Fire and Air: NWCG Smoke Committee Latest Activity*
71	***Nikole Swaney***	*Women in Fire Training Exchange*

POSTER PRESENTATIONS, CONTINUED

#	Presenter	Title
72	***Morris Johnson***	*Fuel Mass and Stand Structure after Salvage Logging of a Severely Burned Sierra Nevada Mixed-Conifer Forest*
73	***Esther Amoako***	*Assessment of the Effect of Burning Regimes on Plants and Soils in West African Savanna/ Parklands. A Case of the Northern Region of Ghana*
74	***Jim Cronan***	*Detailed Fuelbed Characterization and Mapping for Eglin Air Force Base, Florida*
75	***Justin Lauer***	*Reburns and Fire-on-Fire Perimeter Interactions 1900-2013*
76	***Adam Watts***	*Wildland Fire Applications for Unmanned Aircraft: Evaluation and Commercialization*
77	***Maria Godoy***	*Prescribed Burning in a Douglas-Fir Afforestation of Patagonia, Argentina: An Experience of Learning by Doing*
78	***Xinyan Huang***	*Experimental Study on the Lateral Spread and Overhang Phenomenon in Smouldering Peat Fires*
79	***Marnie Light***	*Investigating the Effects of Undercanopy Burning on Young-Aged Pine Plantations in Mpumalanga, South Africa*
80	***Josh Hyde***	*Addressing Smoke and Air Quality: Educational Resources on the FRAMES Emission and Smoke Portal*
81	***Britt Smith***	*Wildland Fire Search Terms: Trends and Patterns*
82	***Charlotte Reemts***	*Targeted Thinning as a Climate Adaptation Strategy in Sky Islands*
83	***Michael Caggiano***	*Cooperative Prescribed Fire in New Mexico*
84	***Erika Garduño***	*Generation of a Plan of Integrated Fire Management in The Monarch Butterfly Biosphere Reserve: Action and Participatory Adaptive Research*
85	***Elizabeth Kellogg***	*Restructuring Wildland Fire Management for an Army Training and Testing Center in a Great Basin Cheatgrass-Dominated Landscape*
86	***Christopher Dunn***	*How Do We Develop Optimal Incident Management Strategies for a New Large-Fire Management Paradigm?*
87	***Kristen Allison***	*PhoDar, Using Cameras to Cut Costs and Gain Insight*
88	***Kim Ernstrom***	*Fire Planning and Fuels Management Resource Portal*
89	***Mike Caggiano***	*Creating High Resolution Maps of the Wildland-Urban Interface—Evaluating an Object Based Image Analysis Approach*
90	***Héctor Martínez-Torres***	*Towards Integrated Fire Management in a Natural Protected Area: What Do Local Key Actors Say?*
91	***Aída García-Frías***	*Fire Ecology and Management from a Journalism Perspective*
92	***Justice Jones***	*Rapidly Fire Adapted*
93	***Barbara Satink Wolfson***	*Fires of Change: An Art and Science Collaborative to Better Understand Changes in Fire, Climate and Society*
94	***Margit Bucher***	*The Southern Blue Ridge Fire Learning Network: A Collaborative Partnership to Restore Fire-Adapted Ecosystems and Sustain Resilient Natural and Human Communities in the Southern Appalachian Mountains*
95	***Lindsey Curtin***	*Allegheny Highlands Fire Learning Network's Forest Composition and Structure Monitoring Program: A Collaborative Approach to Evaluating Long-Term Changes on Prescribed Burn Units in Virginia*
96	***Beth Buchanan***	*Fire Effects Monitoring Supports Expansion of Prescribed Fire Program in Kentucky*
97	***David Quisenberry***	*National Forests in Florida Use Fire Effects Monitoring Data to Assess and Improve their Burn Program*
98	***Greg Salansky***	*Long-Term Fire Effects Monitoring Data Help Inform Resource Objectives and Burn Prescriptions in a Long-Suppressed Fire-Adapted Eastern Hardwood Forest*
99	***Melissa Kreye***	*Promoting Prescribed Burning and Wildlife Habitat Conservation on Private Forestlands through Reduced Regulation in Florida*
100	***Justin Plata***	*Do Small Mammals Cause Spot Fires during Prescribed Burns? Fact or Urban Legend?*
101	***Rachel Reimer***	*Gender and Leadership in Wildfire Suppression: Women Leaders on the Fireline*
102	***Marthin Kasaona***	*Control Burning Program in Etosha National Park, Namibia—The Old vs. The New Fire Management Approach*
103	***Kathryn MacKnight***	*Classifying Gambel Oak Fuels Complexes in the Front Range of Colorado*

MONDAY, 16 NOVEMBER

Schedule Overview

A map of the rooms can be found at the back of the program. No breaks or food service will be provided today, but the hotel's restaurant will be open and a list of nearby coffee shops and eateries will be available.

Registration

7 am to 3 pm, and 6 to 7:30 pm during the welcome reception, second floor

Presentation Loading

8 am to 3 pm, and 6 to 8 pm, second floor

Workshops

8 am to 5 pm, various rooms

8-hour and 4-hour sessions. Please see schedule, below. Full descriptions are available online.

Lunch

Noon to 1 pm

On your own. See list of restaurants included in your packet.

Poster Set-Up

1 pm Monday to 4 pm Tuesday, Fiesta Pavilion

All posters must be up by 4 pm Tuesday!

SAFE Wiki-thon!

Noon to 2 pm, Blue Bonnet Room

Many articles related to fire ecology are short or non-existent on Wikipedia, so we will be getting together to help spread accurate knowledge.

Exhibit Set-Up

Noon to 5 pm, second and third floor lobbies

Student Volunteer Meeting

5 to 6 pm, Executive Salon 4

Conference Meetings

5:15 to 5:45 pm, Executive Salon 3

Moderators meeting
Hosted by ***Tom DeMeo***

5:15 pm, Directors 2

Steering Committee
Hosted by ***Brian Oswald***

Welcome Reception/Mixer

6:30 to 8:30 pm, Texas Ballroom A

Join us for light appetizers and a no-host bar. Concurrently, next door in Ballroom A, the University of Idaho alumni and friends is having a reception.

Workshop Schedule

Rm	8 AM to Noon	Lunch	1 PM to 5 PM
Executive Salon 2	**#1 Fuel & Fire Tool (FFT)—Application for Fuel and Fire Management Planning** Organizers ***Susan Prichard,*** School of Environmental and Forest Sciences, University of Washington ***Roger Ottmar,*** US Forest Service		**#6 Tools for Working with LANDFIRE Data** Organizer ***Kurtis Nelson,*** US Geological Survey, EROS
Executive Salon 5	**#2a IFTDSS—Interagency Fuels Treatment Decision Support System** Organizer ***Caroline Noble,*** US Forest Service, Wildland Fire Management RD&A		**#2b IFTDSS—Interagency Fuels Treatment Decision Support System** Organizer ***Caroline Noble,*** US Forest Service Wildland Fire Management RD&A
Executive Salon 1	**#4 FHAES (Fire History Analysis and Exploration System): Estimating Fire Regime Parameters from Evidence of Fire in Tree Rings** Organizer ***Elaine Kennedy Sutherland,*** US Forest Service, Rocky Mountain Research Station	⟹	**#4 FHAES,** *continued*
Texas Lone Star	**#5 Rx 310: Introduction to Fire Effects** Organizers ***Geoff Babb,*** Central Oregon Fire Management Service, Bureau of Land Management ***Beth Buchanan,*** US Forest Service Region 8	⟹	**#5 Rx 310: Introduction to Fire Effects,** *continued here and at various times on Tuesday, Wednesday, and Thursday. Please see the Special Events for each day's schedule for meeting details.*
Executive Salon 4			**#3. Using ArcFuels10 to Complete a Wildfire Risk Assessment** Organizer ***Nicole Vaillant,*** US Forest Service, WWETAC

Special Events—Tuesday through Friday

Poster Reception

Tuesday, 5:30 to 8:30 pm, in the Fiesta Pavilion. Join us for appetizers and no-host bar, meet poster presenters, and mingle with friends. Concurrently there will be an Ecological Society of America informal mixer in the same room.

Rapid Fire Retrospective

Tuesday, 5:30 to 8:30 pm, during the Poster Reception in the Fiesta Pavilion. *2015 Fire Season World Café.* Look for these tables in the poster hall, where there will be facilitated discussions and sharing about this past fire season. The purpose of this activity is to share observations, ideas, suggestions, and lessons learned with a variety of people in the research, resource management, fire management, and application development communities. Everyone is invited to participate.

Book Signings

Wednesday, 5:15 to 5:45 pm, in Executive Salon 5. Meet with editors ***Dominick DellaSala*** and ***Chad Hanson,*** who recently published *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix.*

Wednesday, 6 to 6:30 pm in the FUSEE exhibitor booth on the second floor. ***Stephen Pyne,*** author of *Between Two Fires: A Fire History of Contemporary America,* will be signing his book. All proceeds go to the ***Mike da Luz*** Memorial Student Scholarship Fund.

AFE Awards Banquet

Wednesday, 6:30 to 8:30 pm, in Texas Ballroom B. Advanced ticket purchase required, extra tickets available at registration until we sell out. The evening's talk, *Making a World of Difference in Fire and Climate Change*, will be given by ***Mary Huffman,*** The Nature Conservancy. We will also be giving out our three Lifetime Achievement Awards, two Student Excellence Awards, and the Mike da Luz Memorial Student Scholarship Award.

AFE Annual Members Meeting

Thursday, 5:30 to 6:15 pm, in Texas B Ballroom. You're invited to join us for our Annual AFE members meeting! AFE members are the professionals and students responsible for developing the international fire ecologist and manager certification programs, the higher education in fire ecology recognition program, collaborative international position statements on critical issues (e.g., climate change, fuels management, gender in fire), awards for lifetime achievements, TREE student travel grants, GRIN innovative student research grants, and the international AFE Fire Congresses and Regional Conferences where scientists, managers, and the next generation unite. All of these accomplishments depend on the initiative and support of our enthusiastic members and committees. Come to the meeting and find out how you can get involved and make a difference. New members welcome!

SAFE Annual Members Meeting

Thursday, 6:15 to 7 pm, in Texas B Ballroom. All students welcome! Come meet your fellow SAFE members, share updates on our chapters, elect new national officers, and help shape the future of SAFE. Also, stop by our table on the third floor throughout the week to meet fellow students and learn more about SAFE.

Friday Field Trips

Get on the bus! We have four fantastic field trips planned. Some may already be full, but there may still be seats left on other trips. Check in with registration to see if there are any seats left on the bus.

SUMMARY OF ALL CONFERENCE MEETINGS

	Time	Meeting	Room	Host
M	Noon to 2 PM	SAFE Wiki-thon	Blue Bonnet	***Colin Campbell***
	5 to 6 pm	Student Volunteer Meeting	Executive Salon 4	***Leda Kobziar***
	5:15 PM	Steering Committee	Directors 2	***Brian Oswald***
	5:15 to 5:45 PM	Moderators meeting	Executive Salon 3	***Tom DeMeo***
T	5:15 PM	Steering Committee	Directors 2	***Brian Oswald***
	5:15 to 5:45 PM	Moderators meeting	Executive Salon 3	***Tom DeMeo***
W	5:15 PM	Steering Committee	Directors 2	***Brian Oswald***
Th	5:30 to 6:15 PM	AFE Annual Membership Meeting	Texas B	***Brian Oswald***
	6:15 to 7 PM	SAFE Annual Membership Meeting	Texas B	***Emma Vakilli***

TUESDAY, 17 NOVEMBER

Schedule Overview

Registration
7 am to 3 pm, second floor

Presentation Loading
8 am to 4 pm, second floor

Welcome Speakers
8 to 8:30 am, Texas Ballroom

Brian Oswald
Association for Fire Ecology, President

Karen Stafford
Texas A&M Forest Service, Fire Congress Co-Chair

Opening Plenary Speakers
8:30 to 9:30 am, Texas Ballroom

Dr. Thomas E. Spencer
Texas A&M Forest Service

Mr. Jeff Sparks
The Wildlife Society

Morning Break
9:30 to 9:55 am

Opening Plenary Panel
9:55 to 11:25 am, Texas Ballroom
An Exploration of Gender Equality and Sexual Harassment Issues in the Wildland Fire Profession
Dr. Citlali Cortés Montaño, Dr. Christine Eriksen, Dr. Pat Stephens Williams, Andrea Medina Rosas, Tim Sexton, Bequi Livingston, and ***Jane Park***

Lunch Break
11:50 am to 1:05 pm
Lunch on your own. Check out the hotel's lunch buffet.

Concurrent Oral Presentations
1 to 2:40 pm, second and third floors

Afternoon Break
2:40 to 3:05 pm

Concurrent Oral Presentations, continued
3:05 to 5:05 pm, second and third floors

Special Events

Rx 310 Course, continued
4:25 to 5:05 pm, Texas Lone Star
Hosted by ***Geoff Babb***

Conference Meetings
5:15 to 5:45 pm, Executive Salon 3
Moderators meeting
Hosted by ***Tom DeMeo***

5:15 pm, Directors 2
Steering Committee
Hosted by ***Brian Oswald***

Poster Reception
5:30 to 8:30 pm, Fiesta Pavilion
Come mingle with your colleagues and check out over 100 poster presentations, including many by students, which will be evaluated for the student poster contest. Appetizers are provided, and there will be a cash bar. As well, the Ecological Society of America informal mixer will be held in the same room.

Rapid Fire Retrospective
5:30 to 8:30 pm**,** during the Poster Reception in the Fiesta Pavilion
2015 Fire Season World Café. Look for these tables in the poster hall, where there will be facilitated discussions and sharing about this past fire season. The purpose of this activity is to share observations, ideas, suggestions, and lessons learned with a variety of people in the research, resource management, fire management, and application development communities. Everyone is invited to participate.

GUIDE TO THE CONCURRENT ORAL PRESENTATION SESSIONS FOR TUESDAY

The presentations listed in the schedule on the next four pages are broken into the following sessions. Please refer to the floorplan map at the back of your program for room locations. Presentation abstracts and speaker biographies are provided in a separate document entitled "Oral presentations" found on the conference website.

Special Sessions

SS05: Novel Approaches for Leveraging Big Data for Fire Monitoring, Planning and Management
Moderator: ***S. Norman***
Starts at 1 PM
Room: Texas A, second floor

SS12: Fire Ecology and Livelihoods: Expanding the Horizons of the Human Dimensions of Fire Past and Present
Moderator: ***M. Coughlan***
Starts at 1 PM
Room: San Antonio, third floor

SS14: Wildland Fire Impacts on Subsequent Fire Behavior, Fire Effects, and Post-Fire Vegetation Dynamics
Moderator: ***S. Parks***
Starts at 1 PM
Room: Texas C, second floor

SS16: Benefit Analysis in Wildfire Decision Making
Moderators: ***M. Taber*** and ***T. Opperman***
Starts at 1 PM
Room: Executive Salon 1, third floor

SS04: Causes and Consequences of Fire Regime Shifts in Subtropical, Temperate, and Boreal Forest Ecosystems
Moderator: ***A. Taylor***
Starts at 1 PM
Room: Executive Salon 2, third floor

SS08: Season of Prescribed Burning in Grassland Management
Moderator: ***A. Toomey***
Starts at 3:05 PM
Room: San Antonio, third floor

General Sessions

Global and International Fire Studies
Moderator: ***B. Oswald***
Starts at 1 PM
Room: Executive Salon 3, third floor

Fire Research 1
Moderator: ***L. Ganio***
Starts at 1 PM
Room: Executive Salon 4, third floor

Fire Ecology I
Moderator: ***C. Reemts***
Starts at 1 PM
Room: Executive Salon 5, third floor

Fire Ecology II
Moderator: ***Z. Prusak***
Starts at 1 PM
Room: Directors 2, second floor

Fire Research 2
Moderator: ***K. Lyon***
Starts at 3:05 PM
Room: Executive Salon 4, third floor

Fuels Management 1
Moderator: ***K. Metlen***
Starts at 3:05 PM
Room: Executive Salon 5, third floor

Fire Ecology III
Moderator: ***L. Condon***
Starts at 3:05 PM
Room: Directors 2, second floor

Tuesday, 17 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS05: Novel Approaches for Leveraging Big Data for Fire Monitoring, Planning and Management** Moderator: ***S. Norman***	**SS12: Fire Ecology and Livelihoods: Expanding the Horizons of the Human Dimensions of Fire Past and Present** Moderator: ***M. Coughlan***	**SS14: Wildland Fire Impacts on Subsequent Fire Behavior, Fire Effects, and Post-Fire Vegetation Dynamics** Moderator: ***S. Parks***	**SS16: Benefit Analysis in Wildfire Decision Making** Moderators: ***M. Taber*** and ***T. Opperman***
1 PM	***D. Lee*** Big Problems Demand Big Data: Promise and Pitfalls of Using Big Data to Cohesively Manage Wildland Fire.	***A. Sullivan*** Anthropogenic Fire Ecology and Food-Supply Security: Lessons from Archaeology	***A. Hudak*** Rates of Post-Fire Vegetation Recovery and Fuel Accumulation as a Function of Burn Severity and Time-Since-Burn in Four Western US Ecosystems	***D. Bahr*** Federal Wildland Fire Policy: Help or Hindrance to Managing Fire on the Landscape
1:20 PM	***J. Kumar*** Mining Historical MODIS Hotspots Archive to Characterize Global Fire Regimes	***P. Laris*** The Implications of Anthropogenic Burning Practices for Estimating Burned Area, Fire Severity, and Emissions in West Africa	***L. Yocom*** Wildfire as Fuel Treatment Effects on Subsequent Fire Size, Severity, and Management Factors in the Southwest	***M. Taber*** Fire Use: It's All about the Objectives
1:40 PM	***S. Norman*** Monitoring Seasonal Fire Niches with Large Phenological and Fire Datasets	***M. Coughlan*** Transitioning from Livelihood Fire to Suppression Fire in the US Southeast: Causes and Consequences of Fire Regime Transition in Two Forested Landscapes	***B. Collins*** What Does Moderate Severity Mean in Pine-Mixed-Conifer Forests and What Is Its Fate when Reburned by a Large Wildfire?	***T. Ingalsbee*** Yearn to Burn: Ecological Fire Use for Restoration Objectives
2 PM	***B-G. Brooks*** Information Theory Applied to Wildfire Mediated Succession	***G. Snitke***r Linking the Social and Ecological Dynamics of Anthropogenic Fire Regimes Through Agent Based Modeling (ABM) and Geographic Information Systems (GIS)	***C. Stevens-Rumann*** The Evaluation of Burn Mosaics on Subsequent Wildfire Burn Severity and Post-Fire Effects	***T. Opperman*** Assessing Resource Benefits at the Incident Level
2:20 PM	***F. Hoffman*** Applying a Big Data Approach to Detecting Fire Disturbances and Recovery at a Continental Scale Using Satellite Remote Sensing	***K. Derr*** Humanized Landscapes: How Fire Shaped Small-Scale Societies in the Pacific Northwest	***B. Harvey*** Burn Me Twice, Shame on Who? Testing Feedbacks Among Multiple Wildfires and Identifying Factors Leading to Two Successive Stand-Replacing Fires	***J. Scot***t Overview of Effects Analysis in a Wildfire Risk Assessment Framework
	2:40 PM Afternoon Break			

1 to 2:20 pm Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**SS04: Causes and Consequences of Fire Regime Shifts in Subtropical, Temperate, and Boreal Forest Ecosystems** Moderator: ***A. Taylor***	**Global and International Fire Studies** Moderator: ***B. Oswald***	**Fire Research 1** Moderator: ***L. Ganio***	**Fire Ecology I** Moderator: ***C. Reemts***	**Fire Ecology II** Moderator: ***Z. Prusak***
1 PM	***N. French*** An Assessment of the Causes and Impacts of Recent Fire Regime Changes in the Boreal Forest Region of Western North America	***S. Pyne*** Fire History as Big History	***C. Hanes*** Using the Canadian Precipitation Analysis (CaPA) to Improve Fire Danger Prediction.	***M. Battaglia*** Tree Refugia within Megafire Perimeters Indicate Very Long Recovery Times for Dry Conifer Forests of the Interior West	***H. Starns*** Impacts on Prairie-Chicken Habitat from Management of Rangeland Fuels
1:20 PM	***Y. Bergeron*** Spatio-Temporal Heterogenity in the Fire Regime Shifts following the Little Ice Age in Eastern Boreal Canada	***S. Hallgren*** Improving Management of Wildlife Parks in West Africa through Better Understanding of the Interactions among Fire, Vegetation and Elephants: A Research Proposal	***K. Nelson*** Quantitative Validation of Preliminary Burned Area Essential Climate Variable Data Products	***M. Rother*** Limited Conifer Regeneration following Wildfires in Low-Elevation Forests of the Colorado Front Range	***M. Smith*** Measuring and Modeling Effects of Wildfire on Riparian-Nesting Bird Habitat in New Mexico
1:40 PM	***P. Higuera*** Causes and Ecosystem Consequences of Fire-Regime Variability from Decades to Millennia	***N. Brouwer*** Dutch Wildfire Spreadmodel: Small Scale Fires, Large Scale Impact	***M. Miller*** Rapid Response Tools and Datasets for Post-Fire Modeling and Fuels Planning	***C. Ferster*** Relationships between Crown Mortality, Pre-Fire Vegetation, Topography, and Fire Weather within Natural Wildfires in the Western Canadian Boreal Forest	***M. Agne*** Post-Mountain Pine Beetle Lodgepole Pine Forests: Assessing Fire Effects in the Recently Burned Pole Creek Fire Area, East Cascades Mountains of Oregon, USA
2 PM	***M. Cochrane*** Climate, Land Use and Land Cover Change-Driven Fire Regime Shifts in Tropical Forests of the Brazilian Amazon and Indonesian Peatlands: Causes, Consequences and Divergences	***R. Singh*** Modelling Forest Fire Risk Zone for the Management of Fire in Tropical Thorn Forest, India	***S. O'Neill*** Wildfire Emissions and Smoke Forecast Modeling—the 2015 Wildfire Season	***C. Miller*** The Spatial and Temporal Variability of Modern-Day Fire Refugia in Temperate Forests of Western Canada and the United States	***G. Meigs*** Can Insect Outbreaks Reduce the Severity of Subsequent Forest Fires?
2:20 PM	***J. Miller*** Pre-Settlement vs. Modern Fire Regimes of the Sierra Nevada, California, USA	***B. Peterson*** Deriving CBD from Lidar for Operational Canopy Fuels Mapping	***K. Robertson*** Fire Environment Effects on Particulate Matter Emission Factors in Southeastern US Pine-Grasslands	***K. Kemp*** Fire Mediates the Role of Climate in Determining Tree Regeneration Patterns in Mixed Conifer Forests of the US Northern Rockies	***S. Howard*** Current Status of the Monitoring Trends in Burn Severity
	2:40 PM Afternoon Break				

Tuesday, 17 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS05: Novel Approaches for Leveraging Big Data for Fire Monitoring, Planning and Management** Moderator: ***S. Norman***	**SS08: Season of Prescribed Burning in Grassland Management** Moderator: ***A. Toomey***	**SS14: Wildland Fire Impacts on Subsequent Fire Behavior, Fire Effects, and Post-Fire Vegetation Dynamics** Moderator: ***S. Parks***	**SS16: Benefit Analysis in Wildfire Decision Making** Moderators: ***M. Taber*** and ***T. Opperman***
3:05 PM	***W. Hargrove*** An Empirically Derived National Map of Relative Wildfire Probability Rankings	***L. Vermeire*** Northern Mixed Prairie Response to Fire Seasonality and Return Interval	***M. Coppoletta*** Influence of Post-Fire Vegetation and Fuels on Fire Severity Patterns in Reburns: Implications for Restoration	***P. Morgan*** Harnessing the Power of Fire to Change Landscapes
3:25 PM	***K. Riley*** Advancements in Spatial Wildfire Risk Analysis	***M. Lata*** The Effects of Soil Moisture on Fire Characteristics in Experimental and Prescribed Fires in Mixed and Tallgrass Prairie	***J. Lyderson*** Landscape Interaction of Previous Fire and Fuel Treatments and Rim Fire Severity	***P. Bowden*** Using Benefit Analysis in Pre-Planning the Response to Wildfires in the Southern Sierra National Forests (Spatial Fire Management Planning)
3:45 PM	***J. Menakis*** Comparison of Several Wildfire Risk Assessment Studies Completed over the Last Couple Years for National Forest Lands in the Western and Conterminous United States	***A. Toomey*** Season of Prescribed Burning on Kleberg Bluestem (*Dichanthium annulatum*) in South Texas	***E. Whitman*** Past Burn Severity and Time Since Fire as Drivers of Current Burn Severity	***D. Helmbrecht*** Integrating Analysis of Ecological Integrity with the Wildfire Risk Assessment Framework in the Southern Sierras
4:05 PM	***D. Nguyen*** Develop a Multistage Stochastic Program with Recourse for Scheduling Prescribed Burning Based Fuel Treatments with Consideration of Future Wildland Fires and Fire Suppressions	***D. Snyder*** Post Wildfire Rangeland Response under Different Grazing Management Scenarios	***M. Parisien*** Age Dependence of Wildfires in the Northern Boreal Forest of Canada	***T. Sexton*** Restoring Fire to North American Wildlands—a Call to Action
4:25 PM	***R. McCarley*** Linking LiDAR-Measured Fire Effects with Traditional Reflectance-Based Burn Mapping	***S. Rideout- Hanzak*** Using Prescribed Fire to Manage Endangered Slender Rush-Pea (*Hoffmannseggia tenella*) in Southern Texas, USA	***S. Prichard*** Wildland Fire-on-Fire Interactions: A Review of Fire-Prone Ecosystems and Implications under a Changing Climate	***E. Steffey*** Developing an Integrated Behavioral Model to Understanding Homeowner Mitigation
4:45 PM	***Panel Discussion*** Putting Big Data to Work	***K. Kuhar*** Management Considerations in the Use of Heavy Equipment in Restoring Grassland Ecosystems	***S. Parks*** Resistance to Reburn: Factors Contributing to Reduced Probability of Burning in Recently Burned Areas	***Panel Discussion***

3:05 to 4:45 pm Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**SS04: Causes and Consequences of Fire Regime Shifts in Subtropical, Temperate, and Boreal Forest Ecosystems** Moderator: ***A. Taylor***	**Global and International Fire Studies** Moderator: ***B. Oswald***	**Fire Research 2** Moderator: ***K. Lyon***	**Fuels Management 1** Moderator: ***K. Metlen***	**Fire Ecology III** Moderator: ***L. Condon***
3:05 PM	***D. Bird*** Co-Evolutionary Dynamics and Anthropogenic Pyrodiversity in Australia's Western Desert	***N. Brouwer*** Fuel Research in the Netherlands and the UK	***C. Dicus*** Changing WUI Fire Risk in Dissimilar Communities of Southern California, USA	***E. Knapp*** Restoring Forest Heterogeneity with Mechanical Thinning and/or Prescribed Fire—Early Results from the Variable Density Thinning Study, Central Sierra Nevada, California	***E. Loudermilk*** Does Fire Behavior Drive Community Assembly through Neutral Processes in Frequently Burned Ecosystems?
3:25 PM	***A. Taylor*** Land-Use Change Triggers Fire Regime Shifts and Modulates Sierra Nevada Fire-Climate Interactions since 1600 CE	***B. Heumann*** Low-Cost Approach to Fire Danger Ratings in Tropical Forest and Grasslands	***B. Wolk*** Assessing Fire Hazard Reduction Treatment Effectiveness on Non-Federal Lands in the Colorado WUI	***P. van Mantgem*** Duration of Fuels Reduction following Prescribed Fire in Coniferous Forests of Western US National Parks	***J. Iniguez*** Changes in Forest Structure Relative to Burn Severity Classes in the Sky Islands of Southeastern Arizona
3:45 PM	***J. Huffma***n Fire History of a Central Florida Pine Savanna Landscape	***R. Gosford*** Ornithogenic Fire—Birds as Propagators of Fire in the Australian Savannah	***A. Ganteaume*** Can Ranking the Flammability of Ornamental Species be Used for the Fire Risk Assessment in WUI ?	***N. Vaillant*** An Evaluation of the Forest Service Hazardous Fuels Treatment Program—are We Treating Enough in the Right Places?	***B. Bright*** Examining Patterns of Vegetation Recovery following Wildfire Using Landsat Time Series Analysis
4:05 PM	***R. Noss*** Fire Seasonality in the Southeastern US Coastal Plain: Should Managers Mimic the Lightning Fire Season?	***F. Schoeffler*** Human Factors Influenced the 30 June 2013 Yarnell Hill Fire Fatalities	***J. Lesser*** Detecting Fires: A Nationally Consistent Rule Based Approach	***E. Reinhardt*** Fuel Management in the US Forest Service—Aspirations and Reality	***R. Magalhaes*** Moisture Content Overwhelms the Effect of Volatile Content in Litter Flammability of a Mixed-Conifer Forest
4:25 PM	***C. McHugh*** Comparison of Temperature and Relative Humidity Values from Sling Psychrometers and Electronic Weather Meters in a Controlled Environment	***D. Phiri*** History of Fire in Kafue National Park of Zambia: from 2000 to 2013	***C. Sieg*** Physics-Based Fire Model Provides Insights on Fire Spread following Bark Beetle-Induced Tree Mortality	***K. Wilkin*** Shrubland Fire Hazard Reduction has Drawbacks for Biodiversity	J***. Roccaforte*** Forest Structure and Fuels Dynamics following Ponderosa Pine Restoration Treatments, White Mountains, Arizona, USA
4:45 PM		***M. Bhatta*** Forest Fire Risk in Chitwan by Using RS and GIS	***C. Dunn*** Improving Fire Severity Maps to Assess Forest Resilience: Tree Survival is More Important than Mortality for Vegetation Response to Mixed-Severity Fire	***J. Scott*** The Relative Contribution of USFS Land to Wildfire Risk to Adjacent Homes—a Pilot Assessment on the Sierra National Forest, California	

WEDNESDAY, 18 NOVEMBER

Schedule Overview

Registration
7:30 am to 1:30 pm, second floor

Presentation Loading
8 am to 4 pm, second floor

Concurrent Oral Presentations
8 to 9:40 am, second and third floors

Morning Break
9:40 to 10:05 am

Concurrent Oral Presentations
10:05 to 11:25 am, second and third floors

Lunch Break
11:25 am to 1 pm
Lunch on your own. Check out the hotel's lunch buffet.

Concurrent Oral Presentations, continued
1 to 2:40 pm, second and third floors

Afternoon Break
2:40 to 3:05 pm

Concurrent Oral Presentations, continued
3:05 to 5:05 pm, second and third floors

Special Events

Conference Meeting
5:15 pm, Directors 2
Steering Committee
Hosted by ***Brian Oswald***

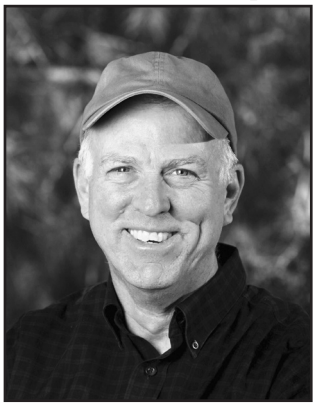
Rx 310 Course, continued
4:25 to 5:05 pm, Texas Lone Star
Hosted by ***Geoff Babb***

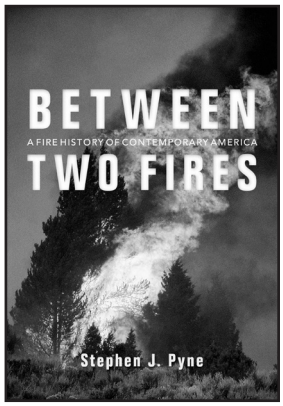
Book Signings

Wednesday, 5:15 to 5:45 pm, in Executive Salon 5. Meet with editors ***Dominick DellaSala*** and ***Chad Hanson,*** who recently published *The Ecological Importance of Mixed-Severity Fires: Nature's Phoenix.*

Wednesday, 6 to 6:30 pm, in the FUSEE exhibitor booth in the second-floor foyer. ***Stephen Pyne,*** author of *Between Two Fires: A Fire History of Contemporary America,* will be signing his book. All proceeds go to the ***Mike da Luz*** Memorial Student Scholarship Fund.

*AFE would like to thank **Stephen Pyne** for so generously donating the proceeds of his book sales at this conference to the Mike da Luz Memorial Student Scholarship Fund.*





Awards Banquet

5:30 to 9 PM, Texas Ballroom B

Reception and No-Host Bar
5:30 to 6:30 pm

Dinner and Welcome
6:30 pm

Dr. Chris Dicus
Master of Ceremonies

Award Presentations
7 pm

Dr. Brian Oswald
Association for Fire Ecology President, Stephen F. Austin State University

- Recognition for AFE's Wildland Fire Professional Certification Recipients
- Recognition for AFE's Wildland Fire Academic Program Certification Recipient
- Student Poster Presentation Awards
- Harold Weaver Undergraduate Student Excellence Award
- Edward Komarek, Sr. Graduate Student Excellence Award
- Mike da Luz Memorial Student Travel Scholarship
- The Herbert Stoddard Lifetime Achievement Award
- The Henry Wright Lifetime Achievement Award
- The Harold Biswell Lifetime Achievement Award

***Fire Ecology* Journal Presentation**
7:50 pm

Featured Speaker
8 pm

Dr. Mary Huffman
Association Director, Fire Learning Network, The Nature Conservancy
Making a world of difference in fire and climate change.

Closing Remarks / End of Banquet
8:45 pm

GUIDE TO THE CONCURRENT ORAL PRESENTATION SESSIONS FOR WEDNESDAY

The presentations listed in the schedule on the next eight pages are broken into the following sessions. Please refer to the floorplan map at the back of your program for room locations. Presentation abstracts and speaker biographies are provided in a separate document entitled "Oral presentations" found on the conference website.

Special Sessions

SS07: Fire Effects on North American Wildlife and Livestock
Moderator: ***J. Scasta***
Starts at 8 AM
Room: Texas A, second floor

SS10: Bridging Gaps Between Fire Ecology and Archaeology: a Millennial Perspective on Managing Cultural-Ecological Landscapes
Moderator: ***R. Loehmann***
Starts at 8 AM
Room: San Antonio, third floor

SS03: Effects and Considerations of Mastication Fuels Treatments: Where Are We in our Scientific Understanding of these Treatments?
Moderator: ***M. Battaglia***
Starts at 8 AM
Room: Texas C, second floor

SS19: Physical Mechanisms of Wildland Fire Spread
Moderator: ***S. McAllister***
Starts at 8 AM
Room: Executive Salon 1, third floor

SS18: The State of Fire Ecology in Latin America and Iberia in the 21st Century: Science, Management and Policy Perspectives
Moderator: ***C. Cortés Montaño***
Starts at 8 AM
Room: Executive Salon 3, third floor

SS01: Let's Talk Fire Science: Strategies and Successes
Moderator: ***B. Wolfson***
Starts at 8 AM
Room: Executive Salon 4, third floor

SS11: Science and Management of Frequently Burned Conifer Ecosystems in North America
Moderator: ***M. Stambaugh***
Starts at 8 AM
Room: Executive Salon 5, third floor

SS21: FIRE TREK: The Next Generation
Moderator: ***T. Ingalsbee***
Starts at 8 AM
Room: Directors 2, second floor

SS17: Outcomes of JFSP-Sponsored Projects: Is Science Used?
Moderator ***M. Hunter***
Starts at 1 PM
Room: Executive Salon 4, third floor

General Sessions

Climate Change and Fire Weather
Moderators: ***P. Robichaud*** and ***T. Brown***
Starts at 8 AM
Room: Executive Salon 2, third floor

Fuels Management II
Moderator: ***D. Lee***
Starts at 1 PM
Room: Executive Salon 2, third floor

Fire and Restoration I
Moderator: ***J. Creighton***
Starts at 1 PM
Room: Executive Salon 4, third floor

Case Studies
Moderator: ***S. Prichard***
Starts at 3:05 PM
Room: Texas A, second floor

Fire Ecology IX
Moderator: ***J. Beyers***
Starts at 3:05 PM
Room: Executive Salon 2, third floor

Fire Ecology: Global
Moderator: ***R. Verble***
Starts at 3:25 PM
Room: Executive Salon 5, third floor

Wednesday, 18 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS07: Fire Effects on North American Wildlife and Livestock** Moderator: ***J. Scasta***	**SS10: Bridging Gaps Between Fire Ecology and Archaeology: a Millennial Perspective on Managing Cultural-Ecological Landscapes** Moderator: ***R. Loehman***	**SS03: Effects and Considerations of Mastication Fuels Treatments: Where Are We in our Scientific Understanding of these Treatments?** Moderator: ***M. Battaglia***	**SS19: Physical Mechanisms of Wildland Fire Spread** Moderator: ***S. McAllister***
8 AM	***R. Limb*** Heterogenity-Based Conservation Strategies for Great Plains Conservation: Implications for Livestock Production		***T. Jain*** Mastication Treatment Parameters: Can We Alter Post-Treatment Outcomes?	***M. Finney, J. Cohen,*** and ***S. McAllister*** Towards Understanding Wildfire—Lessons from Fire Protection Engineering
8:20 AM	***R. Hamilton*** Ecological Restoration and Conservation Outreach in the Tallgrass Prairie of Oklahoma	***R. Loehman*** Fire and Fire Surrogates in Cultural-Ecological Landscapes of the Prehistoric Southwest	***J. Halbrook*** Mastication: an Alternative to Grapple Piling and Burning Activity Fuels	***J. Urban*** Comparing Flaming and Smoldering Spot Ignition of Natural Fuels by Hot Aluminum Particles
8:40 AM	***R. Verble-Pearson*** Impacts of Prescribed Burning on Central Texas Harvester Ant Populations	***N. Kessler*** Historical Land Use and Changes in Fire Occurrence in a Piñon-Juniper Woodland, Cebolla Canyon, Western New Mexico	***S. Hvenegaard*** Mastication Practices and Research—a Canadian Perspective	***X. Huang*** Computational Smouldering Combustion in Peat Fires: Ignition, Spread and Extinction
9 AM	***J. Scasta*** Fire Effects on Parasites of Livestock and Wildlife	***L. Huckaby*** Historic Fire Regimes and Native American Influences on Ignitions in the Northern Colorado Front Range Foothills	***R. Keane*** Physical and Chemical Characteristcs of Surface Fuels in Masticated Mixed-Conifer Stands of the Western United States	***J. Gallacher*** The Ignition and Burning of Live Fuels Studied Using Natural Variation in Fuel Characteristics
9:20 AM	***R. Moranz*** Understanding the Effects of Wildland Fire on North American Butterflies	***A. Klimaszewski-Patterson*** What's Really Driving 2000 Years of Forest Change in the Southern Sierra Nevada, California	***G. Hamby*** Long-Term Ponderosa Pine Growth and Mortality following Mastication and Prescribed Fire in Northern California, USA	***S. Mahalingam*** A Full-Physics Computational Study of Pyrolysis and Ignition of a Leaf-Like Fuel Element Exposed to Convective Heating
	9:40 PM Morning Break			

8 to 9:20 am Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**Climate Change and Fire Weather** Moderator: ***P. Robichaud***	**SS18: The State of Fire Ecology in Latin America and Iberia in the 21st Century: Science, Management and Policy Perspectives** Moderator: ***C. Cortés Montaño***	**SS01: Let's Talk Fire Science: Strategies and Successes** Moderator: ***B. Wolfson***	**SS11: Science and Management of Frequently Burned Conifer Ecosytems in North America** Moderator: ***M. Stambaugh***	**SS21: FIRE TREK: The Next Generation** Moderator: ***T. Ingalsbee***
8 AM	***W. Flatley*** Modeling Vegetation Response to Future Climate and Fire Regimes at the Grand Canyon	***C. Cortés Montaño*** 1998: El Niño, Wildfire, and the Onset of a National Fire Management Program in México	***A. Thode*** The Southwest Fire Community: Developing Relationships and Products to Meet Diverse Needs	***L. Boring*** Frequent Fire Forest Ecosytems: Developing a Common Understanding of Forest Structure and Function	***M. Tiller*** Effects of Yaupon, Chinese Privet, and Chinese Tallow on Understory Fuel Flammability in East Texas Hardwood and Pine Ecosystems
8:20 AM	***D. Hallema*** Discussion of Short and Long Term Hydrologic Effects of Wildfire and Associated Management Strategies in Forests of the Contiguous United States		***J. Creighton*** The Known Unknown: Bringing Diverse Stakeholders Together to Address a Wicked Problem	***B. Gannon*** Structural Reference Conditions for Colorado Front Range Ponderosa Pine Forests	***T. Bloom*** Impact of Climate Change and Wildfires on a High Elevation Flower in the Rocky Mountain Floristic Region
8:40 AM	***J. Stevens*** Multi-Scale Effects of Fire Severity on Snowpack Dynamics in Montane Coniferous Forests	***D. Molina Terrén*** Wildland Fire Use (Prescribed Fire and Suppression Fires) in South Europe and Latin America	***V. Wright*** Spanning Boundaries in the Northern Rockies: Understanding Audiences as a Critical Piece of the Science Delivery Puzzle	***R. Masters*** Fire Frequency as a Determinant of Succession Pathway on Xeric Oak-Pine Sites	***A. Weill*** Fire and Functional Traits: How Do Fire-Adapted Traits Relate to Historical, Recent, and Future Fire Regimes in Post-Fire Reseeding Ceanothus Species?
9 AM	***D. Molina Terrén*** Fire Spread Patterns, Extreme Weather Conditions and Wildfires	***F. Seijo*** Legacy Effects of Preindustrial Era Fire Practices in Iberian Forest Ecosystems: Defining Historical Ranges of Variability in Two Unevenly Developed Chestnut Forest Coupled Human and Natural Systems	***G. Edwards*** Adapting Fire Knowledge Exchange to Digital, Social, and Ecological Dimensions in the Southern Rockies	***J. Marshall*** Documenting Frequent Fire Regimes in Mixed Pine-Oak Forests of Pennsylvania	***D. Hammond*** Contrasting Sapling Bark Allocation of Five Southeastern USA Hardwood Tree Species in a Fire-Prone Ecosystem
9:20 AM	***J. Keeley*** Fire Climate Relationships along Latitudinal and Elevational Gradients in California	***E. Acosta Lugo*** The Regional Program for Wildfire Attention in the Yucatan Peninsula, México	***C. Maier*** The Burning Issues Paradox—How a Narrow Focus Led to "New Ways of Thinking and Awareness"	***M. Stambaugh*** Projected Climate Change Impacts on Frequent Fire Regimes in the Southcentral US	***M. Wright*** Characterizing the Effects of Burn Severity, Mountain Pine Beetle, and Microhabitat on Lodgepole Pine Regeneration following the High Park Fire
	9:40 PM Morning Break				

Wednesday, 18 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS07: Fire Effects on North American Wildlife and Livestock** Moderator: ***J. Scasta***	**SS10: Bridging Gaps Between Fire Ecology and Archaeology: a Millennial Perspective on Managing Cultural-Ecological Landscapes** Moderator: ***R. Loehman***	**SS03: Effects and Considerations of Mastication Fuels Treatments: Where Are We in our Scientific Understanding of these Treatments?** Moderator: ***M. Battaglia***	**SS19: Physical Mechanisms of Wildland Fire Spread** Moderator: ***S. McAllister***
10:05 AM	***S. Wiggam*** Patch-Burn Grazing Promotes Pollinator Diversity on Working Ranches	***A. Steffen*** ArcBurn: Measuring and Managing Fire Vulnerability of Southwestern Cultural Landscapes	***W. Reed*** Long-Term Changes in Masticated Woody Fuelbeds in Northern California and Southern Oregon	***J. Gallacher*** The Effect of Heating Mode on the Ignition and Burning Behavior of 10 Live Shrub Fuels
10:25 AM	***B. Hossack*** Effects of Wildfire on Amphibians and their Parasites: Influences of Burn Severity, Isolation, and Management	***T. Hanson*** Dynamic Entanglements on the Fringe: Fire, Community, and Ecological Change in Lowland Bolivia	***J. Kreye*** Masticated Fuels and How they Burn: a Review of Early Findings	***J. Cohen*** Fuel Particle Heat Exchange during Wildland Fire Spread
10:45 AM	***J. Beck*** Sage-Grouse and Sagebrush Habitat Response to Fire	***R. Guyette*** Embracing "Smart Ignitions" in the Combustion Dynamics of Ecosystems	***P. Morgan*** Fire Behavior in Masticated Fuels Burned in Lab and Field Experiments	***S. McAllister*** Shape Effects on the Convective Ignition of Wood
11:05 AM	***T. Hovick*** Increasing Grassland Suitability for Prairie-Chickens through Restored Fire and Grazing Processes		***T. Schiks*** Fuel Moisture and Fire Behaviour in Masticated Fuels of Canada's Boreal Forest	***M. Finney*** Studies of Flame Spread Mechanisms in Cardboard Fuel Beds: Comparison of Wind and Slope
11:25 AM Lunch Break				

10:05 AM TO 1 PM CONCURRENT ORAL PRESENTATION SCHEDULE

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**Climate Change and Fire Weather** Moderator: ***T. Brown***	**SS18: The State of Fire Ecology in Latin America and Iberia in the 21st Century: Science, Management and Policy Perspectives** Moderator: ***C. Cortés Montaño***	**SS01: Let's Talk Fire Science: Strategies and Successes** Moderator: ***B. Wolfson***	**SS11: Science and Management of Frequently Burned Conifer Ecosystems in North America** Moderator: ***M. Stambaugh***	**SS21: FIRE TREK: The Next Generation** Moderator: ***T. Ingalsbee***
10:05 AM	***R. Guyette*** The Direction, Magnitude and Theory of Ecosystem Fire Probability as Constrained by Precipitation and Temperature	***S. Ortega-Jimenez*** A Fire Frequency Reconstruction of a Mixed Conifer Forest in San Miguel Cajonos, Oaxaca, México	***D. Godwin*** Private Landowners, NGOs, and Government Agencies: *Oh My!* Meeting Diverse Fire Science Needs	***W. Flatley*** Does Fire Suppression Alter Ecosystem Services Provided by Frequent Fire Conifer Forests across North America?	***H. Larson*** Don't Forget the Little Guys: How Smoke Transports Microbes and What it Might Mean for Surrounding Forests
10:25 AM	***A. Terrier*** Paludification Mediate the Ecological Impact of an Intensifying Wildfire Regime in the Clay Belt Boreal Forest of Eastern North America	***P. Llamas-Casillas*** Historical Fire Regime and Land Use in Western México	***S. Leis*** The Heart of Fire in the Great Plains: Private Landscapes, Prescribed Burning, and Collaborative Fire Communities	***S. Brantley*** Water Yield Tradeoffs of Promoting Carbon Sequestration in Frequent-Fire Forest Ecosystems of the Southeastern United States	***M. Poling*** Quantifying Trends in Burn Severity in Arizona and New Mexico Forested Ecosystems from 1984–2013
10:45 AM	***K Riley*** Projected Impacts of Climate Change on Vegetation and Fire in the Huachuca Mountains of Arizona	***H. Martinez-Torres*** Traditional Fire Knowledge Systems in a Temperate Forest Ecosystem	***Panel Discussion***	***J. O'Brien*** Why Frequently Burned Pine Ecosystems are Susceptible to Catastrophic Shifts in Ecological Regimes	***T. Wicks*** Fire and Cavity Nesting Bird Communities: Do Fire Severity and Time-Since-Fire Mediate Community Composition and Nest-Web Assemblages?
11:05 AM	***M. Campbell*** Using Lidar to Determine Firefighter Safety Zone Size in Tahoe National Forest	***M. Farfán*** Modeling Anthropic Drivers as Sources of Fire Occurrence (2009–2013) at the Monarch Butterfly Biosphere Reserve	***Panel Discussion***	***D. Bragg*** Wanted: Case Studies on Frequent Fire in Conifers for a Planned Book on Open Forest Ecosystems	***K. Hill*** Prescribed Fire in Grassland Butterfly Habitat: Targeting Weather and Fuel Conditions to Reduce Risk of Mortality and Enhance Habitat Heterogeneity
11:25 AM Lunch Break					

Wednesday, 18 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS07: Fire Effects on North American Wildlife and Livestock** Moderator: ***J. Scasta***	**SS10: Bridging Gaps Between Fire Ecology and Archaeology: a Millennial Perspective on Managing Cultural-Ecological Landscapes** Moderator: ***R. Loehman***	**SS03: Effects and Considerations of Mastication Fuels Treatments: Where Are We in our Scientific Understanding of these Treatments?** Moderator: ***M. Battaglia***	**SS19: Physical Mechanisms of Wildland Fire Spread** Moderator: ***S. McAllister***
1 PM	***T. Fulbright*** Fire Effects on White-Tailed Deer	***J. Kinoshita*** History of Archaeologists on the Fire Line	***J. Kreye*** Plant Community Response to Mastication Fuels Treatments: a Review of Current Knowledge	***C. Miller*** A Fundamental Exploration of Flame Structure in Wildland Fires
1:20 PM	***S. Leverkus*** Pyric Herbivory in Northern Canada: Where do the Wood Bison Roam?	***J. Dyer*** Restoring Fire at the Landscape Scale to Protect Sacred Sites	***M. Battaglia*** Tree Regeneration and Growth Response to Mastication: Does Mastication Depth Matter?	***A. Trouve*** Numerical Simulations of the Structure of Wildland Fire Flames
1:40 PM	***J. Beck*** Fire Effects on Reintroduced, Low-Elevation Bighorn Sheep	***J. Sturdevant*** Historic Archeology, Climate Change, and Wildland Fire: a Midwestern Perspective on Future Threats to Resource Preservation	***M. Rocca*** After the Mulch Settles: Understory Plant Response 8 Years after Mastication in Three Colorado Forest Types	***C. Shen*** Experiments and Modeling of Fire Spread in Big Sagebrush and Chamise Shrubs in a Wind Tunnel
2 PM	***K. Davies*** Livestock Grazing Influences Wildfire Risk and Effects in Dry Sagebrush Communities	***R. Loehman*** Trial by Fire: Do Fuel Treatments Work to Mitigate Wildfire Damages to Cultural Resources?	***P. Fornwalt*** Mulching Treatment Impacts on Understory Plant Composition in Colorado Coniferous Forests	***D. Weise*** Investigating the Effects of Kinetic Parameters on Fire Spread in Chaparral Fuel Beds
2:20 PM		***D. Carrill*** Managing the Pino Fire for Resource Benefit	***S. Owen*** Mechanical Mastication and Exotic Plant Invasion: a Synthesis of Research and Observations	***E. Mueller*** Localized Fire Behavior Regimes in a Field-Scale Experiment
2:40 PM Afternoon Break				

1:20 to 3:05 pm Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**Fuels Management II** Moderator: ***D. Lee***	**SS18: The State of Fire Ecology in Latin America and Iberia in the 21st Century: Science, Management and Policy Perspectives** Moderator: ***C. Cortés Montaño***	**S17: Outcomes of JFSP-Sponsored Projects: Is Science Used?** Moderator: ***M Hunte***	**Fire and Restoration I** Moderator: ***J. Creighton***	**SS21: FIRE TREK: The Next Generation** Moderator: ***T. Ingalsbee***
1 PM	***C. Marks*** Burning Southerly Aspects to Reduce Fire Severity in Dry Mixed Conifer Forest at Grand Canyon NP	***J. Sáenz Ceja*** Dendrochronological Reconstruction of the Establishment History of *Pinus pseudostrobus* and *Abies religiosa* in the Monarch Butterfly Biosphere Reserve	***J. Cissell*** Best Practices for Improved Program Relevance and Outcomes	***S. Pyne*** Fire's American Century	***A. Brennan*** Determining Public Perception toward Wildland Fire in the Veluwe Region of the Netherlands
1:20 PM	***H. Kramer*** Estimating Ladder Fuels: a New Approach by Land and by Air	***D. Pérez Salicrup*** Historical Fire Regimes and Fire Management in an Emblematic Biosphere Reserve in México	***M. Hunter*** Outcomes of Fire Science Research: Is Science Used?	***P. Hessburg*** Restoring Fire-Prone Inland Pacific Landscapes: Seven Core Principles	***W. Mobley*** Effects of Development on Wildfire Risk
1:40 PM	***M. Johnson*** Evaluating Fuel Treatment Effects in Defensible Fuel Profile Zones, Lassen National Forest, Bald Fire 2014	***E. Jardel Peláez*** Fire Management and Fire Regimes in Tropical Montane Forests of Mexico and El Salvador	***M. Varner*** Bridging Gaps between Managers and Scientists: the Southern Pine Duff Story	***T. DeMeo*** A New Approach to Evaluate Forest Structure Restoration Needs across Oregon and Washington, USA	***S. Lobby*** Fired Up: The Geography of Federal Wildland Firefighter Safety in Perspective
2 PM	***L. Ball*** Unanticipated Seasonal Predictability of Live Fuel Moisture in Central Texas	***E. Jardel Peláez*** Fire Regimes, Fire Management and the Diversity of Pine Forests and the Genus *Pinus* In Mexico	***C. Lafon*** Fire History Research and Its Application to Fire Management in the Appalachian Mountains	***R. Haugo*** Applying the Principles of Landscape Restoration within the Central Washington Cascades: the Manastash-Taneum Large Landscape Project	***U. Raja*** Decision-Making on the Fireline: Roots of Risk and Causes for Collaboration
2:20 PM	***C. Dunn*** How Do We Develop Optimal Incident Management Strategies for a New Large-Fire Management Paradigm?	***S. Quintero Gradilla*** Ecosystem Carbon Pools Recovery after Stand-Replacing Wildfires in México	***S. Fuhlendorf*** Pyric Herbivory on Grasslands: Innovation through JFSP	***W. Tinkham*** Treatment Longevity of Ponderosa Pine Forest Restoration: Implications of Regeneration on Fire Hazard	***E. Vakili*** Fuel Treatment Effects on Spatial Variability of Surface Fuels in Ponderosa Pine Forests of the Southern Rocky Mountains
2:40 PM Afternoon Break					

Wednesday, 18 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**Case Studies** Moderator: ***S. Prichard***	**SS10: Bridging Gaps Between Fire Ecology and Archaeology: a Millennial Perspective on Managing Cultural-Ecological Landscapes** Moderator: ***R. Loehmann***	**SS03: Effects and Considerations of Mastication Fuels Treatments: Where Are We in our Scientific Understanding of these Treatments?** Moderator: ***M. Battaglia***	**SS19: Physical Mechanisms of Wildland Fire Spread** Moderator: ***S. McAllister***
3:05 PM	***B. Buchanan*** Large-Scale Monitoring Projects Supplement Fire Effects Research in the Southern US	***M. Friggens*** A GIS-Based Model for Predicting Wildfire-Caused Damages to Archaeological Sites and Artifacts	***C. Rhoades*** Fuel Reduction Mulching Treatments, Nitrogen Dynamics and Site Productivity in Colorado Conifer Forests	***K. Saito*** Fire Whirls in Wildland Fires
3:25 PM	***W. Harling*** Bringing Good Fire Back to the Klamath Mountains: the Western Klamath Restoration Partnership and the Klamath River Prescribed Fire Training Exchange (TREX)	***R. Kneifel*** Developing Fuel Treatment Guidelines for Reducing Wildfire Damages to Cultural Resources in the American Southwest	***J. Coop*** Mastication Treatments in Piñon-Juniper Woodlands: Fuels, Vegetation, and Bird Responses to a No-Analogue Disturbance	***R. Linn*** Heterogeneous Fireline Dynamics: a Numerical Exploration of Feedbacks Involved in Coupled Fire/Atmosphere Dynamics
3:45 PM	***Z. Prusak*** The Fire Team Model: Getting More Acres Burned Collaboratively	***Panel*** Bridging Gaps Between Fire Ecology and Archaeology in Theory and Practice	***J. McMillin*** Bark Beetle Responses to Fuels Management Treatments Involving Chipping or Mastication	***J. Coen*** Coupled Weather-Fire Modeling of Landscape-Scale Wildland Fires Using Spatially Refined Satellite Remote Sensing Fire Detection Data
4:05 PM	***N. Swaney*** Using Adaptive Management to Guide Prescribed Burn Programs in the Central Appalachian Mountains	***Panel*** Bridging Gaps Between Fire Ecology and Archaeology in Theory and Practice	***T. Brennan*** Mastication in Chaparral, New Ideas to Chew on.	***J. Picotte*** Sisyphus and MTBS: Utilizing Multi-Sensor Active Fire Detections to Help MTBS Map Fires in the US
4:25 PM	***W. Hall*** Fuels Treatment Effectiveness and Utilization in Suppression: A case study of the 2014 Slide Fire on the Coconino National Forest	***Panel*** Bridging Gaps between Fire Ecology and Archaeology in Theory and Practice	***Panel Discussion*** ***J. Kreye, M. Battaglia, M. Varner,*** *and* ***E. Knapp*** Mastication as a Fuels Treatment Tool: a Discussion of Treatment Efficacy, Ecological Effects, and Where We Go from Here.	***J. Coen*** The King Megafire: Coupled Weather-Fire Modeling Enhanced by Pre-Hyspiri Imaging Spectrometer and LiDAR Fire and Fuel Products
4:45 PM			***Wrap-up Meeting***	***R. Parsons*** Exploratory Analysis of Interactions of Patchy/Clumpy Fuel Configurations on Fire Behavior with a Physics-Based Fire Model

3:05 to 4:45 pm Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**Fire Ecology IX** Moderator: ***J. Beyers***	**SS18: The State of Fire Ecology in Latin America and Iberia in the 21st Century: Science, Management and Policy Perspective** Moderator: ***C. Cortés Montaño*s**	**SS17: Outcomes of JFSP-Sponsored Projects: Is Science Used?** Moderator: ***M Hunter***	**Fire Ecology: Global** Moderator: ***R. Verble***	**SS21: FIRE TREK: The Next Generation** Moderator: ***T. Ingalsbee***
3:05 PM	***L. Ellsworth*** Mid-Succession Fire Effects in Sagebrush-Dominated Ecosystems	***M. Castillo-Navarro*** Effects of Fire on Morpho-Functional Diversity of Trees in Subtropical Montane Forests in Western Mexico	***P. Fulé*** Applying Fire Ecology Research for Management at Grand Canyon	***B. Kramp*** Protection by Detection: How Early Wildfire Detection Technology Reduces Economic, Natural and Human Devastation	***B. Hart*** Fire in the Future, Lessons from the Past: Forest Fire Fuel Reduction Treatment Impacts on Ponderosa Pine Mycorrhizal Fungi Diversity
3:25 PM	***S. Reis*** Dynamics of Fuels Accumulation in Mountain Shrub Communities at Hart Mt. National Antelope Refuge	***P. Fulé*** Fire Regimes Can Be Conserved in Protected Areas: Examples from México	***P. Robichaud***: Smoldering Questions: Are Better Post-Fire Decisions Being Made?	***L. Ganio*** Mortality Classifications of Large Fire-Injured Douglas-Fir and Ponderosa Pine in Oregon and Washington Using Logistic Regression	***B. Miller*** Innovative Strategies for Achieving Collaborative Forest Landscape Restoration Program (CFLRP) Objectives in the Southern Blue Mountains
3:45 PM	***D. Hankins*** Restoring Indigenous Prescribed Fires to California Oak Woodlands	***E. Alvarado*** Fire Effects on Bolivian Production Forests	***J. Chambers*** A Holistic Management Approach for Addressing Invasive Annual Grass and Wildfire Threats to Sagebrush Ecosystems and Greater Sage-Grouse	***J. Portier***: Do Fire Regimes Differ South and North of the Limit of Commercial Forest of Quebec, Canada?	***D. O'Leary*** Investigating the Spatio-Temporal Relationships between Snow Melt Timing and Wildfire Occurrence in the US Mountain West
4:05 PM	***C. Lauvaux*** Fire History and Vegetation Change in a Mixed Severity Regime Douglas-Fir Forest-Sagebrush-Grassland Landscape in the Northern Rocky Mountains		***C. Reemts*** Using The Floristic Quality Index to Assess Long-Term Effects of Prescribed Fire and Grazing on a Prairie Remnant	***T. Bragg*** Fire-Return Interval and Mulga (*Acacia aneura*) Regeneration in Western Australia: Implications for Prescribed Burning	***A. Masarie*** A Continuous Space-Time Domain Model for Fire Resource Movement
4:25 PM	***J. Beyers*** Chaparral Recovery after a Short-Interval Reburn		***L. Condon*** An Examination of the Roles of Grazing and Fire on the Ability of Biological Soil Crusts to Maintain Site Resistance to *Bromus tectorum* in the Great Basin	***G. Borala Liyanage***: Seedling Performance in the Post-Fire Environment: Effect of Seed Dormancy-Breaking Temperature Thresholds on Subsequent Life History Stages	
4:45 PM	***R. Innes*** Finding Information on Fire Effects and Fire Regimes		***C. Bowman-Prideaux*** Adding Fuel to the Fire: The Contribution of Perennial Bunchgrasses in Altering Fire Regimes in the Great Basin	***D. Dellasala*** Ecological Importance of Mixed-Severity Fires: Nature's Phoenix	

THURSDAY, 19 NOVEMBER

Schedule Overview

Registration
7:30 am to 1:30 pm, second floor

Concurrent Oral Presentations
8 to 9:40 am, second and third floors

Morning Break
9:40 to 10:05 am

Concurrent Oral Presentations, continued
10:05 to 11:25 am, second and third floors

Lunch Break
11:25 am to 1 pm

Lunch on your own. Check out the hotel's lunch buffet.

Concurrent Oral Presentations, continued
1 to 3 pm, second and third floors

Afternoon Break
3 to 3:25 pm

Closing Plenary Speakers
3:25 to 5 pm, Texas Ballroom

Marthin Kasaona
Etosha Ecological Institute, Namibia

Scott Stephens
University of California, Berkeley

Patrick Brose
USDA Forest Service, Northern Research Station

Special Events

Poster Breakdown
8 am to 1 pm, Fiesta Pavilion

Must be completed by 1 PM!

Rx 310 Course, continued
8 to 11:30 am, Texas Lone Star

Hosted by ***Geoff Babb***

Exhibit Breakdown
3:30 to 5 pm, second and third floors

AFE Annual Members Meeting
Thursday, 5:30 to 6:15 pm, in Texas B Ballroom.

You're invited to join us for our Annual AFE members meeting! AFE members are the professionals and students responsible for developing the international fire ecologist and manager certification programs, the higher education in fire ecology recognition program, collaborative international position statements on critical issues (e.g., climate change, fuels management, gender in fire), awards for lifetime achievements, TREE student travel grants, GRIN innovative student research grants, and the international AFE Fire Congresses and Regional Conferences where scientists, managers, and the next generation unite. All of these accomplishments depend on the initiative and support of our enthusiastic members and committees. Come to the meeting and find out how you can get involved and make a difference. New members welcome!

SAFE Annual Members Meeting
Thursday, 6:15 to 7 pm, in Texas B Ballroom.

All students welcome! Come meet your fellow SAFE members, share updates on our chapters, elect new national officers, and help shape the future of SAFE. Also, stop by our booth in the exhibit hall throughout the week to learn more about SAFE.

GUIDE TO THE CONCURRENT ORAL PRESENTATION SESSIONS FOR THURSDAY

The presentations listed in the schedule on the next six pages are broken into the following sessions. Please refer to the floorplan maps at the back of your program for room locations. Presentation abstracts and speaker biographies are provided in a separate document entitled "Oral presentations" found on the conference website.

Special Sessions

SS02: Keeping Fire on Our Side: Manging Fire to Meet Political, Social, and Ecological Imperatives
Moderator: ***L. Kurth***
Starts at 8 AM
Room: Texas A, second floor

SS09: Smoke Ecology
Moderator: ***M. Lata***
Starts at 8 AM
Room: San Antonio, third floor

SS13: Post-Fire Tree Mortality Causes and Patterns: Insights from Around the World
Moderator: ***S. Hood***
Starts at 8 AM
Room: Texas C, second floor

SS15: Changing Fire Regimes: Ecological Change as a Consequence of Climate Warming and Dynamic/Novel Fuel Complexes
Moderator: ***M. Turesky***
Starts at 8 AM
Room: Executive Salon 1, third floor

SS06: Characterizing Uncertainty in Wildland Fire: Occurrence, Decision Making, and Management
Moderator: ***K. Riley***
Starts at 8 AM
Room: Executive Salon 2, third floor

General Sessions

Human Dimensions
Moderators: ***D. DellaSalla, M. Anderson,*** and ***M. Reilly***
Starts at 8 AM
Room: Executive Salon 3, third floor

Fire Management I
Moderator: ***T. Sexton***
Starts at 8 AM
Room: Executive Salon 4, third floor

Fire Ecology V
Moderator: ***B. Heumann***
Starts at 8 AM
Room: Executive Salon 5, third floor

Fire Ecology IV
Moderator: ***D. Weise***
Starts at 8 AM
Room: Directors 2, second floor

Fire and Restoration II
Moderator: ***B. Reinhardt***
Starts at 10:05 AM
Room: Executive Salon 4, third floor

Fire Management Modelling I
Moderator: ***B. Kerns***
Starts at 10:05 AM
Room: Executive Salon 5, third floor

Fire Ecology VI
Moderator: ***E. Knapp***
Starts at 10:05 AM
Room: Directors 2, second floor

Fire Management II
Moderator: ***W. Massman***
Starts at 1 PM
Room: Executive Salon 4, third floor

Fire Ecology VIII
Moderator: ***B. Keane***
Starts at 1 PM
Room: Executive Salon 5, third floor

Fire Management Modelling II
Moderator: TBA
Starts at 2 PM
Room: San Antonio, third floor

Thursday, 19 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS02: Keeping Fire on Our Side: Manging Fire to Meet Political, Social, and Ecological Imperatives** Moderator: ***L. Kurth***	**SS09: Smoke Ecology** Moderator: ***M. Lata***	**SS13: Post-Fire Tree Mortality Causes and Patterns: Insights from Around the World** Moderator: ***S. Hood***	**SS15: Changing Fire Regimes: Ecological Change as a Consequence of Climate Warming and Dynamic/ Novel Fuel Complexes** Moderator: ***M. Turetsky***
8 AM	***E. Reinhardt*** Ecological and Social Imperatives for Managing Wildfire	***J. Keeley*** Mechanism of Smoke-Induced Seed Germination	***M. Varner*** Post-Fire Tree Mortality: Coming to Terms with Increasing Complexity	***M. Flannigan*** Climate Change and Wildland Fire
8:20 AM	***D. Bahr*** Policy—Who Speaks for the Land—What Got Us Here	***M. Lata*** Effects of Pine Needle Smoke on Sprouting of Species Native to Ponderosa Pine in Northern Arizona, USA	***M. Varner*** Agents of Death: Fire Managers' Balancing Act between Desired and Undesired Tree Mortality	***R. Jandt*** What Do Decision-Makers Need from Science to Maintain Resiliency in a Time of Changing Climate and Changing Fire Regime in the Boreal Region?
8:40 AM	***H. Bastian*** Historical Overview of Fire in Resource Management—Federal Lands	***Y. Jimison*** Influence of Smoke on Germination of Species in the Southern High Plains, USA	***T. Woolley*** Reviewing Post-Fire Tree Mortality Modeling for Western US Conifers: Past, Present, and Where Do We Go from Here?	***D. Schwilk*** Dimensions of Litter Flammability: Leaf Size, Decomposition, Moisture and Volatiles
9 AM	***D. Calkin*** Why We Underinvest in Fire on the Landscape	***P. Fornwalt*** Does Smoke Promote Seed Germination in Penstemon (Scrophulariaceae) Species?	***R. Keane*** Simulating Future Tree Mortality Under Climate Change with Interacting Disturbance	***M. Wotton*** Fire Behavior and Dynamic Fuels Complexes in the Next Generation of the Canadian Forest Fire Behavior Prediction System
9:20 AM	***S. Hood*** Unintended Ecological Consequences of Removing Fire from Fire-Dependent Forests	***S. Rideout-Hanzak*** Heat, Smoke, and Smoke Water Effects on Germination	***P. Brando*** Fire-Induced Tree Mortality in Amazônia: What Do We Really Know?	***J. Hicke*** Effects of Bark Beetle-Caused Tree Mortality on Subsequent Wildfire
	9:40 PM Morning Break			

8 to 9:20 am Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**SS06: Characterizing Uncertainty in Wildland Fire: Occurrence, Decision Making, and Management** Moderator: ***K. Riley***	**Human Dimensions** Moderator: ***D. DellaSalla***	**Fire Management I** Moderator: ***T. Sexton***	**Fire Ecology V** Moderator: ***B. Heumann***	**Fire Ecology IV** Moderator: ***D. Weise***
8 AM	***K. Riley*** An Uncertainty Analysis of Wildfire Modeling	***M. Anderson*** The Shortleaf Pine Initiative: Developing an Institutionalized Framework to Restore an Imperiled Ecosystem	***S. Parks*** Wildland Fire Deficit and Surplus in the Western US	***S. Hamman*** Maximizing Benefits and Minimizing Risk to Fire-Sensitive Species Using Prescribed Fire	***B. Kerns*** Prescribed Fire Regime Effects on Fuel Structure in an Eastern Oregon Ponderosa Pine Forest
8:20 AM	***D. Calkin*** Defining the Right Objectives at the Right Scale: Keys to Successful Wildfire Risk Management	***J. Vara*** Texas Wildfire Risk Assessment Portal: Arming Texas with Tools for Fire Protection Planning	***M. Dickinson*** Flammability Characteristics of Common Garden Litter under FPL Instrumented Hoods	***M. Reilly*** Post-Fire Structural Variation in Forests of Oregon, Washington, and N. California	***M. Chambers*** Post-Fire Tree Regeneration in Severely Burned Ponderosa Pine Forests of the Central Rockies
8:40 AM	***K. Short*** Improved Simulation of Probabilistic Wildfire Risk Components for the Conterminous United States	***K. Lyon*** Fire on the Fringe: Empirically Parameterizing Defensible Space Behavior in an Agent Based Model	***V. Morfin*** The Sitgreaves Fire—a Case Study Describing a Successful Outcome	***G. Nowacki*** The Use of Witness Trees As Pyro-Indicators in the Eastern United States	***A. Martin*** Burning for Biodiversity: Lessons from the South Sound
9 AM	***G. Dillon*** Using Probabilistic Model Outputs to Address Wildfire Management Questions at a Range of Spatial Scales	***W. Tripp*** Social Factors Affecting Media Analyses of Wildland Fires	***D. Peterson*** Persistence of Emergency Post-Fire Seeding and Fertilization Treatment Effects: Short-Term Efficacy and Longer-Term Impacts	***K. Metlen*** Collaborative Landscape Planning to Promote Resilient Landscapes and Fire Adapted Communities in an Increasingly Fire-Prone Climate: the Rogue Basin Cohesive Forest Restoration Strategy	***J. Briggs*** How Did Fuel Reduction Treatments and Prescribed Fire Affect Ponderosa Pine Forests' Resilience to a Mountain Pine Beetle Epidemic in Colorado?
9:20 AM	***J. Scott*** Application of Landscape-Scale Wildfire Risk Assessment Results to Incident Management	***P. Lahm*** Wildfire, Prescribed Fire and the Clean Air Act: the Latest Challenges and Opportunities	***D. Calkin*** Structured Risk Assessment to Achieve Fire Adapted Communities	***L. Harris*** Topography, Fuels and Fire Exclusion Drive Fire Severity of the Rim Fire in an Old-Growth Mixed-Conifer Forest, Yosemite National Park, USA	***H. Heward*** Educating Fire Professionals through Experiential and Online Education in Fire Ecology and Management
	9:40 PM Morning Break				

Thursday, 19 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS02: Keeping Fire on Our Side: Manging Fire to Meet Political, Social, and Ecological Imperatives** Moderator: ***L. Kurth***	**SS09: Smoke Ecology** Moderator: ***M. Lata***	**SS13: Post-Fire Tree Mortality Causes and Patterns: Insights from Around the World** Moderator: ***S. Hood***	**SS15: Changing Fire Regimes: Ecological Change as a Consequence of Climate Warming and Dynamic/ Novel Fuel Complexes** Moderator: ***M. Turetsky***
10:05 AM	***Panel*** ***D. Campbell, T. Ingalsbee, P. Lahm, M. Mitchell*** Managing Fire—Understanding Perspectives	***M. Light*** Contrasting Germination Responses to Smoke-derived Compounds by Species from South-West Australia	***L. Collins*** Fire and Tree Mortality in Resprouting Eucalypt Forests	***B. Harvey*** Forest Structure, Wildfire Severity, and Postfire Resilience Following Recent Bark Beetle Outbreaks in the US Northern Rockies
10:25 AM	***Panel*** ***D. Campbell, T. Ingalsbee, P. Lahm,*** *and* ***M. Mitchell*** Managing Fire—Understanding Perspectives	***M. Light*** Ecological Implications of the Antagonistic Interactions of Smoke-Derived Butenolide Compounds	***F. Catry*** Modelling Post-Fire Tree Responses in Western Mediterranean Basin Forests	***M. Jenkins*** Monitoring the Impact of Climate Change on the Frequency and Severity of Fires in Great Basin Bristlecone Pine Sky Island Ecosystems
10:45 AM	***Panel*** ***D. Campbell, T. Ingalsbee, P. Lahm,*** *and* ***M. Mitchell*** Managing Fire—Understanding Perspectives	***M. Ooi*** The Ecological Role of Smoke in Controlling Germination	***J. O'Brien*** Physiological Responses of Southern Pines to Fire: Synergy among Above- and Below-Ground Damage	***T. Douglas*** Relationships between Fire and Permafrost in Boreal and Subarctic Landscapes
11:05 AM	***Panel*** ***D. Campbell, T. Ingalsbee, P. Lahm,*** *and* ***M. Mitchell*** Managing Fire—Understanding Perspectives	***J. Springer*** Smoke-Cued Emergence in Plant Species of Ponderosa Pine Forests: Contrasting Greenhouse and Field Results	***S. Michaletz*** Sapwood Dysfunction Kills Trees Faster than Girdling: a Test of Post-Fire Mortality Mechanisms	
11:25 AM Lunch Break				

10:05 AM TO 1 PM CONCURRENT ORAL PRESENTATION SCHEDULE

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**SS06: Characterizing Uncertainty in Wildland Fire: Occurrence, Decision Making, and Management** Moderator: ***K. Riley***	**Human Dimensions** Moderator: ***M. Anderson***	**Fire and Restoration II** Moderator: ***B. Reinhardt***	**Fire Management Modelling I** Moderator: ***B. Kerns***	**Fire Ecology VI** Moderator: ***E. Knapp***
10:05 AM	***H. Williams*** Economic Efficiency of Landscape-Scale Fuel Reduction and Home Ignition Zone Treatments to Mitigate Wildfire Risk in Montana, USA	***V. Miller*** Which Values at Risk	***T. Nichols*** From Blazing Heritage to Faded Glory: Comments on the History and Current State of the National Park Service Fire Management Program	***D. Long*** Assessment of Requirements, Methods, and Applications of LANDFIRE Fire Modeling Products	***K. Wilkin*** Pyrodiversity Begets Biodiversity in the Sierra Nevada
10.25 AM	***D. Martell*** Using Discrete Stochastic Fire Scar Scenarios to Evaluate Landscape Management Strategies	***J. Jones*** Rapidly Fire Adapted: a Journey from Risk to Empowered	***J. Cochrane*** Managing Fire With Fire: Creating Fire Resilient Landscapes for Now and into the Future	***A. Bailey*** Informed Decision Making for Wildfire Response Utilizing WFDSS Spatial Fire Planning to Represent Land and Resource Management Plan Direction	***B. Newingham*** What's Still Hot? Cross-Ecosystem Diversity Responses a Decade after Fire
10:45 AM	***H. Preisler*** Probabilistic Assessment of the Seven-Day Fire Potential Outlook for the Western USA	***E. Alvarado*** Threat of Large Wildfires on the Boundaries between Indian Reservations and Federal Lands in the State of Washington	***D. Dey*** The Silviculture of Oak Woodland and Savannah Restoration	***R. Parsons*** Stand-Scale Fuel Treatment Analysis with STANDFIRE: Fuel and Fire Modeling for Current and Future Needs	***L. Yocom*** Historical High-Severity Fire Patches in Mixed-Conifer Forests, Grand Canyon National Park
11:05 AM	***A. McKerrow*** Sources of Uncertainty in Projecting Extreme Fires in the Southeastern Coastal Plain	***K. Lyon*** Individual- and Community-Level Influences of Wildfire Preparedness		***C. Martin*** Seasonally Dynamic Surface Fuel Model Data from the LANDFIRE Program	***C. Hanson:*** Conservation Concerns over Post-Fire Management of Mixed-Severity Fire Areas
11:25 AM Lunch Break					

Thursday, 19 November 2015

	Texas A, floor 2	San Antonio, floor 3	Texas C, floor 2	Executive Salon 1, floor 3
Session title	**SS02: Keeping Fire on Our Side: Manging Fire to Meet Political, Social, and Ecological Imperatives** Moderator: ***L. Kurth***	**SS09: Smoke Ecology** Moderator: ***M. Lata***	**SS13: Post-Fire Tree Mortality Causes and Patterns: Insights from Around the World** Moderator: ***S. Hood***	**SS15: Changing Fire Regimes: Ecological Change as a Consequence of Climate Warming and Dynamic/ Novel Fuel Complexes** Moderator: ***M. Turetsky***
1 PM	***S. Prichard*** Past Burn Mosaics in the North Cascades Mountains and Implications for Fire Management	***Panel Discussion***	***M. Dickinson*** The Missing Link between Fire Behavior and Tree Injury and Mortality in Wildland Fires	***M. Turetsky*** Current and Future Vulnerability of Northern Peatlands to Wildfire
1:20 PM	***B. Grauel*** When Ecology, Management, and Culture Align	***Panel Discussion***	***K. Kavanagh*** Effects of Heat Plumes on Tree Canopy Hydraulics	***B. Benscoter*** Novel Fuel Conditions Invert the Fire Regime across Low-Latitude Peatlands
1:40 PM	***S. Stonum*** Case Study—Deerhead and Jackalope Fires, Saguaro National Park		***P. van Mantgem*** Prescribed Fire Promotes Resistance to Drought in Ponderosa Pine Forests of the Sierra Nevada, California	***Panel Discussion***
Session	***J. Hubbard*** Maximizing the Intent of Federal Policy—Managing Ecology and Protecting Values	**Fire Management Modelling II** Moderator: ***TBA***	***J. Kane*** Post-Fire Tree Mortality Model Assessment following Prescribed Burning Treatments in National Park Units of the Western US	***Panel Discussion***
2 PM		***W. Massman*** A Non-Equilibrium Model for Soil Heating and Moisture Transport during Extreme Surface Heating		
2:20 PM		***S. Rothberg*** A Revised Brown's Method: Improving Fire Behavior Modeling	***S. Hood*** Modeling Post-Fire Mortality under a Changing Climate: Ways to Move Forward	
2:40 PM	***A. Taylor*** The Influence of Topography, Weather, Fuels, and Management on Fire Severity in Overlapping Wildfires in the Sierra Nevada	***J. Park*** Use of Multiple Iterations of Prescribed Fire to Restore Historic Vegetation Patterns in Banff National Park, Alberta, Canada	***I. McWhorter*** Prescribed Fire in Upland Island Wilderness	
3 PM Afternoon Break, followed by Closing Plenary, 3:25 to 5 PM				

1:20 to 2:40 pm Concurrent Oral Presentation Schedule

	Executive Salon 2, flr 3	Executive Salon 3, flr 3	Executive Salon 4, flr 3	Executive Salon 5, flr 3	Directors 2, flr 2
Session title	**SS06: Characterizing Uncertainty in Wildland Fire: Occurrence, Decision Making, and Management** Moderator: ***K. Riley***	**Human Dimensions** Moderator: ***M. Reilly***	**Fire and Restoration II** Moderator: ***T. Sexton***	**Fire Ecology VIII** Moderator: ***B. Keane***	
1 PM	***N. Brunner*** Validation of the Landsat Burned Area ECV Product for the Conterminous US	***S. Miller*** If... Would We Be Spending Billions of Dollars on the Purchase of Iron Lungs?	***V. Wright*** The Decision to Manage Fire: Insights from Wilderness Fire Managers in the Northern Rockies	***J. Miesel*** How Does Wildfire Severity Affect Soil Organic Matter Composition and Dynamics in Southern Boreal Forest?	
1:20 PM	***T. Hawbaker*** Automated Mapping of Burned Areas in Landsat Imagery: Tracking Spatial and Temporal Patterns of Burned Areas in the Southwestern United States	***A. Merschel*** Partnering Fire History and Forest Development Research with Collaborative Restoration in Central Oregon	***C. Hoffman*** Restoration and Fire Behavior in Ponderosa Pine Dominated Forests of the Southern Rocky Mountains	***L. Bourgeau-Chavez*** Vulnerability of North American Boreal Peatlands to Interactions between Climate, Hydrology, and Wildland Fires	
1:40 PM	***M. Thomas-Van Gundy*** Examining Landscape Control of Fire Severity in the Central Appalachians		***C. Maginel*** Landscape-Scale Prescribed Fire Effects on Ozark Ground Flora Communities	***E. Berryman*** How Does Post-Fire Mulching Affect Forest Regeneration and Soil Productivity? A Controlled Experiment	
2 PM	***T. Brown*** What is Fire Season and How Long is It?	***J. Patton*** Supporting Fire Ecology through Effective Communications: LANDFIRE Lessons Learned	***M. Medler*** The Wildland Fire Deficit in the United States	***E. Duran:*** Understanding Effects of Heat Dosage on Soils from Slash Pile Burning in a Piñon-Juniper System (*Pinus edulis-Juniperous monsperma*)	
2:20 PM	***B. Williams*** Next Generation Fire Modeling for Advanced Wildland Fire Training	***V. Wright*** Influences on the Use of Science by Fire Managers	***C. Miller*** Evaluating Wind Patterns and Potential Burn Days for Prescribed Fires outside Bend, Oregon	***V. Jurskis*** How Does the Firestick Maintain Healthy and Resilient Ecosystems?	
2:40 PM	***S. Lewis*** Assessing Burn Severity and Recovery 10 Years after Wildfires in Western Montana		***R. Fairbanks*** Implementing Fire Permeable Landscapes in Southwest Oregon	***C. Stockdale*** Modeled Changes in Burn Probability in a Canadian Rocky Mountain Landscape Restored to Pre-European Settlement Conditions	
3 PM Afternoon Break, followed by Closing Plenary, 3:25 to 5 PM					

FRIDAY, 20 NOVEMBER: Field Trips

We are very excited to offer four different field trips for our conference participants to choose from. You can sign up for a field trip at the time of registering for the conference. All field trips include lunch and water. Field trip size is limited, so register early to guarantee your spot. Field trip start times are when the buses will begin to board; return times listed represent the latest estimated return time—trips may return earlier.

1. The Aransas National Wildlife Refuge
6:30 am to 8:30 pm, 30 participants, bag lunch, $60

The Aransas National Wildlife Refuge Complex, including Matagorda Island, is comprised of 117,000 acres of coastal prairie, woodland, and savannah habitats. This landscape provides the wintering ground for the only wild population of whooping cranes in the world. For more than 75 years, fire has been used to manage habitats for the endangered whooping crane, aplomado falcon, and over 400 species of migratory and resident birds. The expanding use of prescribed fire on the landscape of coastal Texas provides a wealth of opportunity for land managers, fire practitioners, and researchers to build cooperative relationships. This tour will focus on the fire management practices of the refuge and will include a guided tour through the refuge habitats. Discussions, presentations, and burn-unit visits will be led by fire management staff, refuge management, and whooping crane biologists.

2. After the Big One: Integrated fire management after the Bastrop Wildfire
7 am to 6 pm, 30 participants, lunch on site, $15

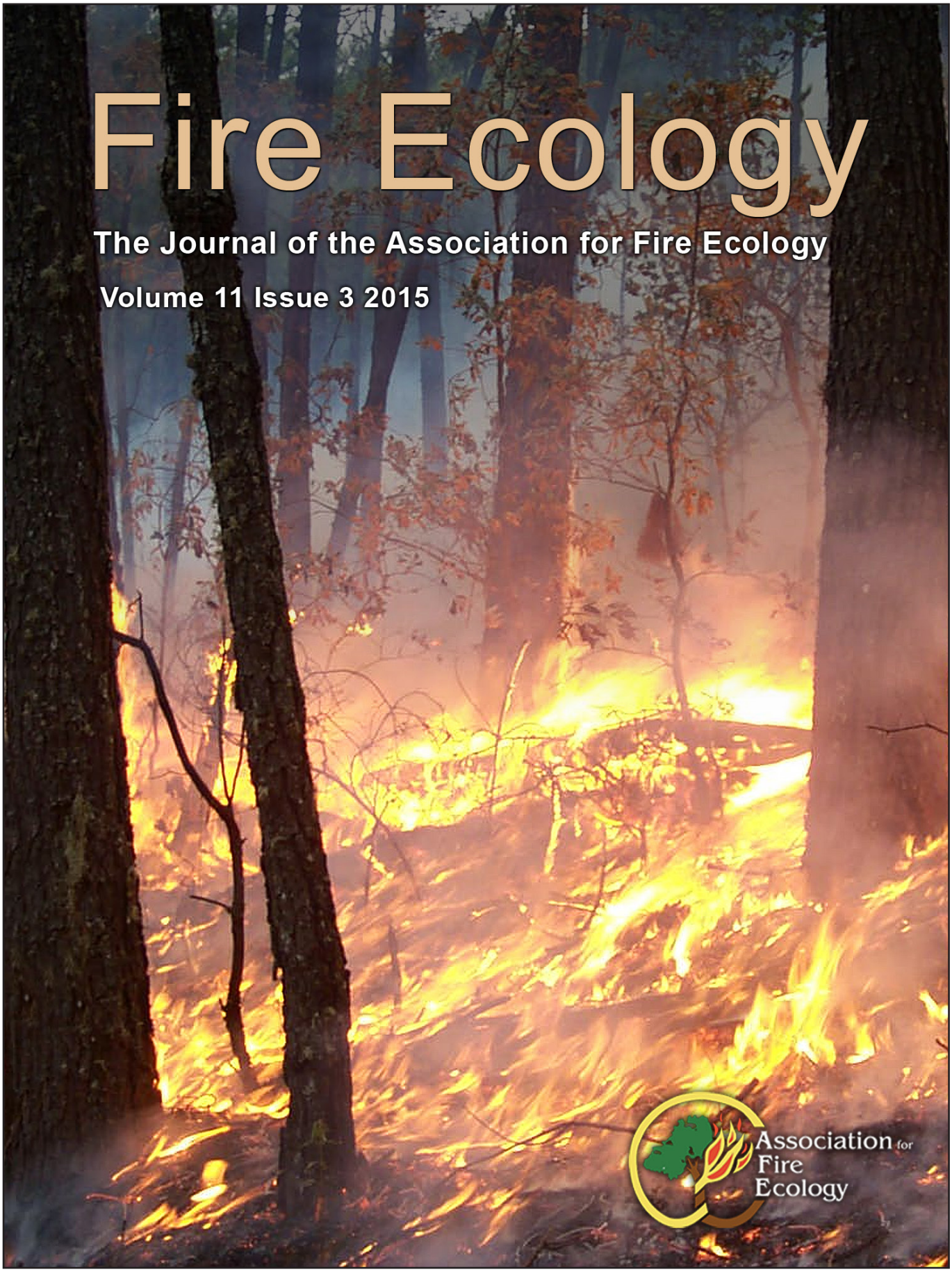
This field trip will integrate wildfire, prescribed burning, and wildlife habitat management into a thoughtful, day-long excursion that explores the intersection of fire and prairie ecosystems. In 2011, the Bastrop County Complex Fire burned 23,000 acres in central Texas in the most destructive wildfire in state history. The post-fire landscape has provided an opportunity for managers to document and manipulate post-fire recovery in central Texas. On our way to Bastrop State Park, we'll stop briefly to tour the exquisite native plant gardens at the Lady Bird Johnson Wildflower Center and view the fuel ecology research work conducted by University of Texas, Austin. At Bastrop State Park, 95% of which was affected by a wildfire, we'll discuss post-fire recovery and the use of prescribed burning for fuel reduction. Regrowth in critical areas of the Houston toad habitat will be viewed along with a discussion of management for this endangered species. Then it's on to Camp Swift Military Training area, where research on fuels ignitability, fire weather, and influence of topography is being incorporated into fire-spread models. Federal, state, and local agencies are all participating in this effort, which also includes improving communications during a fire. The National Weather Service will explain the "Hi-Rise" project that collected data on fire weather and smoke outputs at low- and mid-level altitudes during a prescribed burn using aircraft-mounted equipment.

3. Chaparral Wildlife Management Area
7 am to 6 pm, 50 participants, bag lunch, $60

The Chaparral Wildlife Management Area (CWMA) encompasses 15,200 acres of South Texas brush country in La Salle and Dimmit counties, approximately 100 miles southwest of San Antonio. One of the studied habitat treatments is prescribed burning, including both warm season (summer) and cool season (winter) fire. Prescribed burning is used to improve habitat for deer and numerous other wildlife species. As a general rule, about 10% of selected acreage can be burned annually, rotating sites every 5 to 7 years to control brush, promote native grasses, and stimulate new growth of browse and forbs (weeds and wildflowers). One fire management concern on CWMA is the presence of invasive species such as buffelgrass (*Pennisetum ciliare*). Some research has shown that late summer burning of buffelgrass followed by dormant-season grazing is one method of control. Over three days in March 2008, 95% of the CWMA burned in a wildfire that consumed some 75,000 acres. Numerous studies arose as a result of that wildfire. Two units covering approximately 300 acres were burned on the CWMA in February 2015. These were the first prescribed burns since the 2008 wildfire.

4. Balcones Canyonlands National Wildlife Refuge
7:30 am to 6:30 pm, 30 participants, bag lunch, $60

Balcones Canyonlands National Wildlife Refuge was established primarily to maintain and enhance habitat for the endangered golden-cheeked warbler and black-capped vireo. The Refuge utilizes prescribed fire to maintain a healthy and resilient ecosystem. This, coupled with other techniques, also reduces the likelihood and severity of wildland fire. Located just 40 km northwest of downtown Austin, Texas, the Refuge works with local residents and communities to reduce the potential loss of homes and property at the wildland-urban interface. The tour will focus on treatment methods and results for hazardous fuel reduction and hardwood recruitment in juniper-oak woodlands associated with the golden-cheeked warbler.



High-severity fire in the Sierra de Manantlan, Mexico.
Photo by ***Salvador García.*** *Fire Ecology* cover designed by ***Brett Cole.***

10-YEAR ANNIVERSARY!
The Best of *Fire Ecology*
2005–2015

The Association for Fire Ecology is celebrating the 10-year anniversary of publication by its journal, *Fire Ecology.* The journal is now indexed by all the major indexing institutions, and is highly ranked among ecology and forestry journals. For this conference, we decided to highlight *Fire Ecology* by publishing abstracts of 13 of its best papers, chosen by me and two Associate Editors of the journal. There is no ranking implied by the order of presentation, as it is chronological, and the choices are rather subjective, as others may feel (as I do!) that their own papers were worthy of inclusion. I hope this will encourage you to browse through our past volumes, which are all available online at fireecologyjournal.org, to read these and other fine papers within our archived history.

James K. Agee, Managing Editor

Fire Ecology 2005, Volume 1, Issue 1, pages 2–19
Fire History in Coast Redwood Stands in the Northeastern Santa Cruz Mountains, California
Scott L. Stephens and ***Danny L. Fry***

Fire regimes in coast redwood forests in the northeastern Santa Cruz Mountains were determined by ring counts from 48 coast redwood stumps, downed logs, and live trees. Degradation of remnant materials from post-harvest fires severely limited available fire scars in this region. The earliest recorded fire was recorded in approximately 1615 and the last fire recorded was in 1884. The Ohlone and early immigrants were probably the primary source of ignitions in this region. For all sites combined, the mean fire return interval (FRI) was 12.0 years; the median FRI was 10 years. There was no significant difference in FRIs between plot aspects but there was a significant difference in MFI between the four sampled sites. The grand mean FRI for single trees (point) was 16.3 years. Past fire scars occurred most frequently in the latewood portion of the annual ring or during the dormant period. It is probable that the number of fires recorded in coast redwood trees is a subset of those fires that burned in adjacent grasslands and oak savannahs. Continued development of old-growth and young-growth coast redwood forests toward prehistoric conditions may be dependent of a fire regime where prescribed burning substitutes for the now-absent aboriginal ignitions.

Fire Ecology 2006,Volume 2, Issue 1, pages 31–52
Modeling Spatial Patterns of Fuels and Fire Behavior in a Longleaf Pine Forest in the Southeastern USA
Diane K. Kennard and ***Kenneth W. Outcalt***

Characterizing spatial patterns of fire behavior is an important and rarely considered means of understanding patterns of vegetation recovery following a fire event. Using geostatistics, we characterized spatial patterns of pre-burn fuel loads, fire temperature and duration during prescribed burns, and post-burn fuel loads in four longleaf pine stands in the southeastern USA. Fire temperatures exhibited moderate to strong spatial dependence over medium spatial scales. Variograms suggest that 61-99% of sample population variance was spatially dependent at scales of 27-157 m. Patterns of pre-burn fuel loads were only moderately related to patterns of mean fire temperature, confirming that fuel loads alone cannot predict fire patchiness. Other fuel parameters and microscale changes in wind and relative humidity likely influenced patterns of fire intensity as well. Strength and scale of fuel load spatial patterns were altered by fire as indicated by pre- and post-burn measurements. Spatial analysis provides a useful way to quantify burn patchiness and can help to identify which patch size may be desirable for different management goals. Studies that examine fire effects need to recognize spatial autocorrelation when characterizing fire behavior and account for this variation at appropriate scales.

Fire Ecology 2006, Volume 2, Issue 2, pages 107–118
Spatial Autocorrelation and Pseudoreplicaton in Fire Ecology
Amanda L. Bataineh, Brian P. Oswald, Mohammad Bataineh, Daniel Unger, I-Kuai Hung, and ***Daniel Scognamillo***

Fire ecologists face many challenges regarding the statistical analyses of their studies. Hurlbert (1984) brought the problem of pseudoreplication to the scientific community's attention in the mid 1980s. Now, there is a new issue in the form of spatial autocorrelation. Spatial autocorrelation, if present, violates the traditional statistical assumption of observational independence. What, if anything, can the fire ecology community do about this new problem? An understanding of spatial autocorrelation, and knowledge of available methods used to reduce the effect of spatial autocorrelation and pseudoreplication will greatly assist fire ecology researchers.

Fire Ecology 2007, Volume 3, Issue 2, pages 68–82
Patterns in Lightning-Caused Fires at Great Smoky Mountains National Park
Dana Cohen, Bob Dellinger, Rob Klein, and ***Beth Buchanan***

Fires that burn unimpeded behave differently than suppressed or prescribed (management-ignited) fires. Studying this fire behavior increases our understanding of historic fire regimes. Wildland fire use policy allows for managing lightning-caused fires for resource benefit without suppressing them provided specific pre-defined conditions are met. Great Smoky Mountains National Park has managed ten fires under this policy from 1998 to 2006. Data from these fires and data from park fire reports for suppressed lightning-caused fires since 1940 were examined to illustrate patterns for non-anthropogenic fires. Lightning-caused fires occurred most frequently during the growing season and many persisted through numerous precipitation events. Unsuppressed fires had long durations (up to 38 days) and exhibited a wider range of fire behavior than found by previous studies for lightning-caused fires in the region. These unsuppressed fires exhibited the largest perimeter growth in periodic bursts of higher-intensity behavior; yet smoldered and crept through the majority of the active burning window. The total area burned by the ten fires managed under the wildland fire use policy from 1998 to 2006 (787 ha) has surpassed the aggregate within-park acreage of 122 suppressed lightning-caused fires over the previous 56 years (523 ha).

Fire Ecology 2008, Volume 4, Issue 1, pages 87–100
Seed Invasion Filters and Forest Fire Severity
Tom R. Cottrell, Paul F. Hessburg, and ***Jonathan A. Betz***

Forest seed dispersal is altered after fire. Using seed traps, we studied impacts of fire severity on timing of seed dispersal, total seed rain, and seed rain richness in patches of high and low severity fire and unburned Douglas-fir (*Pseudotsuga menziesii*) forests in the Fischer and Tyee fire complexes in the eastern Washington Cascades. Unburned plots had the lowest average seed production. The high severity fire patches in the Fischer Fire Complex had a higher total seed production than low severity fire patches of the same complex. At the Tyee Fire Complex, the total seed production for each of the two fire severities was similar, but the period of maximum seed dispersal was later for high severity than low severity fire. Seed rain at the Fischer Fire patches (sampled one year after the fire) was predominantly composed of annual species, while that of the Tyee Fire patches (sampled nine years after fire) was predominantly perennial species. Seed rain richness was greater in Tyee high severity patches than paired low severity fire patches. In these paired Tyee patches the average number of new seed species (species not found in the extant plot vegetation) was greater for high severity than low severity fire. Our results suggest that high severity fire plots are more porous to seed rain than low severity plots. Intact forest canopies may filter seed rain and reduce seed influx, while high severity fires are more open to invasion by seed dispersal.

Fire Ecology 2008,Volume 4, Issue 2, pages 46–62
Wintering Grassland Bird Habitat Selection following Summer Prescribed Fire in a Texas Gulf Coast Tallgrass Prairie
Damion E. Marx, Sallie J. Hejl, and ***Garth Herring***

We examined changes in winter habitat use by four grassland passerine birds in response to summer prescribed burning within a Texas gulf coast tallgrass prairie during 2001 and 2002. We used a traditional Before-After/Control-Impact (BACI) design consisting of one treatment plot (burned during summer 2001) and one control plot (no burning during the study period, but burned in previous years) at two study areas. Examination of use versus availability suggested that savannah sparrows (*Passerculus sandwichensis*) preferred recently burned patches. In contrast, sedge wrens (*Cistothorus platensis*) and Le Conte's sparrows (*Ammodramus leconteii*) avoided recently burned patches and preferred later successional stages. Our results suggest that grassland birds partitioned the prairie mosaic along a gradient of successional ecotypes, and that post-fire succession is an important ecological process influencing wildlife habitat use. Our results also highlighted the potential to sustain grassland bird habitats by managing Texas gulf coast tallgrass prairie with 3 yr to 4 yr rotational summer burns, similar to the historic fire return interval for this habitat type. We suggest that reinstating fire on its natural return interval will produce coarse-grained (e.g., 100 ha to 300 ha) habitat mosaics within the landscape and will sustain winter habitat diversity required for the guild of wintering grassland birds.

Fire Ecology 2009, Volume 5, Issue 1, pages 67–78
Predicted Fire Behavior and Societal Benefits in Three Eastern Sierra Nevada Vegetation Types
Christopher A. Dicus, Kenneth Delfino, and
David R. Weise

We investigated potential fire behavior and various societal benefits (air pollution removal, carbon sequestration, and carbon storage) provided by woodlands of pinyon pine (*Pinus monophylla*) and juniper (*Juniperus californica*), shrublands of Great Basin sagebrush (*Artemisia tridentata*) and *rabbitbrush* (*Ericameria nauseos*a), and recently burned annual grasslands near a wildland-urban interface (WUI) community in the high desert of the eastern Sierra Nevada Mountains. Fire behavior simulations showed that shrublands had the greatest flame lengths under low wind conditions, and that pinyon-juniper woodlands had the greatest flame lengths when winds exceeded 25 km hr^{-1} and fire transitioned to the crowns. Air pollution removal capacity (PM_{10}, O_3, NO_2, etc.) was significantly greater in pinyon-juniper stands, followed by shrublands and grasslands. Carbon storage (trees and burned tree snags only) did not significantly differ between pinyon-juniper and burned stands (~14 000 kg ha^{-1}), but will change as burned snags decompose. Annual C sequestration rates in pinyon-juniper stands averaged 630 kg ha^{-1} yr^{-1}. A landscape-level assessment showed that total compliance with residential defensible space regulations would result in minimal impact to air pollution removal capacity and carbon sequestration due to a currently low population density. Our methodology provides a practical mechanism to assess how potential management options might simultaneously impact both fire behavior and various environmental services provided by WUI vegetation.

Fire Ecology 2010, Volume 6, Issue 1, pages 80–94
A Way Forward for Fire-Caused Tree Mortality Prediction: Modeling a Physiological Consequence of Fire
Kathleen Kavanagh, Matthew B. Dickinson, and
Anthony S. Bova

Current operational methods for predicting tree mortality from fire injury are regression-based models that only indirectly consider underlying causes and, thus, have limited generality. A better understanding of the physiological consequences of tree heating and injury are needed to develop biophysical process models that can make predictions under changing or novel conditions. As an illustration of the benefits that may arise from including physiological processes in models of fire-caused tree mortality, we develop a testable, biophysical hypothesis for explaining pervasive patterns in conifer injury and functional impairment in response to fires. We use a plume model to estimate vapor pressure deficits (*D*) in tree canopies during surface fires and show that *D* are sufficiently high to cause embolism in canopy branches. The potential implications of plume conditions and tree response are discussed.

Fire Ecology 2011,Volume 7, Issue 1, pages 57–73
Personal Perspectives on Commercial Versus Communal African Fire Paradigms when Using Fire to Manage Rangelands for Domestic Livestock and Wildlife in Southern and East African Ecosystems
Winston S.W. Trollope

Africa is often referred to as the Fire Continent, and fire is recognised as a natural factor of the environment due to the prevalence of lightning storms and an ideal fire climate in the less arid regions with seasonal drought. On a global scale, the most extensive areas of tropical savanna, characterized by a grassy under stories that become extremely flammable during the dry season, occur in Africa. The use of fire in Africa to manage vegetation for domestic livestock and indigenous wildlife is widely recognized by both commercial and communal land users. Research on the effects of fire has been conducted throughout the grassland and savanna areas since the early twentieth century, resulting in the development of effective and practical guidelines for prescribed burning for domestic livestock and wildlife management systems. Generally, the reasons for prescribed burning in Africa are similar for both commercial and communal land users, namely, to remove moribund and or unacceptable plant material and to control the encroachment of undesirable plants negatively affecting domestic livestock and wildlife. In addition, commercial operators use fire to manage wildlife conservation areas. Prescribed burning to control ticks is also widely used in communal communities but is generally not recognised in commercial livestock enterprises. However, research has shown that tick populations can be reduced using fire to alter the micro-habitat for these organisms. Until recently, commercial and communal land users held differing views on the appropriate season for prescribed burning, with the former igniting fires shortly after the first spring rains and the latter burning throughout the dry winter period. Subsequent research has shown that both seasons of burn have similar

effects; the key requirement being that the grass sward is dormant at the time of burning to minimise the negative effects on the vegetation. A valuable tentative comparison has been made between fire management practices applied by commercial land users and communal land users, and provides an exciting opportunity for further and essential research to be conducted to gain greater insight into how communal African communities use fire. Based on extensive experience, my aim is to provide a personal perspective on the use of fire by commercial and communal land users for managing rangelands in southern and east African regions of the continent.

Fire Ecology 2012, Volume 8, Issue 3, pages 41–57

Trends in Wildfire Severity: 1984 to 2010 in the Sierra Nevada, Modoc Plateau, and Southern Cascades, California, USA

Jay D. Miller and ***Hugh Safford***

Data from recent assessments indicate that the annual area of wildfires burning at high severity (where most trees are killed) has increased since 1984 across much of the southwestern United States. Increasing areas of high-severity fire can occur when greater area is burned at constant proportion of high-severity fire, or when the proportion of high-severity fire within fire perimeters increases, or some combination of both. For the Sierra Nevada Forest Plan Amendment (SNFPA) area, which includes forestlands in eastern California and western Nevada, Miller *et al.* (2009*a*) concluded that the proportion of area burning at high severity in mixed-conifer forests had risen over the 1984 to 2004 period. However, no statistical assessment was made of the temporal trend in high-severity fire area because the analyzed dataset was incomplete in the early years of the study period. In this update, we use satellite-derived estimates of fire severity from the three most widely distributed SNFPA forest types to examine the trend in percent high severity and high-severity fire area for all wildfires ≥80 ha that occurred during the 1984 to 2010 period. Time-series regression modeling indicates that the percentage of total high severity per year for a combination of yellow pine (ponderosa pine [*Pinus ponderosa* Lawson & C. Lawson] or Jeffrey pine [*P. jeffreyi* Balf.]) and mixed-conifer forests increased significantly over the 27-year period. The annual area of high-severity fire also increased significantly in yellow pine-mixed-conifer forests. The percentage of high severity in fires ≥400 ha burning in yellow pine-mixed-conifer forests was significantly higher than in fires <400 ha. Additionally, the number of fires ≥400 ha significantly increased over the 1950 to 2010 period. There were no significant trends in red fir (*Abies magnifica* A. Murray bis) forests. These results confirm and expand our earlier published results for a shorter 21-year period.

Fire Ecology 2014, Volume 10, Issue 1, pages 56–83

Intercomparison of Fire Size, Fuel Loading, Fuel Consumption, and Smoke Emissions Estimates on the 2006 Tripod Fire, Washington, USA

Stacy A. Drury, Narasimhan (Sim) Larkin, Tara T. Strand, ShihMing Huang, Scott J. Strenfel, Theresa E. O'Brien, and ***Sean M. Raffuse***

Land managers rely on prescribed burning and naturally ignited wildfires for ecosystem management, and must balance trade-offs of air quality, carbon storage, and ecosystem health. A current challenge for land managers when using fire for ecosystem management is managing smoke production. Smoke emissions are a potential human health hazard due to the production of fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), and ozone (O_3) precursors. In addition, smoke emissions can impact transportation safety and contribute to regional haze issues. Quantifying wildland fire emissions is a critical step for evaluating the impact of smoke on human health and welfare, and is also required for air quality modeling efforts and greenhouse gas reporting. Smoke emissions modeling is a complex process that requires the combination of multiple sources of data, the application of scientific knowledge from divergent scientific disciplines, and the linking of various scientific models in a logical, progressive sequence. Typically, estimates of fire size, available fuel loading (biomass available to burn), and fuel consumption (biomass consumed) are needed to calculate the quantities of pollutants produced by a fire. Here we examine the 2006 Tripod Fire Complex as a case study for comparing alternative data sets and combinations of scientific models available for calculating fire emissions. Specifically, we use five fire size information sources, seven fuel loading maps, and two consumption models (Consume 4.0 and FOFEM 5.7) that also include sets of emissions factors. We find that the choice of fuel loading is the most critical step in the modeling pathway, with different fuel loading maps varying by 108 %, while fire size and fuel consumption show smaller variations (36 % and 23 %, respectively). Moreover, we find that modeled fuel loading maps likely underestimate the amount of fuel burned during wildfires as field assessments of total woody fuel loading were consistently higher than modeled fuel loadings in all cases. The $PM_{2.5}$ emissions estimates from Consume and FOFEM vary by 37 %. In

addition, comparisons with available observational data demonstrate the value of using local data sets where possible.

Fire Ecology 2014,Volume 10, Issue 2, pages 64–75

Modeling Climate-Fire Connections within the Great Basin and Upper Colorado River Basin, Western United States

James D. Arnold, Simon C. Brewer, and ***Philip E. Dennison***

The specific temporal patterns of antecedent conditions associated with fire occurrence in the Great Basin and Upper Colorado River Basin are poorly understood. Using 25 years of combined fire and climate data, we identified unique antecedent patterns of climate conditions prior to fires in the Great Basin and Upper Colorado River Basin. Five distinct antecedent patterns of climate related to fire were found within the region; with these antecedent patterns we were able to construct models of fire danger. The occurrence of these antecedent patterns varies both spatially and temporally, and appears to be driven by drought severity. We used a Maximum Entropy approach to model the spatial extent and strength of these fire-climate patterns, and the associated fire danger. This approach provides land managers with a practical way to assess fire danger at a relatively fine spatial scale and also gives researchers a tool for assessing future fire danger.

Fire Ecology 2015, Volume 11, Issue 1, pages 10–31

Ecological Implications of Fine-Scale Fire Patchiness and Severity in Tropical Savannas of Northern Australia

Sofia L.J. Oliveira, Manuel L. Campagnolo, Owen F. Price, Andrew C. Edwards, Jeremy Russell-Smith, and ***José M.C. Pereira***

Understanding fine-scale fire patchiness has significant implications for ecological processes and biodiversity conservation. It can affect local extinction of and recolonisation by relatively immobile fauna and poorly seed-dispersed flora in fire-affected areas. This study assesses fine-scale fire patchiness and severity, and associated implications for biodiversity, in north Australian tropical savanna systems. We used line transects to sample burning patterns of ground layer vegetation in different seasons and vegetation structure types, within the perimeter of 35 fires that occurred between 2009 and 2011. We evaluated two main fire characteristics: patchiness (patch density and mean patch length) and severity (inferred from char and scorch heights, and char and ash proportions). The mean burned area of ground vegetation was 83 % in the early dry season (EDS: May to July) and 93 % in the late dry season (LDS: August to November). LDS fires were less patchy (smaller and fewer unburned patches), and had higher fire severity (higher mean char and scorch heights, and twice the proportion of ash) than EDS fires. Fire patchiness varied among vegetation types, declining under more open canopy structure. The relationship between burned area and fire severity depended on season, being strongly correlated in the EDS and uncorrelated in the LDS. Simulations performed to understand the implications of patchiness on the population dynamics of fire-interval sensitive plant species showed that small amounts of patchiness substantially enhance survival. Our results indicate that the ecological impacts of high frequency fires on fire-sensitive regional biodiversity elements are likely to be lower than has been predicted from remotely sensed studies that are based on assumptions of homogeneous burning.

The editors of *Fire Ecology* encourage you to submit an article for publication. Articles include our forum section (management and policy opinions), original research articles, reviews (critical syntheses of ecological issues), and book reviews. We have a fairly rapid turnaround time between original submission and publication. The journal has over 30 associate editors representing scientists on five continents. Issues are published three times per year: April, August, and December. Beginning in 2005 with Issue No. 1, we are now completing our eleventh year, and have published scientific papers of over 520 authors.

Fire Ecology is now indexed by all of the leading indexing institutions: Thomson Reuters ISI Web of Science, AGRICOLA, Biosis Reviews, Current Contents, Google Scholar, Scopus, and the Science Citation Index. These indicate that *Fire Ecology* has joined the ranks of the most prestigious international journals, and will be the journal of choice for significant research in fire ecology. Our long-term goal is to have the highest journal impact factor among journals publishing fire ecology research.

ASSOCIATION FOR FIRE ECOLOGY POSITION PAPERS

AFE produces position papers that synthesize the best available research on critical fire ecology issues of the day, and offer suggestions for ecologically based management applications. These papers are drafted by special committees established by the AFE board of directors, and are submitted to external peer review by top experts in the field.

AFE's most recent position papers include:

Reduce Wildfire Risks or We'll Continue to Pay More for Fire Disasters (January 2015)

Wildfires are costing American taxpayers billions of dollars every year; much of the cost is underestimated and/or under-reported by the media and government agencies, and if more effective mitigation of the hazard isn't forthcoming, those costs will continue to increase. These are some of the main findings of a joint position paper published by the Association for Fire Ecology, the International Association of Wildland Fire, and The Nature Conservancy. The paper's authors conclude that, at the current pace of investment in hazardous fuel mitigation—limited by static or decreasing budgets and legislative impediments—a large proportion of funding will need to be directed to maintaining areas already treated, instead of treating additional areas of high hazard. The outcome of such under-treatment will lead to increased burned area with severe economic, social, and environmental impacts. Without greater investments in fuels management, these increasing hazards will not be mitigated and costs will increase for managing wildfire disasters, restoring fire-impacted landscapes, and supporting community redevelopment.

The 21st Century Workforce: An Exploration of Gender Equality and Sexual Harassment Issues within the Wildland Fire Vocation (November 2015)

The management of wildland fire has historically been viewed as an occupation with a male-dominated workforce and masculinist culture. The emulation of military culture through discourse in wildfire suppression (e.g., fire fighting, aggressive suppression, initial attack) further intensifies the association of wildland fire with masculinity and machismo. However, these views do not reflect reality. Women work side by side with men in all aspects of managing wildland fire, from direct suppression to research and development, outreach, and education. The incorporation of women in the workforce is the result of multiple factors that vary by country and region.

The wildland fire vocation is not different from society at large in its need to confront, analyze, and solve the issues of sexual harassment and gender discrimination. This position paper is an organization-wide initiative with two objectives: to determine the occurrence of these two issues throughout the profession, including management, education, and research; and to offer a set of principles and actions that may foster organizational cultures of respect, equity, and parity.

Access these papers via the AFE website (http://fireecology.org/about-afe-position-papers) and feel free to provide us with your comments. What topics do you think warrant position papers?

You can also comment on AFE positions papers through Facebook, Twitter, and LinkedIn. We'd love to hear from you!

ATTRACTIONS NEAR THE WYNDHAM SAN ANTONIO RIVERWALK HOTEL

Historic Market Square (0.2 mile) Formerly known as El Mercado Mexican Market, the Department for Culture and Creative Development for the City of San Antonio now manages this colorful hub for authentic Mexican dining and music.

Southwest School of Art (0.3 mile) As a nationally recognized leader in arts education, this museum and studio venue offers community classes, art history exhibits and café for a complete day of artistic exploration.

Tobin Center for the Performing Arts (0.3 mile) This performing arts facility is a center for specialized education and extraordinary performances. Constructed for $100 million in 2008, the performance hall features 1,750 seats and 37 luxury boxes. Witness ballet, opera, and theatrical productions with state-of-the -art effects, lighting, and acoustics.

Majestic Theatre (0.5 mile) The Majestic Theatre is the oldest operating theatre in San Antonio, accommodating more than 2,200 people in a Baroque, Mission Revival style setting. For many years, it was the largest theater in Texas and the second largest movie theater in the US featuring world premieres of films like *The Texans* (1938) and *The Alamo* (2004). Built in 1929, it has hosted films and live entertainment since and now holds a seat on the US National Register of Historic Places.

San Antonio Museum of Art: SAMA (0.5 mile) Step back in time! SAMA houses the largest collection of ancient Egyptian, Green, Roman, and Asian art in the southern United States. If you are looking for something indicative of the area, visit the collection of Latin American art. This grand museum boasts riverside grounds and a boutique café for a full day's itinerary.

The Alamo (0.6 mile) The site of the historic Battle of the Alamo of 1836 sits just a quick walk from this San Antonio hotel. For many Tejano Americans, the Alamo represents years of English assistance through hospital and missionary philanthropy. Today, more than 2.5 million people a year visit the Alamo complex.

Henry B. Gonzalez Convention Center (0.8 mile) In the heart of downtown San Antonio, this 1.3 million square foot facility hosts more than 300 events a year within 67 meeting rooms and four exhibit halls.

San Antonio Children's Museum (0.8 mile) A visionary spot for learning and discovery, the San Antonio Children's Museum is a community space where kids can be kids. Ideal for visitors from birth to age 10, hands-on exhibits spark the imagination while PowerBall and Tot Spot spaces offer physical activities. There's even a 1,750 square foot H-E-B supermarket replica for pretend play.

"Made in Texas" at the Institute of Texan Cultures (0.9 mile) From cowboy boots to salsa and Texas-shaped tortilla chips, this museum exhibits some of the Lone Star State's best-loved people, products, and ideas. Did you know that Dr. Pepper comes from Texas, *circa* 1885? And that Fritos corn chip originates in San Antonio, 1932? All this and technical gadgets, famous inventors, space exploration, art ,and fashion are on display within walking distance of this hotel.

Arneson River Theatre (1 mile) Hop over to this outdoor performance theater on the Riverwalk, which plays host to local acts and regional theater. Named for the philanthropic engineer ***Edwin Arneson,*** the stage faces grass-covered tiered seating across the river. Above and beyond the seating is La Villita, a restoration of San Antonio's oldest residential area, now filled with quaint shops and restaurants.

The Buckhorn Saloon & Museum (1 mile) Just one block from the Riverwalk and two blocks from the Alamo, this saloon has been a watering hole and conversation place for more than 131 years. With café, gift shop, shooting gallery, and museums onsite, the Buckhorn is a great place to spend a day with the taste of times gone by.

Ripley's San Antonio, Texas (1 mile) With three stories of oddities from all over the world, this San Antonio attraction is the largest and most interactive Ripley's Believe It or Not! Museum in the US.

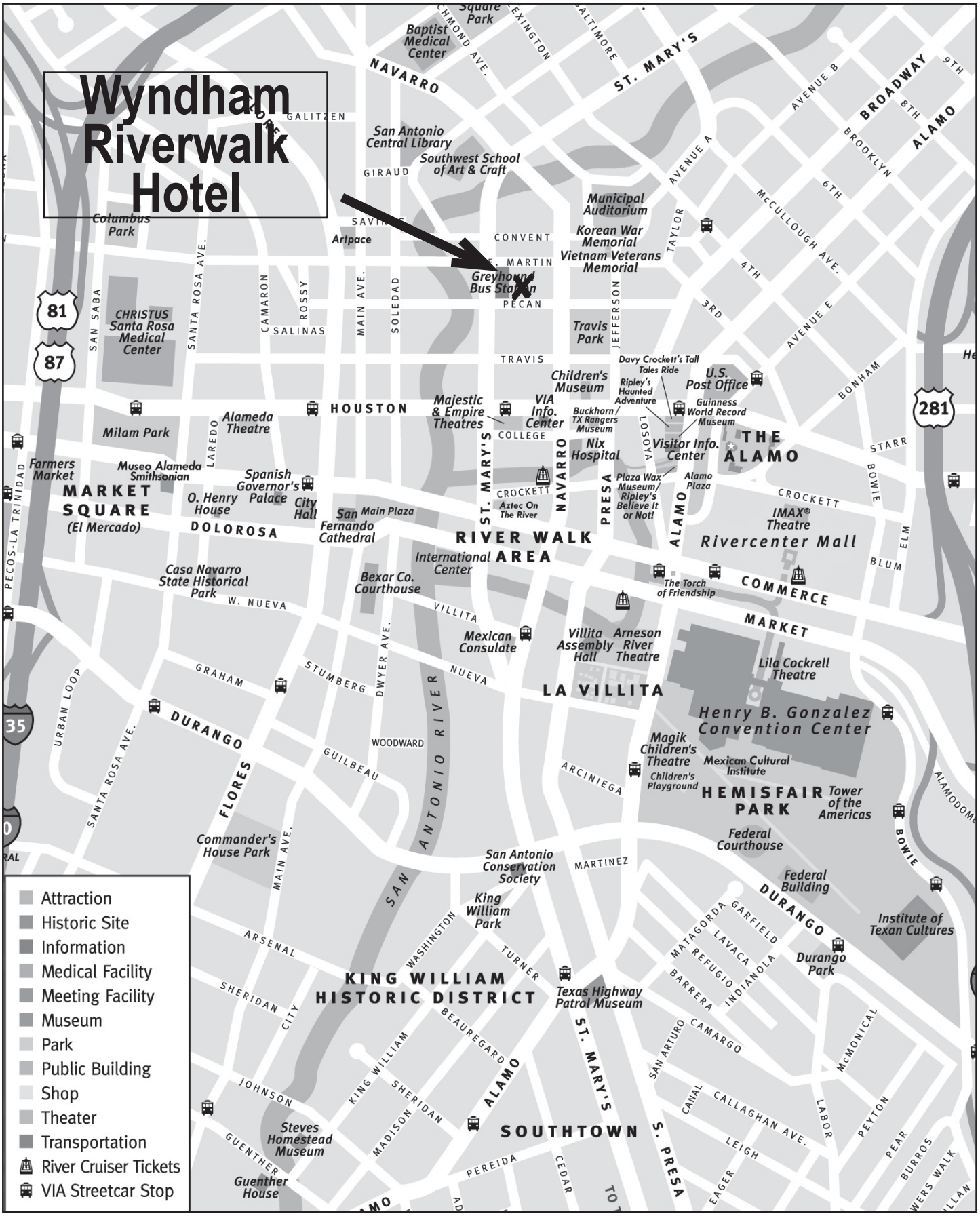
Rivercenter Comedy Club (1 mile) Since 1993, this comedy club nearby has been making San Antonio night lifers laugh. Recently renovated, the club offers great shows for singles, groups, and even private parties.

Rivercenter Mall (1 mile) Check out this mall downtown, adjacent to the Riverwalk. With a variety of stores and restaurants to choose from, Rivercenter offers a perfect air-conditioned getaway for a few hours or even an entire day.

Additional Nearby Attractions

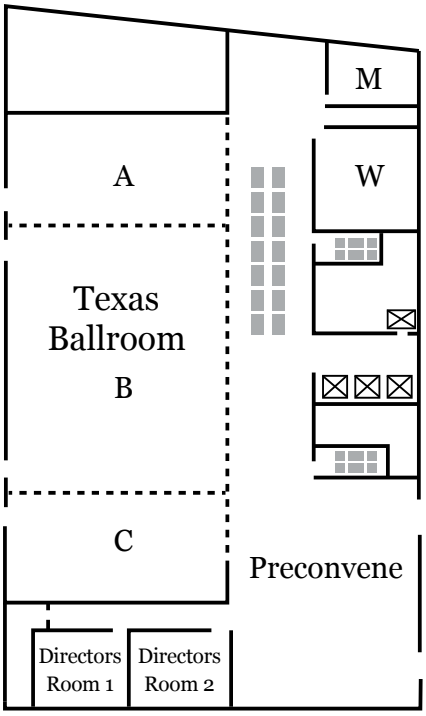
King William Historic District (2 miles)
Blue Star Brewing Company (2.8 miles)
San Antonio Botanical Gardens (3.5 miles)
San Antonio Zoo (3.5 miles)
AT&T Center - San Antonio Silver Stars/Spurs (5 miles)
Alamo Quarry Market (7 miles)
North Star Mall (7 miles)
Quarry Golf Club (7 miles)
Palo Alto College - Alamo Colleges (8 miles)
The Republic Golf Club (8 miles)
Pecan Valley Golf Club (8.5 miles)
Our Lady of the Lake University (9 miles)
Artisan's Alley - The Alley on Bitters (13 miles)
SeaWorld San Antonio (15 miles)
Six Flags Fiesta Texas (15 miles)
Natural Bridge Wildlife Ranch (22 miles)
Northwest Vista College - Alamo Colleges (26 miles)
Natural Bridge Caverns (28 miles)

MAP OF THE VICINITY NEAR THE WYNDHAM SAN ANTONIO RIVERWALK HOTEL

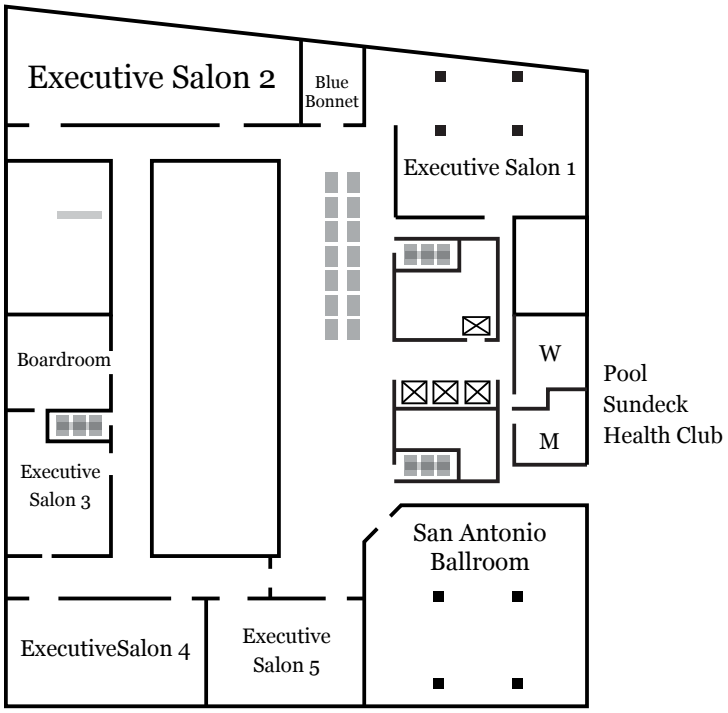


FLOORPLAN FOR WYNDHAM SAN ANTONIO RIVERWALK HOTEL
SAN ANTONIO, TEXAS, USA

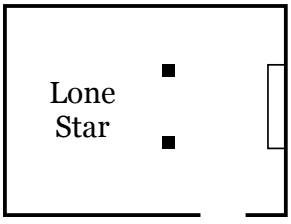
Second Floor



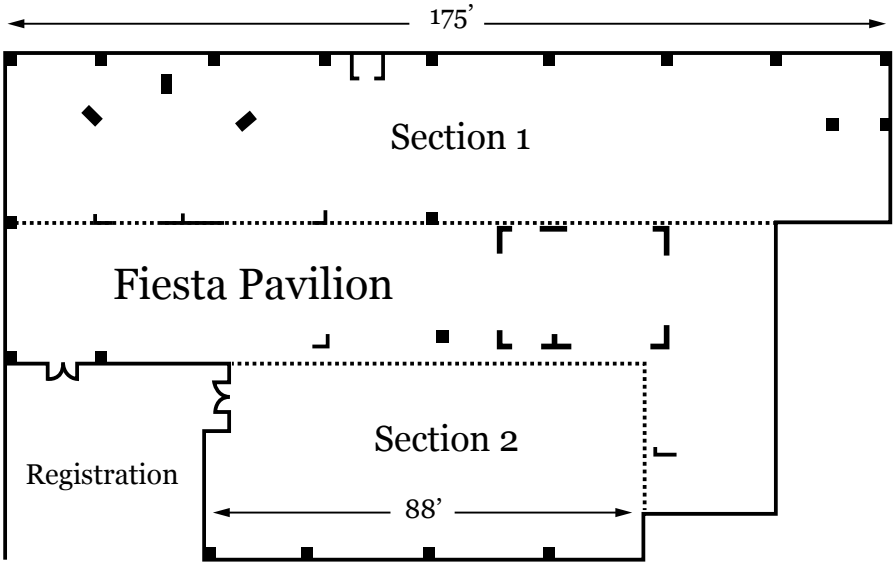
Third Floor



Lobby Level



Lower Level



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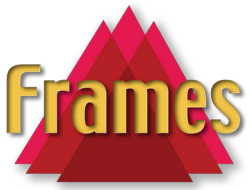

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