

Wicked Problem, New Solutions: Our Fire, Our Problem
5th International Fire Behavior and Fuels Conference
Oregon Convention Center, Portland, Oregon
April 11-15, 2016

Monday, April 11, 2016

7:00 am-6:00 pm	Conference Registration/Information Desk Open <i>(Pre-Function E)</i>				
WORKSHOPS					
	Room E141	Room E143	Room E144	Room E146	Room E147
8:30 - 12:30	#1 - Fuel and Fire Tools (FFT) —An application for Wildland Fuel and Fire Management Planning	#11 -The Future of Fire and Fuels Management: Adapting Fuels Treatments in a Changing Climate	#5 - Introduction to the BehavePlus fire modeling system	#2 - Fire Behavior Fuel Model Guidebook – LANDFIRE: Invest your knowledge in FBFM calibration rules for the conterminous US	#3 - Accessing Fire Weather Information: A Tutorial on Using the MesoWest/Synoptic API Web Services
12:30-1:30 pm	Lunch - on your own				
WORKSHOPS (cont.)					
	Room E141	Room E143	Room E144	Room E146	Room E147
1:30 - 5:30 pm	#7 – How to generate, interpret and apply landscape-scale hazard and risk assessment results	#11 - Cont.. The Future of Fire and Fuels Management: Adapting Fuels Treatments in a Changing Climate	#10 - Linking Fire Behavior, Fire Effects, and Weather Systems in Prescribed Fire Planning	#12 -Fuels Treatment Effectiveness: Joint Fire Science Workshop for Current Research, Preliminary Results and Implications (by invitation for JFSP PI's)	#9 - Getting more “Good Fire” on the Ground Across North America
12:00-6:00 pm	Exhibitor Set-up <i>(Exhibit Hall E)</i>				
6:00-8:00 pm	Social Reception with Exhibitors <i>(Exhibit Hall E)</i>				
8:00 pm	Afterhours Networking - Spirit of '77, 500 NE Martin Luther King Jr Blvd, Portland				

Tuesday, April 12, 2016

7:30 am-5:00 pm	Conference Registration/Information Desk Open <i>(Pre-Function E)</i>		
7:30-8:15	Greet-the-Day Gentle Yoga - Led by Johnny Stowe <i>(Wellness Lounge Room E142)</i>		
8:30-9:30	Welcome and Opening Session <i>(Portland Ballroom 254/255)</i> Tom Zimmerman, IAWF President and Conference Co-chair Ron Steffens, Professor, Green Mountain College & Conference Co-chair Kevin Martin, Director Fire, Fuels & Aviation Management, Alaska and PNW Regions, US Forest Service		
9:30-10:00	NETWORKING BREAK with Exhibitors <i>(Exhibit Hall E)</i>		
9:35-9:55	Lightning Info Session One: NASA Fire Science and Applications: Technology, Satellites, Airborne Data and Models <i>Presented by Amber Soja, NASA</i>	Lightning Info Session Two: Putting the “I” in Wildfire Preparedness: Insurance & NFPA Working Together to ensure Wildfire safety in the WUI <i>Presented by Michele Steinberg and Lucian Deaton, NFPA</i>	Campfire Session One: Smoke is a Global Problem <i>Led by Int'l Smoke Symposium Committee</i>

	CONCURRENT SESSIONS (Tuesday, April 12)				
	Room E141	Room E143	Room E144	Room E145	Room E146
	SPECIAL SESSION ONE: Towards Efficient Large Fire Management: Monitoring, Modeling, and Accountability <i>Moderator: Matt Thompson</i>	Rx Fire <i>Moderator: Johnny Stowe</i>	Fire and Smoke Modeling <i>Moderator: Casey Teske</i>	Risk Assessment <i>Moderator: Elizabeth Reinhardt</i>	Fire Behavior <i>Moderator: LaWen Hollingsworth</i>
10:00-10:20	SS1.1 A framework for optimal incident management: safe and effective response in a new fire management paradigm <i>Christopher Dunn</i>	1. Is It Time To Say Goodbye to Fire Rotations? <i>Cecil Frost</i>	6. Multiphase CFD Model of Wildland Fire Initiation and Spread (<i>remote</i>) <i>Vladimir Agranat</i>	12. A National Wildfire Risk Assessment for U.S. Forest Service Lands <i>Greg Dillon</i>	17. Trends and thresholds in fire behavior across Yellowstone's young lodgepole pine forests <i>Kellen Nelson</i>
10:20-10:40	SS1.2 Large airtankers in US fire management: describing historical use and discussing implications related to efficiency <i>Crystal Stonesifer</i>	2. Restoration of xeric oak forests in south-central United State with prescribed fire <i>Stephen Hallgren</i>	7. Data-driven Forecasting Paradigms for Wildland Fires using the CAWFE modeling system and Fire Detection Data <i>Janice Coen</i>	13. Perception and Management of Sociopolitical Risks on Large Fires <i>Armando Gonzalez-Caban</i>	18. Fuels and Fire Behaviour in New Zealand Wilding Conifers <i>Tara Strand</i>
10:40-11:00	SS1.3 Meaningful translation of aerial firefighting objectives, context and outcomes into effectiveness across the range of fire sizes for the Aerial Firefighting Use and Effectiveness Study <i>Keith Stockmann</i>	3. Post-fire tree mortality model assessment following prescribed burning treatments in National Park units of the western U.S. <i>Jeffrey Kane</i>	8. GridFire: A Fast Raster-Based Fire Spread and Severity Model <i>Gary Johnson</i>	14. Investigating temporal trends in wildfire hazard <i>Jessica Haas</i>	19. Using McArthur Model To Predict Bushfire Prone Areas In New South Wales <i>Liran Sun</i>
11:00-11:20	SS1.4 Firefighting Resource Use and Movement in the United States <i>Erin Belval</i>	4. 2015 National Prescribed Fire Use Survey <i>Pete Lahm</i>	9. Towards an integrated fire-atmosphere prediction system with data assimilation <i>Sher Shranz</i>	15. Wildfire threat to residential structures in the Island Park Sustainable Fire Community <i>Joe Scott</i>	20. An experimental study of the stochastic nature of firebrand flight <i>Ali Tohidi</i>
11:20-11:40	SS1.5 Develop a simulation/optimization procedure to study the daily suppression resource movement in Colorado <i>Yu Wei</i>	5. The Smoke-wise Community and the Path to More Fire <i>Peter Lahm</i>	10. High Fidelity Reduced Order Models for Wildland Fires <i>Alan Lattimer</i>	16. Impact Oriented Fire Paths <i>Joaquin Ramirez</i>	21. The Frequency in the Flames: Acoustic Impulse Events Generated by Wildland Fire Fuels <i>Kara Yedinak</i>
11:40-12:00	SS1.6 Summary: Infusing Risk Management Principles into the Fire Management System <i>Matthew Thompson & David Calkin</i>	Discussion	11. Field-scale testing of detailed physics-based fire behavior models <i>Eric Mueller</i>	Discussion	22. Exploratory analysis of interactions of patchy/clumpy fuel configurations on fire behavior with a physics-based fire model <i>Francois Pimont</i>
12:00-1:45	Lunch - on your own				
1:30-1:45	Work-the-Kinks-Out Gentle Yoga - Led by Johnny Stowe (Wellness Lounge Room E142)				

	CONCURRENT SESSIONS (Tuesday, April 12)				
	Room E141	Room E143	Room E144	Room E145	Room E146
	Smoke Management <i>Moderator: Tamara Wall</i>	Community Protection and Adaptation <i>Moderator: Jerry McAdams</i>	Fire and Smoke Modeling <i>Moderator: Kurtis Nelson</i>	Fire and Climate <i>Moderator: Tim Brown</i>	Fire Behavior <i>Moderator: Kara Yedinak</i>
1:45-2:05	23. Managing Fire in the Only EPA Declared Public Health Emergency in America <i>Nikia Hernandez</i>	28. Landscaping with Ornamental Trees and Exterior Structure Features using EcoSmart Fire Model <i>Mark Dietenberger</i>	32. The effect of static stability on the atmospheric response to a wildland fire <i>Joseph Charney</i> CANCELLED	37. Fire weather drives the population collapse of obligate-seeder forests <i>David Bowman</i>	42. ForestFireFOAM: A Numerical Tool For Investigating The Burning Dynamics Of Wildland Fuels <i>Mohamad El Houssami</i>
2:05-2:25	24. When there's Fire there's Smoke: Linking Wildfire to Distant Urban Airsheds. A 5 Year Health Economic Assessment of the Western US, 2010-2014 <i>Benjamin Jones</i>	29. Setting Wildfire Evacuation Triggers by Coupling Fire and Traffic Simulation Models <i>Dapeng Li</i>	33. A Study of the Influence of Vertical Canopy Structure on Fire-Atmosphere Interactions <i>Michael Kiefer</i>	38. Contributions to a megafire: Fire-induced winds, drought, and fuel buildup due to fire suppression <i>Janice Coen</i>	43. A Fundamental Exploration of Flame Structure in Wildland Fires <i>Colin Miller</i>
2:25-2:45	25. Smoke in the City: How Often and Where Does Smoke Impact Summertime Ozone in the United States? <i>Steven Brey</i>	30. Coupling the human and biophysical dimensions of wildfire to better understand wildfire risk and risk mitigation <i>Max Nielsen-Pincus</i>	34. Ignition from fire perimeter and assimilation into a coupled fire-atmosphere model <i>Adam Kochanski</i>	39. Climate-induced variations in global wildfire danger from 1979 to 2013 <i>W. Matt Jolly</i>	44. Forward Heating in Wind-Driven Fire Spread <i>Wei Tang</i>
2:45-3:05	26. Impact of wildfires on regional air pollution <i>Alexandra Larsen</i>	31. Wildland/Urban Interface: U.S. Fire Department Wildfire Preparedness and Readiness Capabilities <i>Michele Steinberg</i>	35. Developments in the BlueSky smoke modeling framework and related smoke tools <i>Sim Larkin (remote)</i>	40. Exploring interactions among multiple disturbance agents and future climates in forest landscapes <i>Robert Keane</i>	45. Laboratory Studies on the Generation of Firebrands and Ignition of Structural Components <i>Raquel Hakes</i>
3:05-3:25	27. Sensor Messaging: Guidance for Interpretation of Short-Term Concentration Readings <i>Susan Stone</i>	Discussion	36. The Effect of Forest Gaps on the Transport and Dispersion of Smoke Plumes from Low-Intensity Wildland Fires <i>Jovanka Nikolic</i>	41. Projected impacts of climate change on vegetation and fire in the Huachuca Mountains of Arizona <i>Christopher O'Connor</i>	46. Experimental Study on the Surface Spread of Smouldering Peat Fires <i>Xinyan Huang</i>
3:25-4:00	NETWORKING BREAK with Exhibitors (Exhibit Hall E)				
3:35-3:55	Lightning Info Session Three: Innovations in Early Wildfire Detection: International Case Studies <i>Presented by Brendan Kramp, Insight Robotics</i>		Lightning Info Session Four: Come learn more about Columbia Helicopters! <i>Presented by Jim Rankin, Columbia Helicopters</i>	Campfire Session Two: Students of Fire <i>Led by Kelsy Gibos</i>	
4:00- 4:45	GENERAL SESSION (Portland Ballroom 254/255) - Live streamed to Melbourne Wicked (Fire) Problems, Sweet (and Messy) Solutions <i>Ron Steffens, Professor, Green Mountain College & Conference Co-chair</i>				
4:45-5:30	GENERAL SESSION (Portland Ballroom 254/255) - Live streamed from Melbourne Fire is the Problem and Fire is the Solution <i>Dr Kevin Tolhurst AM, Assoc. Prof., Fire Ecology and Management, Department of Forest and Ecosystem Science, University of Melbourne</i>				
5:30-7:30	Poster Session (Exhibit Hall E) List of Poster Presentations listed at the end of the program				
7:30 pm	After Hours Networking - Altabira City Tavern (located on the top floor of the Hotel Eastland) - 1021 NE Grand Ave.				

Wednesday, April 13, 2016

7:30 am-5:00 pm	Conference Registration/Information Desk Open (Pre-Function E)				
7:00 am	Group Led Run/Walk - Led by Amanda Stamper - (meet in the lobby at the DoubleTree Hotel)				
8:00-8:45	Greet-the-Day Gentle Yoga - Led by Johnny Stowe (Wellness Lounge Room E142)				
8:00-9:00	<i>Exhibit Hall E ~ Breakfast with the Exhibitors ~</i> World Café - Fire Season 2015 – Looking Back and Moving Forward with Collective Wisdom Fire Behavior and Fire Management – Does Normal Exist? Denise Blankenship, Deputy Fire Director, US Forest Service				
9:00-9:45	GENERAL SESSION (Portland Ballroom 254/255) Wildland Fire: Shared Problems, Shared Solutions Vicki Christiansen, Associate Deputy Chief for State & Private Forestry, U.S. Forest Service				
9:45-10:00	Transition to Concurrent Sessions				
	CONCURRENT SESSIONS				
	Room E141	Room E143	Room E144	Room E145	Room E146
	SPECIAL SESSION TWO: Wildland Fire Emission Factors – Latest research and implications for management and policy Moderator: Shawn Urbanski	Smoke Management Moderator: Steve Miller	Case Studies Moderator: Norman Arendt	Wildfire Response Moderator: Tim Sexton	Fire Weather Moderator: Faith Ann Heinsch
10:00-10:20	SS2.1 Emission Factors and Wildland Fire: Policy Implications and Applications <i>Pete Lahm</i>	47. Differential respiratory health effects from the 2008 northern California wildfires: a spatiotemporal approach <i>Colleen Reid</i>	53. Lessons Learned from an Unexpected Spread Event on a Large Fire in a Remote Mountain Park <i>Kelsy Gibos/Dave Finn</i>	57. The effectiveness of large air tankers for containing wildfire ignitions <i>Hari Katuwal</i>	63. Introducing and Validating a New Fire Weather Index: The Hot-Dry-Windy (HDW) Index <i>Alan Srock</i>
10:20-10:40	SS2.2 Background to Emission Factor Development <i>Shawn Urbanski</i>	48. Montana Idaho Airshed Group Smoke Management Decision Support <i>Erin Law</i>	54. Developing and Implementing Geospatial Data Collection of Fuel Treatments, Lessons Learned <i>Justin Shedd</i>	58. Providing Information about Uncertainty Using Probability Distributions: USDA Forest Service Wildfire Suppression Expenditure Forecasting <i>Charlotte Ham</i>	64. Testing the Hot-Dry-Windy Index for the 2015 Fire Season in the Pacific Northwest <i>Brian Potter</i>
10:40-11:00	SS2.3 Emission Factors – Latest Research <i>Shawn Urbanski</i>	49. A Flexible Decision Support Framework for Smoke Management: 3 Case Studies <i>Matthew Mavko</i>	55. A 72-day Probabilistic Fire Growth Simulation as a Decision Support Tool on a Large Mountain Fire in Alberta, Canada <i>Kelsy Gibos/Neal McLoughlin</i>	59. What Does It Mean to Have a High Initial Attack Success Rate in Wildland Firefighting? <i>Karen Short</i>	65. Daily Relationships Between Fire Danger and Satellite-Derived Metrics of Fire Activity Across CONUS <i>Patrick Freeborn</i>
11:00-11:20	SS2.4 Assessing the limits of large diameter live and dead fuel consumption and their potential influence on emissions <i>Matt Jolly</i>	50. Understanding Smoke Transport from Prescribed Burning in the Wildland Urban Interface of Bend, Oregon <i>Susan O'Neill</i>	56. Something Wicked This Way Burns: A Wicked Fire Problem in a Coastal Oregon Town <i>Ron Steffens</i>	60. Beyond ICS: Propositions on Managing Complex Fire Events <i>Branda Nowell</i>	66. Alaska Fire and Fuels System <i>Joe Young</i>

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	Room E141	Room E143	Room E144	Room E145	Room E146
11:20-11:40	SS2.5 Will fire average emission factors provide the ability to evaluate the effectiveness of emission reduction techniques? <i>Roger Ottmar</i>	51. Wildland Fire Smoke: A Hazard for Health Disaster Management <i>Darlene Oshanski</i>	Discussion	61. Writing Incident Objectives in WFDSS: What we Know, How we can do Better <i>Tim Sexton</i>	67. Charles McHugh <i>Cancelled</i>
11:40-12:00	SS2.6 Assessing New Emissions Factors for Estimating Emissions from Wildland Fires <i>Duncan Lutes</i>	52. Smoke Monitoring in the Field: Understanding Equipment and the Value of Particulate Matter Data in Making Smoke Management Decisions <i>Don Schweizer</i>	Discussion	62. What is the Strategy? A Comparison of WFDSS and ICS 209 <i>Tim Sexton</i>	Discussion
12:00-1:30	Awards Luncheon (Portland Ballroom 256/257)				
CONCURRENT SESSIONS					
	Room E141	Room E143	Room E144	Room E145	Room E146
	Continued... SPECIAL SESSION TWO: Wildland Fire Emission Factors – Latest research and implications for management and policy <i>Moderator: Shawn Urbanski</i>	Fire Economics <i>Moderator: Joe Scott</i>	Fire and Smoke Modeling <i>Moderator: Nancy French</i>	Fire Effects <i>Moderator: Kelsey Gibos</i>	Fire Weather <i>Moderator: Brian Potter</i>
1:30-1:50	SS2. 7 Smoke Emission Modeling Inter-comparison Project (SEMIP) <i>Susan O'Neill</i>	68. Benefits and Incentives for Fuels Treatment in the Mokelumne Basin <i>Mark Buckley</i>	73. Assimilation of satellite active fires detection into a coupled weather-fire model <i>Jan Mandel</i>	78. Black Carbon Production and Storage as a Result of Differing Fire Frequencies in Longleaf Pine Forests <i>Adam Coates</i>	84. The MesoWest/Synoptic Web Service: A Tool for Accessing Fire Weather Data <i>Joshua Clark</i>
1:50-2:10	Panel Discussion	69. Minority Households Willingness-to-Pay for Public and Private Wildfire Risk Reduction in Florida: A Latent Class Analysis <i>Jose J. Sanchez</i>	74. Evaluation and improvement of an advanced regional modeling framework, addressing effects of wildfire emissions on modeled air quality for the Pacific Northwest <i>Vikram Ravi</i>	79. Recovering Lost Ground: Effects of Soil Burn Intensity on Nutrients and Ectomycorrhiza Communities of Ponderosa Pine Seedlings <i>Ariel Cowan</i>	85. A Novel Wildfire Prediction Tool Utilizing Fire Weather and Machine Learning Methods <i>Leo Deng</i>
2:10-2:30		70. Hedonic Models for Homes Vulnerable to Wildfire <i>David Rossi</i>	75. The importance of biomass burning feedbacks: Focus on CALIOP-based estimates of smoke plume injection height <i>Amber Soja</i>	80. Basal duff smoldering beneath old pines: a distinctive pattern of ground combustion <i>Jesse Kreye</i>	86. Modeling of Thunderstorm-Induced Wind Shifts <i>Scott Goodrick</i>

CONCURRENT SESSIONS (Wednesday, April 13)					
	Room E141	Room E143	Room E144	Room E145	Room E146
2:30-2:50	Panel Discussion	71. Systematic Investigation of Wildfire Damage and Risks on Property Values <i>Qihua Ma</i>	76. Field-Scale Validation of Data-Driven Wildland Fire Spread Simulations <i>Cong Zhang</i>	81. Quantifying Emission Factors from Smouldering Peat Fires: a Laboratory Study <i>Rory Hadden</i>	87. How Do Very Large Fires Get to be Very Large Fires? <i>Harry Podschwit</i>
2:50-3:10		72. The Effect of Wildfires on Recreation Visitation: A Historical Analysis of the National Park Service's Intermountain Region <i>Kara Walter</i>	77. Effects of Forest Canopy on Atmospheric Turbulence During Wildland Fires <i>Warren Heilman</i>	82. Flammability of North America Pines <i>Morgan Varner</i>	88. Defining fire season length using daily climatic, satellite, and documentary fire records <i>Karin Riley</i>
3:10-3:30		Discussion	Discussion	83. Can Wildfire Restore Conifer-encroached California Black Oak Woodlands? <i>Deborah Nemens</i>	Using boosted regression trees to model and predict wildfires in the southwest United States <i>Nick Nausler</i>
3:30-4:00					
3:35-3:55	Lightning Info Session Five: National Fire Danger Rating System (NFDRS) – Update 2016 <i>Presented by Matt Jolly</i>		Lightning Info Session Six: Fire Behavior Fuel Model (FBFM) Guidebook-Database <i>by Wendel Hann and Linda Tedrow</i>		Campfire Session Three: Women in Fire Science <i>Led by Kara Yedinak</i>
4:00-6:00	<p align="center">JOINT PANEL SESSION WITH MELBOURNE (Portland Ballroom 254/255) - Live streamed</p> <p align="center">How Do We Make the Complex Tradeoffs Necessary to Effectively Manage Fuels for Ecosystem Health and Public Safety?</p> <p align="center">PANEL MODERATOR: Tamara Wall, Desert Research Institute</p> <p align="center">PANELISTS: Lynn M. Decker, North America Fire Learning Network Director, The Nature Conservancy Zachary Prusak, The Nature Conservancy, Florida Fire Manager and Central Florida Conservation Program Director Leland W. Tarnay, Ecologist, Air Quality, Smoke, Landscape Fire, Pacific Southwest Research Station</p>				
6:00-7:00 pm	Sahyinidra Yoga and Meditation - Led by Johnny Stowe (Wellness Lounge Room E142)				
7:00 pm	After Hours Networking - Doug Fir Restaurant and Lounge, 830 E Burnside Street, Portland				
Thursday, April 14, 2016					
7:30 am-5:00 pm	Conference Registration/Information Desk Open (Pre-Function E)				
7:30-8:30	<p align="center"><i>Exhibit Hall E ~ Breakfast with the Exhibitors ~</i></p> <p align="center">World Café - Fire Season 2015 – Looking Back and Moving Forward with Collective Wisdom Protecting Values While Managing Fire</p> <p align="center"><i>Jack Oelfke, Chief of Natural and Cultural Resources, North Cascades National Park, National Park Service</i></p>				
7:30-8:15	Greet-the-Day Gentle Yoga - Led by Johnny Stowe (Wellness Lounge Room E142)				

CONCURRENT SESSIONS (Thursday, April 14)					
	Room E141	Room E143	Room E144	Room E145	Room E146
	SPECIAL SESSION THREE: Joint Fire Science Program and Smoke Science Research: Status of Progress Towards Meaningful Solutions <i>Moderator: Al Riebau</i>	Fire Use/Restoration <i>Moderator: Gene Rogers</i>	Technology <i>Moderator: Robert Ziel</i>	Fire Effects <i>Moderator: Eric Miller</i>	Education, etc <i>Moderator: Amanda Stamper</i>
8:30-8:50	SS3.1 Critical Assessment of Wildland Fire Emissions Inventories: Methodology, Uncertainty and Effectiveness <i>Wei Min Hao</i>	89. Modeling alternative fire response policies: proof-of-concept and preliminary results <i>Karin Riley</i>	94. Emerging Communication Technologies for Wildland Firefighting <i>Ed Mills</i>	100. Impacts of Post-fire Salvage Harvesting on Early-seral Ecosystems in Western Oregon <i>John Bailey</i>	106. Automating Fuel Model Assignment and Spatial Alignment for Fire Spread Modeling in Roaded Areas <i>Casey Teske</i>
8:50-9:10	SS3.2 Overview of the SC Regional Emissions and Aging Measurements (SCREAM) study <i>Sonia Kreidenweis</i>	90. Analyzing tradeoffs among socioeconomic and ecological restoration goals on the national forests of the Pacific Northwest <i>Kevin Vogler</i>	95. Synergistic Use of New NASA Technologies for Pre-, Active, and Post-Fire Applications <i>E. Natasha Stavros</i>	101. Mapping Severe Fire Potential in the Contiguous United States <i>Brett Davis</i>	107. Educating the Future Fire Workforce to Respond to Increasingly Complex Challenges <i>Leda Kobzair</i>
9:10-9:30	SS3.3 Emissions and properties of light absorbing particles emitted from fire <i>Gavin McMeeking</i>	91. Using Natural Ignitions to Accomplish Land Management Objectives <i>Kelly Martin</i>	96/97. Efforts to Enhance the Emergency Fire Shelter: A Collaboration between the U. S. Forest Service and NASA <i>Tony Petrilli and Josh Fody</i>	102. Spatial Analysis of the Influence of Fire Severity on Forest Structure on the North Rim of Grand Canyon National Park <i>Valentijn Hoff</i>	108. Burning for Blooms, Birds, and Butterflies: Partnerships and Pyrodiversity in the Willamette Valley <i>Amanda Stamper</i>
9:30-9:50	SS3.4 Investigation of particle and vapor wall-loss effects on controlled wood smoke smog chamber experiments <i>Jeffrey Pierce</i>	92. Restoring Fire to North American Wildlands - A Call to Action <i>Tim Sexton</i>		103. Fire Moss as a Tool for Post-Wildfire Ecosystem Restoration <i>Chris Ives</i>	109. Aerial Firefighting with Helicopters <i>Jim Rankin</i>
9:50-10:10	SS3.5 Data and Tools for Analysis of Smoke Impacts on Ozone and PM <i>Matt Mavko</i>	93. Planning for a future of more fire, safer fire, and better fire <i>Christopher O'Connor</i>	98. Evaluating the Quality of a Wildfire Defensible Space with Airborne LiDAR and GIS <i>Jason Harshman</i>	104. Disentangling the Drivers of Wildfire Severity in a Multi-Owner Forest Landscape <i>Harold Zald</i>	110. UWSP Fire Crew Approaching Tomorrow's Problems With Today's Education and Training <i>Jacob Livingston</i>
10:10-10:30	Discussion	Discussion	99. Detection of Forest Fires Impact with Remote Sensing Data, ALSAT, In Semi-arid Zones, Algeria <i>Zegrar Ahmed</i>	105. Estimating Fire Induced Basal Area Mortality with Multi-temporal LiDAR <i>Michael Hoe</i>	Discussion

10:30-11:00					
10:35-10:55	Lightning Info Session Seven: Monitoring the Fire Edge and Tracking Personnel with Modern Technology <i>Presented by Josh Hintze</i>		Campfire Session Four: LANDFIRE <i>Led by Henry Bastian and Frank Fay</i>		
11:00-11:40	GENERAL SESSION (Portland Ballroom 254/255) We Have a “Wicked” Problem. How Did It Happen? Can It Be Fixed? <i>Gary Berndt, Washington State Wildland Liaison, Commissioner of Public Lands</i>				
11:40-1:00	Lunch - on your own				
12:40-12:55	Work-the-Kinks-Out Gentle Yoga - Led by Johnny Stowe (Wellness Lounge Room E142)				
	CONCURRENT SESSIONS				
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	Continued... SPECIAL SESSION THREE: JFSP and Smoke Science Research: Status of Progress Towards Meaningful Solutions Moderator: Doug Fox	SPECIAL SESSION FOUR: Managing Wildfire for Resource Benefit: Increasing Opportunities, Improving Ecosystems Moderator: Laurie Kurth	Fuels Moderator: John Bailey	Fire Effects (landscape) Moderator: Lily Konantz	Shared Responsibility Moderator: Michael Gollner
1:00-1:20	SS3.6 A casual inference analysis of the effect of fire smoke on ambient air pollution levels <i>Alexandra Larsen</i>	SS4.1 Where are we and where can we go with managing fire and what do we need to get there? <i>Jim Hubbard</i>	111. New frontiers in fuel sampling: new techniques for measuring fuels for fire management in the US <i>Robert Keane</i>	117. Simulating the Joint Impacts of Wildfires and Fuel Management on Landscape Resiliency in Central Oregon USA <i>Ana Barros</i>	123. Successful Stewardship Begins with Trust: The Southern Blues Restoration Coalition <i>Dana Skelly</i>
1:20-1:40	SS3.7 Comparative study of emission factors and mutagenicity of red oak and peat smoke from smoldering and flaming combustion <i>Yong Ho Kim</i>	SS4.2 Where have we been with managing fire for resource benefits? <i>Laurie Kurth, Frankie Romero, Henry Bastian</i>	112. Modeling fuels and fire effects in 3D with FuelManager and STANDFIRE <i>Francois Pimont</i>	118. Forest fuels and potential fire behavior twelve years after variable-retention harvest in lodgepole pine <i>Justin Crotteau</i>	124. A Framework for Collaborative Learning: Forest Fuels and Vegetation Monitoring in the Southern Blue Mountains <i>Becky Miller</i>
1:40-2:00	SS3.8 Fire and Smoke Model Evaluation Experiment (FASMEE) <i>Roger Ottmar</i>	SS4.3 Do We Need Wildland Fire Use Back? <i>Frankie Romero</i>	113. Next-Generation Fuels Mapping at Regional Scales: accounting for uncertainty and spatial variability <i>Susan Prichard</i>	119. Multi-dimensional cost-effectiveness of fuel treatments in dry mixed conifer forests: an inventory originated analysis <i>Jeremy Fried</i>	125. Fire Adapted Communities - Networking on a Local & National Scale <i>Jerry McAdams and Forest Shafer</i>
2:00-2:20	SS3.9 Airborne based smoke marker ratios from prescribed burning <i>Amy Sullivan</i>	SS4.4 Managing Fire – Working with partners to protect communities and other values, reduce risk, and improve ecosystems <i>Panel Members: Forest Schafer – Lake Tahoe Fire Districts Darren Borgias – The Nature Conservancy Judy Reese – State of Alaska Judy Knobel – Washington Department of Natural Resources Dave Baker – Livestock rancher</i>	114. Changes of masticated fuelbed properties over time in the western US <i>Pamela Sikkink</i>	120. The effects of a long-term, landscape-scale, fuel management program on three-dimensional fuel loading and distribution <i>Nicholas Skowronski</i>	126. Think bigger: statewide wildfire risk perceptions in Idaho <i>Thomas Wuerzer</i> Cancelled
2:20-2:40	SS3.10 How wild is your model fire? Constraining WRF-Chem wildfire smoke simulations with satellite observations <i>Jeffrey Pierce</i>		115. Estimating Litterfall Rates Following Stand-replacement Disturbance in Northern Rocky Mountain Ecosystems <i>Bob Keane for Chris Stalling</i>	121. Driving fire behaviour models with forest inventory data in Canada <i>Dan Thompson</i>	127. How Wildland Fire Leaders are Co-Managing Risk <i>Michael Zupko</i>
2:40-3:00	Panel Discussion		116. Post Treatment Fuel Loading Differential in Two Logged Areas of Banff National Park <i>Erin Tassell</i>	122. Utilizing drought science and information in wildfire management decision context <i>Timothy Brown</i>	128. New Approaches for Mapping the Wicked Problem of Wildfire <i>Cody Evers</i>

3:00-3:15	NETWORKING BREAK (Pre-Function E)				
	CONCURRENT SESSIONS				
	Room E141	Room E143	Room E144	Room E145	Room E146
	Continued... SPECIAL SESSION THREE: JFSP and Smoke Science Research: Status of Progress Towards Meaningful Solutions <i>Moderator: Cindy Huber</i>	Continued... SPECIAL SESSION FOUR: Managing Wildfire for Resource Benefit: Improving Ecosystems <i>Moderator: Laurie Kurth</i>	Fire and Carbon <i>Moderator: Ron Steffens</i>	Fire Management Planning <i>Moderator: Tom Zimmerman</i>	Fire Weather/Fuel Moisture <i>Moderator: Mary Taber</i>
3:15-3:35	SS3.11 Megafire, Fuel Loading, and Emissions in the Continental United States under Changing Climate <i>Yong Liu</i>	SS4.5 Risk Assessment in the Southern Sierras <i>Matt Thompson, Phil Bowden</i>	129. Quantifying avoided wildfire emissions from significant wildfires in California <i>Thomas Buchholz</i>	135. A Legacy of Fire Use: Fire Management and Fire Use in Eastern Province of Zambia <i>LaWen Hollingsworth</i>	141. Moisture Exchange Models for Standing Dead Grass in Alaska <i>Eric Miller</i>
3:35-3:55	SS3.12 Future Mega-fires and smoke impacts <i>Sim Larkin</i>	SS4.6 Rogue Basin – Risk Assessment across land ownership boundaries <i>Kerry Metlen</i>	130. Estimates of biomass consumption based on MODIS Fire Radiative Power overestimate global biomass consumption and carbon release <i>Bryce Kellogg</i>	136. Living with Fire—Lessons Learned from Central Africa Grass-Savannas and how it relates to Fire-Management in the United States <i>Jim Menakis - Cancelled</i>	142. Examination of pyrophytic plant combustion and the relationship between fuel moisture, energy released, and emissions <i>Evan Ellicott</i>
3:55-4:15	SS3.13 Modeling evaluation of the contribution of wildland fire emissions of BC deposition rates in the Western US <i>Serena Chung</i>	SS4.7 Application of landscape-scale wildfire risk assessment results to incident management <i>Joe Scott</i>	131. A new top-down method for estimating aerosol emissions applied to large wildfires in North America <i>Tadas Nikonovas</i>	137. Introduction to STARFire: wildland fire spatial planning and budgeting <i>Douglas Rideout</i>	143. Climatic and eco-hydrological drivers of fuel moisture dynamics in complex terrain <i>Petter Nyman</i>
4:15-4:35	SS3. 14 Estimating climate impacts on future wildfires and SE US Air Quality <i>Uma Shankar</i>	SS4.8 Case Study - Bald Knob Fire, Pisgah NF <i>Riva Duncan</i>	132. Snag Dynamics and Fuel Succession Following Wildfires in the Eastern Cascade Mountains <i>David Peterson</i>	138. A Survey of Fire Managers: Characterization of Resource Importance, Scarcity, and Substitutability by Resource Type <i>Crystal Stonesifer</i>	144. Flammability of Live Vegetation: Combustibility and Ignitability Assessment <i>Jan Christian Thomas</i>
4:35-4:55	Panel Discussion	SS4. 9 The High Meadow Wildfire - A Natural Ignition Managed for Multiple Objectives In a Complex Social Environment <i>Mark Rosenthal</i>	133. Estimating canopy bulk density distribution using calibrated t-LiDAR indices <i>Francois Pimont</i>	139. Water Quality Above All Else: Fire Management in the Greater Victoria (British Columbia) Water Supply Area <i>Robert Walker</i>	145. Critical Examination of the Haines Index and its Use <i>Brian Potter</i>
4:55-5:15		SS4.10 Case Study - Paradise Fire, Olympic NP <i>Todd Rankin</i>	134. Effects of Stand Thinning in Modifying Crown Fire Behavior in a Black Spruce Stand in Interior Alaska <i>Eric Miller</i>	140. NASA Fire Science and Applications: Technology, Satellites, Airborne Data and Models <i>Amber Soja</i>	146. Developing new references for fine dead fuel moisture in the Southeastern United States <i>Matt Jolly</i>
5:15-5:20	Transition to Closing Session				
5:20-5:40	Closing Session (Portland Ballroom 254/255)				
7:00	After Hours Networking - Punchbowl Social, 340 SW Morrison Street, Portland				
Friday, April 15, 2016					
8:00 - 5:00	Field Trip #1 – Burning for Blooms, Butterflies, Birds (and Bouquets): Prescribed Fire in the Willamette Valley				
8:30 - 12:30	Field Trip #2 Columbia Helicopters				