



International Association of Wildland Fire

3rd Fire Behavior and Fuels Conference

Beyond Fire Behavior and Fuels: Learning from the Past to Help Guide Us in the Future

Red Lion Hotel at the Park – Spokane, Washington

October 25-29, 2010

POSTER PRESENTATIONS

SESSION #1

Tuesday, October 26, 2010

1:00-2:00 PM

The 1910 Fire Season in the US and Canada

(449) 1910 Fire Events in the Forest Reserves, Rocky Mountain and Foothill Regions of Alberta
A. Annand

Fire History and Fire Regimes

(465) Compounding disturbances and their impact on subalpine forest and landscape structure
B. Buma

(254) Recreation of Historical Fire Return Intervals and Age Mosaics to Capture Historical Fire Regime Conditions
MP Rogeau

(294) The Influence of Geospatial Factors on Wildfire Occurrence in the Black Hills of South Dakota
J. Strain

(372) Geo-referencing Historical Photos to Quantify Century-scale Changes in Forest Structure
C. Stockdale

(376) Retrospective Fire Modeling to Quantify the Hidden Consequences of Fire Suppression
C. Miller

(384) Assessing Fire Severity Among Interacting Fires in Three Western U.S. Wilderness Areas
S. Parks

(393) Climatic and Topographic Influences on Fire Regime Attributes in the Northern Cascade Range, Washington, USA
C. Cansler

(447) Fire Regimes of Mexico
D. Perez-Salicrup

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Poster Presentations

Fire and the Wildland-Urban Interface & Dealing With the Public

(319) LEST WE FORGET: Canada's Major Wildland Fire Disasters of the Past, 1825-1938

M. Alexander

(278) Modeling Wildfire Property Risk in Near Real Time

S. Stransky

(344) Wildland-Urban Interface in Ontario, Canada

L. Bowan

(366) Spatially Defining Wildland Fire Risk: A Novel Approach to WUI Mapping

J. Haas

(373) From the Flames to the Frame: Communicating Messages of "Conflagration" and "Climate Change"

R. Steffens

(442) Fire Risk and Rural Activity in the Djebel Mansour Forest

K. Abdelmoula

(451) Identifying Fire Research Priorities in Mexico

D. Perez-Salicrup

Wildland Fire Case Studies

(240) The Role of a Long Term Assessment in Management of the North Fork Complex

W. Aney

(252) The Howling Prescribed Natural Fire – Long Term Effects on the Modernization of Planning and Implementation of Wildland Fire Management

T. Zimmerman

(378) Reconstructing the Spread and Behaviour of the February 2009 Victorian Fires

N. Gellie

Fuels

(277) Climate Change and Weather-damaged Fuels – Challenges to Ontario Fire Management Staff

A. O'Connor

(299) Snag Fall, Coarse Wood Decomposition, and Fine Fuel Succession Following High-Severity Fire in Dry-mixed Conifer Forests of Oregon's Cascades

C. Dunn

(308) Quantifying Fire Hazard After Blowdown in Southwest Oregon

M. Johnson

(331) The Comparison of the Fuel Moisture Change on Pine Forests in Korea East Sea Region in Spring and Fall
SY Lee

(361) Variation in Flammability of North American Pine Species
E. Banwell

(363) Assessing Fuel Loading in Longleaf Pine Forests for the BlueSky Framework
R. Mickler

(382) The Validation and the Prediction of Canadian Fine Fuel Moisture Code (FFMC) Under Future Climate Change in Kangwon Province, Korea
HS Park

(383) Deriving Conifer Needle and Branch Mass for Crown Fuel Modeling Using Terrestrial Laser Scanning
C. Seielstad

(399) The Effect of Decomposition of Coarse Woody Debris Consumption
J. Hyde

(407) Another Compelling Reason for Establishing National Sampling and Data Standards for the National Fuel Moisture Database
E. Delgado

(452) Leaf Litter and Coarse Woody Debris Dynamics in *Pinus douglasiana* stands of different age after high and low severity fires
D. Perez-Salicrup

Fuel Dynamics and Fuels Management/Treatments

(232) Quantifying the Effects of Wildland and Prescribed Fire on three-dimensional forest structure and fuel loading using a 50 year fire history and landscape-scale scanning LiDAR in the Pine Barrens of New Jersey
N. Skowronski

(289) A Comprehensive Guide to Fuels Management Practices for Ponderosa Pine/Mixed Conifer Forests
M. Battaglia

(339) Post-burn Fire Hazard in Mixed Severity Fire Regimes in the Cascade Range
J. Hudec

(351) Assessing Efficacy of Landscape Restoration in Juniper Savannas in Southern Arizona
E. Apland

(375) Evaluating Hazardous Fuel Treatment Alternatives in the Southeastern United States
R. Ottmar

(381) Ponderosa Pine Canopy Changes Following 30 Years of Different Prescribed Fire Burning Rotations
S. Haase

(401) Effectiveness of Fuel Treatments by Wildfire in the Wildland Urban Interface of Central Idaho
A. Hudak

(406) A Comparison of Landscape Fuel Treatment Strategies to Mitigate Wildland Fire Risk in the Urban Interface and Preserve old Forest Structure
A. Ager

POSTER PRESENTATIONS

SESSION #2

Wednesday, October 27, 2010

1:00-2:00 PM

Fuel Dynamics and Fuels Management/Treatments

(418) Monitoring Mechanical Fuels Reduction Effectiveness and Effects in Shrublands (Coastal Sage and Chaparral)

A. Fege

(420) Evaluating Shrubland Fuels Reduction Projects with BEHAVE models

A. Fege

(435) Numerical Simulations of Fuel Treatment Effectiveness in Preventing Structure Ignitions

M. Ginder

(437) Forest Restoration and Fire Hazard in a High Severity Fire Regime

M. Johnson

(450) Accomplishing Stand and Landscape-scale Fuel Management through a Balanced Fire Management Program

T. Sexton

(394) Post-fire Logging Effects on Fuel Succession and Potential Fire Behavior in Dry Coniferous Forests

D. Peterson

Fire Weather

(250) Initialization of High Resolution Surface Wind Simulations Using NWS Gridded Data

B. Butler

(312) The Australian Dry Slot Theory and Its Occurrence and Implications in North America
F. Schoeffler

(313) Weather Modification and Geoengineering Implications on Wildland Fire Weather
F. Schoeffler

(321) Evolution of 20th-Century Climate-Fire Relationships in the US Northern Rockies
P. Higuera

(341) Thermal Troughs in the Pacific Northwest
J. Ruthford

(342) The Tale of Tumblebug and the Thermal Trough: A Case Study of Critical Fire Weather Patterns in the Pacific Northwest
J. Ruthford

(370) A Mountain Wind Model for Assisting Fire Management
G. Achtemeier

(388) Untangling the Roles of Dry Air Aloft and Downward Instability in Fire Growth
B. Potter

(441) Progress Towards a Lightning Ignition Model for the Northern Rockies
P. Sopko

(443) Season Ending Events, A Matter of Perspective
L. Kurth

(296) Climate Change and Fire Danger Rating in the Northern Rockies
Faith Ann Heinsch

Fuel Modeling, Mapping & Simulations

(466) Introducing the Canopy Fuel Stratum Characteristics Calculator
M. Cruz and M. Alexander

(241) Producing a Canadian Forest Fire Danger Rating System (CFFDRS) Fuel Map Using the Vegetation Resource Inventory (VRI) for Kootenay and Yoho National Parks
J. Park

(260) Integrating the Fuel Characteristics System and the Forest Vegetation Simulator
M. Johnson

(286) Simulating Fire Hazard Across Landscapes Over Time through integration of the Vegetation Dynamics Development Tool (VDDT) and the Fuel Characteristic Classification System (FCCS)
J. Halofsky

(337) Keeping Up with Changing Landscapes in Wildland Fuels

C. Martin

(354) Fire Effects Tradeoff Model (FETM): A Landscape-scale Ecosystem Model for Land Managers

M. Schreuder

(386) Fuel Heterogeneity at Stand Boundaries in the Elk Creek Watershed of Southern Oregon

E. Comfort

(389) Fuel Dynamics on Sites with Strong Potential to Paludification and Fire Behavior modeled from empirical data in the spruce-feathermoss domain of Northwestern Quebec.

M. Paquette

(408) Climate-driven Changes in Fire Regime Affect Carbon Dynamics in a Heterogeneous Forested Landscape of Washington, USA

C. Raymond

(417) Landscape-level Evaluation of Fuel Treatment Impacts on Fire Behavior and Carbon Dynamics in the Klamath Mountains

C. Discus

(457) High Resolution Fuel Mapping: Wildland and Urban Interface Areas Application in the Iberian Peninsula

J. Ramirez

Operational Perspectives and Applications of Fire Behavior Knowledge

(229) Do you BEHAVE? – Application of the BehavePlus fire modeling system

P. Andrews

(230) Fire Characteristics Charts for U.S. Fire Danger Rating and Fire Behavior

F. Heinsch

(424) Fireline Assessment Method (FLAME)

R. Ziel

(454) TOWARDS A CROWN FIRE SYNTHESIS: What would you like to know and what might you able to contribute?

M. Alexander

(456) Wildfire Analyst: Taking Fire Behaviour Analysis to the Field

J. Ramirez

Fire Ecology and Post-Fire Effects

(231) Experimental Fire in Two Different Grassland Ecosystems in the Southwestern United States

P. Ford

Updated 8/3/2010

(279) A Synthesis of Insect Outbreaks and Subsequent Wildfire

J. Hicke

(352) Restoring Habitat Diversity in the Centennial Sandhills Ecosystem; a Collaboration Employing a Unique Application of Prescribed Fire.

B. Bauer

(365) Predicting Dust Emissions in Post-fire Areas with Complex Terrain

N. Wagenbrenner

(403) Effectiveness of Post-fire Mulches in the Santa Barbara Front County

J. Beyers

(427) Do Non-native Species Invade Chaparral from Fuelbreaks After Fire?

J. Beyers

Decision Support Systems

(283) Predictive Services: Current and Future Directions in Decision Support

R. Heffernan

(315) Tiger: A New 2D Fire Propagation Simulator

S. Mazzoleni

(316) Coupling Fire Behavior Models with Other Decision Support Tools

R. Seli

(396) The Wildland Fire Decision Support System – Decision Support for Fire Management

M. Pence

POSTER PRESENTATIONS

SESSION #3

Thursday, October 28, 2010

1:00-2:00 PM

Scientific Investigations and Approaches to Understanding Fire Behavior

(249) In-situ Characterization of Wildland Fire Behavior

B. Butler

(262) Numerical Simulation of Crown Fire Hazard following Bark Beetle-caused Mortality in Lodgepole Pine Forests

C. Hoffman

(268) Impact of the Live Fuel Structure on Fire Behavior in Limestone Provence (SE France)

A. Ganteaume

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Poster Presentations

(270) Modern Developments for Ground-based Monitoring of Fire Behavior and Effects
R. Kremens

(272) Modeling a Burning Shrub With and Without Wind Using a Semi-empirical Model
T. Fletcher

(273) Effects of Wind on Flame Characteristics of Leaves and Needles
T. Fletcher

(285) Ignition Thresholds for Grassland Fuels and Management Implications
H. Wakelin

(298) Mountain Pine Beetle (*Dendroctonus ponderosae*) and Lodgepole pine (*Pinus contorta*) in south-central Oregon: Fuel dynamics and consequences for fire behavior through time.
T. Woolley

(305) Fire Behavior in Simulated Mountain Pine Beetle Attacked Stands
D. Schroeder

(311) A Study on Heat Release Characteristics of Tree Species Distributed at M. Halla
HP Lee

(317) Physical-based Modeling of Crown Forest Fire Behavior Using the PHOENICS CFD Software
V. Perminov

(327) Airborne Remote Sensing of Southern California Wildland Fires
P. Riggan

(355) Evaluation of the FCCS Crown Fire Potential Equations in Conifer Stands in the Western United States
M. Schreuder

(362) Large Fire Whirls: Can Their Formation be Predicted?
J. Forthofer

(374) Advanced Fire Data Products from the AMS-Wildfire Sensor
E. Hyer

(426) Sensitivity Analysis and Application of a Coupled Fire-Atmosphere Model
K. Yedinak

(464) A Fire Simulation Using a Chemically Reacting Plume in a Cross Flow
T. Alvarado

Smoke

(233) Do Polyethylene Plastic Covers Affect Smoke Emissions from Debris Piles?

D. Weise

(263) Development and Validation of Modeling Tools for Predicting Smoke Dispersion During Low-intensity Fires

W. Heilman

(287) Large Eddy Simulation of Canopy Structure Effects on Smoke Dispersion from Prescribed Fire

S. Garrity

(310) A Study of Smoke Release Characteristics of the Tree Species Distributed at Mt. Halla

HP Lee

(334) Simulation and Evaluation of Smoke Plume Rise with Modified Daysmoke

Y. Liu

(358) BlueSky Modelling Framework: Status, Products, and Future Developments

N. Larkin

(397) Comparison of Measure PM2.5 Data from Two Prescribed Burns in North Carolina

M. Rorig

(402) Development of New Fuels and Emissions Data for Maritime Chaparral and Madroan Oak Woodland Fuel Types

D. Weise

(404) Measurements of Smoke Concentrations and Inversions in the Lake Tahoe Basin

M. Rorig

(409) The Smoke and Emissions Model Intercomparison Project (SEMIP) Community Data Warehouse

N. Larkin

(410) Identifying the Conditions Necessary for CONUS Fires to Impact the Arctic

N. Larkin

(411) Uncertainties in Fuel Loading, Fire Consumption, Plume Rise, and Smoke Concentration Calculations

N. Larkin

(412) Integrating Air Quality Tools into the Wildland Fire Decision Support System (WFDSS-AQ)

N. Larkin

(413) Smoke Modeling and Validation Field Design: CO, PM2.5, CO2 and Smoke Monitoring

J. Hom

(439) Validation of Smoke Plume Rise Models Using Ground Based Lidar
C. Wold

(446) Fuels, Fuel Consumption, and Smoke Emissions Simulations Under Wildfire Conditions: Case Studies Using Modeling Frameworks
S. Drury

(463) Effectively Engaging and Addressing Natural Resource Smoke Management Issues – A Focus Of The National Wildfire Coordinating Group (NWCG) Smoke Committee (SmoC)
P. Lahm

Fire Management Applications

(227) Relay Pumping with Electric Wires in Houses to Power Electric Pumps
S. Shoap

(246) GIS Tools, Courses and Learning Pathways Offered by the National Interagency Fuels, Fire and Vegetation Technology Transfer (NIFTT)
K. Schon

(288) Geospatial Fire Analysis, Interpretation, and Application – Developing and Maintaining Fire Analysis Training for Multiple Audiences
L. Kurth

(377) The Pacific Northwest Fire Science Consortium: Towards a New Paradigm for Technology Transfer
T. DeMeo

(390) The National Fire Decision Support Center: Supporting Decision Making
M. Pence

(395) Transforming Fire Fighters into Fire-Guiders: Firefighters United for Safety, Ethics, and Ecology (FUSEE)
T. Ingalsbee

(432) Firefighter Math – A Web-based Learning Tool
D. Jimenez

(462) Blending Fire Management Tools in Support Of Planned Fire Ignitions On Organic Soils A Case Study at Camp Lejeune / Jacksonville, North Carolina
G. Curcio