



A JFSP Fire Science Exchange Network

February 2018 Newsletter

In This Issue

- Upcoming NRFSN Workshops and Field Trip
- Fire Continuum Conference - Workshops and Field Trips
- Fire Continuum Conference - Registration Scholarships
- Videos Highlight Wilderness Fire Science and Management
- Updates to BehavePlus
- New IFTDSS Version Released
- LANDFIRE Website Gets a Makeover
- Input Wanted: Sagebrush Ecosystems Actionable Science Plan
- Tri-County Firesafe Working Group Lead Receives National Wildfire Mitigation Award

Upcoming NRFSN Workshops and Field Trip



Workshop Series: Post-Fire Regeneration and Fuels

March 6, McCall, Idaho

March 7, Boise, Idaho

March 8, Jackson Hole, Wyoming

This workshop series will engage forest managers in co-developing strategies that help manage tree regeneration and fuels and adapt to

WEBINARS

February 28
2018 Fire Season
Primer Webinar

February 28
Using Science to Inform
Policy and Mitigation of
Anthropogenic Impacts
on Long-Distance
Migrations in the GYE

March 8-May 9
Cheatgrass
Management Webinar
Series

Search the [NRFSN Webinar Archive](#) for recordings of past webinars

CONSERVATION EDUCATION

Sage Grouse Challenge
New sage grouse
distant learning program

CONFERENCES / WORKSHOPS

February 27-March 1, 2018
Wildland Urban
Interface 2018
Reno, Nevada

March 6, 2018
Post-Fire Regeneration
and Fuels Workshop
McCall, Idaho

March 7, 2018
Post-Fire Regeneration
and Fuels Workshop
Boise, Idaho

March 8, 2018

climate change impacts in post-fire environments. These efforts are designed to inform and learn from forest managers across various sectors in the Northern Rockies region, and to produce useable materials to facilitate post-fire management. Check the event pages linked above for more details.

Field Trip: Fuel Treatment Effects in Ponderosa Pine and Mixed Conifer Forests

May 31, Lubrecht Experimental Forest, Montana

The Northern Rockies Fire Science Network, UM W.A. Franke College of Forestry and Conservation and Rocky Mountain Research Station invite you on a field tour of one of the National Fire-Fire Surrogate Study Sites at UM's [Lubrecht Experimental Forest](#). This study, initiated in 1999, evaluates the effects of thinning and burning treatments in fire-adapted ponderosa pine-mixed conifer forests. We will discuss short and mid-term treatment effects, including stand dynamics, fuel treatment longevity, potential fire behavior, bark beetle activity, and soil productivity 17 years post-treatment. Check the [event page](#) for more details and to [register](#). Attendance is capped and registration is first come, first served.

Workshop: Long-Term Vegetation Recovery and Reburn Potential

June 11-13, McCall Idaho

This workshop will bring local, regional and national managers and scientists together to share recent research findings and discuss implications for vegetation and fire management. The workshop will facilitate an exchange of ideas between scientists and managers and encourage collaboration on developing post-fire vegetation management and wildland fire management strategies. Check the [event page](#) for more information and to [register](#)

Fire Continuum Conference - Workshops and Field Trips



In addition to the special sessions and presentations at the May 21-24 [Fire Continuum Conference](#) in Missoula, Montana, attendees can participate in variety of workshops and field trips.

Workshops are 2 or 4 hours in length and are scheduled for Monday, May 21 (cost: \$10 or \$15). The 16 workshops will provide a forum for researchers and practitioners to share new tools and discuss and

[Post-Fire Regeneration and Fuels Workshop](#)
Jackson Hole, Wyoming

March 20-21, 2018

[Resilient Landscapes, Thriving Communities: Achieving a Collaborative Vision of the Future Workshop](#)
Coeur d'Alene, Idaho

March 26-29, 2018

[2nd Annual National Cohesive Wildland Fire Management Strategy Workshop](#)
Reno, Nevada

April 27-29, 2018

[National Wildland Fire Conference](#)
San Diego, California

May 15-18, 2018

[12th Fire and Forest Meteorology Symposium](#)
Boise, Idaho

May 21-24, 2018

[Fire Continuum Conference - Preparing for the Future of Wildland Fire](#)
Missoula, Montana

May 31, 2018

[Fuel Treatment Effects in Ponderosa Pine and Mixed Conifer Forests Field Trip](#)
Lubrecht Experimental Forest, Montana

PUBLICATIONS / REPORTS

Search the [NRFSN Research & Publications Database](#)

Fire and Climate-

[Assessment of aspen ecosystem vulnerability to climate change for the Uinta-Wasatch-Cache and Ashley National Forests, Utah](#)

[Effects of climate change on rangeland vegetation in the northern Rockies](#)

[Evaluating future success of whitebark pine ecosystem restoration under climate change using](#)

exchange information on defined topics. [View the workshop schedule and descriptions here.](#)

Field trips take place on Wednesday afternoon, May 23, and cost \$25 each, including lunch and transportation. Five field trips are available:

- Confederated Salish-Kootenai Tribal Fire and Forestry Management: Philosophy, management strategies, and working across boundaries
- Marshall Woods Fuel Treatment Project: Challenges to building consensus and conveying fire hazard mitigation and ecological restoration needs to the public
- Tour of the US Forest Service, Fire Science Laboratory and Missoula Smokejumper Center
- Fuel Treatment Effects in Ponderosa Pine-Douglas-fir Forests: 18 Years after the Lubrecht Fire-Fire Surrogate Study
- From the Wilderness to the WUI: Management of the Lolo Peak 2017 Fire

Register early as space is limited. If you do not plan to register for the conference, but would like to attend one of the workshops, please contact Bob Keane at rkeane@fs.fed.us.

University of Montana dorm rooms are available for attendees to the Fire Continuum Conference. The dorms are within walking distance of the conference meeting spaces, and single or double rooms are available from Sunday, May 20 to Tuesday, May 29. Click [here for more information or to make a reservation](#).

Fire Continuum Conference - Registration Scholarships



To make it easier for managers to attend the **2018 Fire Continuum Conference** in Missoula, the Association of Fire Ecology and the International Association of Wildland Fire are offering 10 free registrations (value of \$450) to professionals and managers interested in attending the conference. These were designed for local managers who live near Missoula and will not incur extra travel costs; however, others will be considered. If interested, fill out the [online form here](#) to apply as soon as possible.

Videos Highlight Wilderness Fire Science and Management

simulation modeling

Effects of climate oscillations on wildland fire potential in the continental United States

Fire and Disturbances-
Estimating aboveground tree biomass for beetle-killed lodgepole pine in the Rocky Mountains of northern Colorado

Post-disturbance sediment recovery: Implications for watershed resilience

Evidence of compounded disturbance effects on vegetation recovery following high-severity wildfire and spruce beetle outbreak

Disturbance and productivity interactions mediate stability of forest composition and structure

Fire and People-
Human presence diminishes the importance of climate in driving fire activity across the United States

Should I stay or should I go now? Or should I wait and see? Influences on wildfire evacuation decisions

Examining the influence of biophysical conditions on wildland-urban interface homeowners' wildfire risk mitigation activities in fire-prone landscapes

Fire Behavior / Prediction-
Spatiotemporal patterns of unburned areas within fire perimeters in the northwestern United States from 1984 to 2014

Effects of season on ignition of live wildland fuels using the forced ignition and flame spread test apparatus



The Northern Rockies Fire Science Network provided support to two recent videos that highlight the importance of managing and understanding fire as a process of change in national parks and wilderness areas.

The [Aldo Leopold Wilderness Research Institute](#) presents [Wild Science: Wilderness and Fire](#), a 12-minute film addressing the critical importance of wilderness fire science to understanding the complex nature of forest fires and to informing natural resource management across all landscapes.

A second video, [The Berry Fire](#), showcases the largest fire ever recorded in Grand Teton National Park. The six-minute video highlights the challenges managers face in balancing ecological benefits of fire with the potential threats of fire to public lands and nearby communities. Viewers hear commentary from park staff and scientists about how the Berry Fire was managed, and what made this fire so unusual.

Fine-scale spatial climate variation and drought mediate the likelihood of reburning

Fire Effects-

The phosphorus-rich signature of fire in the soil-plant system: a global meta-analysis

Fire enhances the complexity of forest structure in alpine treeline ecotones

A spatial evaluation of global wildfire-water risks to human and natural systems

Stream water quality concerns linger long after the smoke clears: Learning from Front Range wildfires

Ecological effects of fire

Post-fire vegetation response at the woodland-shrubland interface is mediated by the pre-fire community

Fire Management / Decision Support-

Production rates for United States Forest Service brush disposal planning in the northern Rocky Mountains

Climate adaption and post-fire restoration of a foundational perennial in cold desert: Insights from intraspecific variation in response to weather

Network analysis of wildfire transmission and implications for risk governance

Predicting post-fire tree mortality for 12 western US conifers using the First-Order Fire Effects Model (FOFEM)

Principles and practices for the restoration of ponderosa pine and dry mixed-conifer forests of the Colorado Front Range

Wildfire risk reduction in

Updates to BehavePlus

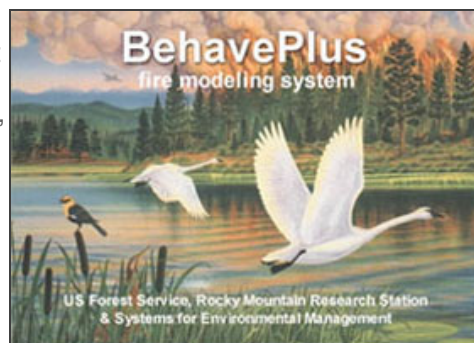
A new version of BehavePlus, one of the most widely used fire behavior modeling systems in the U.S., is now available on

[FRAMES](#). **BehavePlus version 6 Beta** includes improved estimates of both flanking fire behavior and probability of containment.

New features include calculations of crown fire behavior using the method by Scott and Reinhardt (2005), spotting distance from active crown fire, and probability of mortality for longleaf pine. A complete list of changes is located in [BehaveplusUpdates V6 Changes.pdf](#).

Version 6 includes significant changes to the SURFACE module related to direction of fire spread. Lessons about these changes are [available here](#). The overview lesson demonstrates all changes made in version 6. Additional lessons provide more in-depth analysis.

The [four introductory lessons to BehavePlus](#) have been updated for



new users. All other lessons are being updated and will be posted to the training page as they are completed.

Full information about this release is available on [FRAMES](#). Updated [Known Bugs](#) and [FAQs](#) can be downloaded from the website. Please send questions and feedback regarding version 6 to Faith Ann Heinsch, Development Lead (faheinsch@fs.fed.us; 406-829-7342). The [IIA Help Desk](#) will continue to assist with questions related to version 5.0.5.

New IFTDSS Version Released

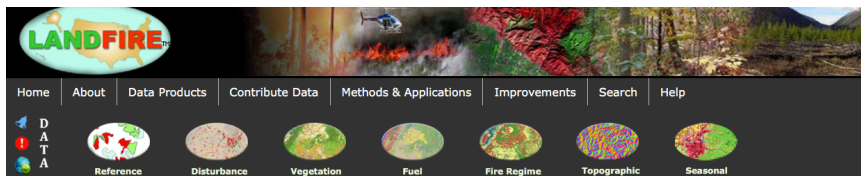


The folks at IFTDSS have been working hard to incorporate user feedback into Version 3.0.1, which includes multiple improvements to enhance your fuels planning experience. The new version was released on February 22, 2018, and includes the following updates:

- Download LCPs and Model Outputs: Export your landscapes and fire behavior outputs from IFTDSS for use in other applications like ArcGIS, FlamMap Desktop, etc.
- Shapefile Management: Now easier to import and save your own shapefiles to your IFTDSS workspace. Utilize shapefiles as Areas of Interest in generating reports and Masks in landscape editing.
- View Outputs in English Units: Fire Behavior and Landscape Summary Outputs and Reports include English units.
- Updated Landscape Fire Behavior Modeling: Landscape Fire Behavior modeling (FlamMap) to include Wind Ninja.

More details will be available in the [release notes](#). Check the [website](#) and give the new version a try!

LANDFIRE Website Gets a Makeover



The [LANDFIRE website](#) has undergone changes, not only to make it 508 compliant, but to update resources, refresh and add content and links, and improve navigation. All the info you've relied on is there, as is the basic structure, but the improved look and feel will better support many mobile devices and make the Big Screen experience more enjoyable. Go explore the new site!

the United States:
Leadership staff
perceptions of local fire
department roles and
responsibilities

A model-based
framework to evaluate
alternative wildfire
suppression strategies

Fire Regimes-

Land surveys show
regional variability of
historical fire regimes
and structure of dry
forests of the western
USA

Fire regimes of
ponderosa pine
communities in the
Black Hills and
surrounding areas

Historic frequency and
severity of fire in
whitebark pine forests of
the Cascade Mountain
Range, USA

Fuels-

Modeling fuel treatment
leverage: Encounter
rates, risk reduction, and
suppression cost
impacts

Importance of fuel
treatment for limiting
moderate-to-high
intensity fire: Findings
from comparative fire
modeling

Economic and policy
factors driving adoption
of institutional woody
biomass heating
systems in the United
States

Dimensional analysis on
forest fuel bed fire
spread

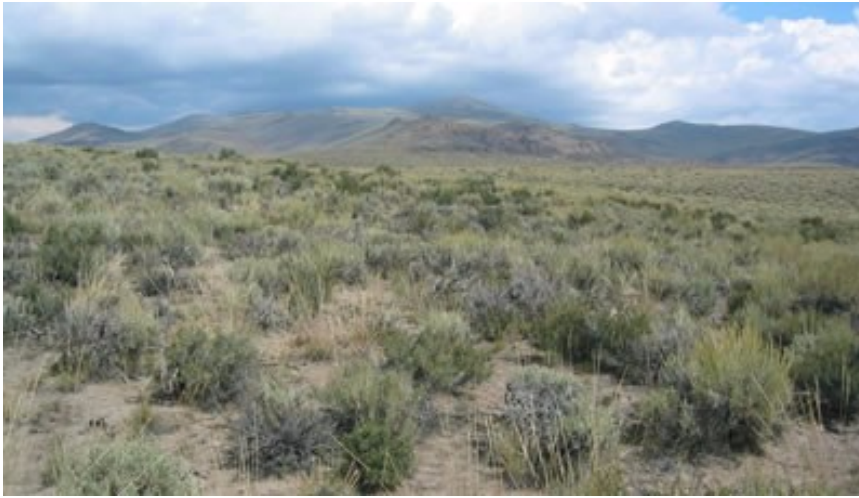
Smoke & Air Quality-
Wildland fire smoke and
human health

Wildland firefighter
exposure to
hydrocarbons

NEWS

New Study Finds
Climate Change
Reducing Forest
Regrowth After Fires,

Input Wanted: Sagebrush Ecosystems Actionable Science Plan



The Great Basin Consortium wants your ideas on how to implement the Actionable Science Plan (ASP). The ASP identified 37 priority science needs for the sagebrush ecosystem. In 2017 the Great Basin Consortium brought together scientists, managers and other stakeholders to brainstorm how to implement the ASP in the immediate future and beyond. Now, the Great Basin Consortium invites you to submit your ideas through their [online review website](#)! They've requested feedback in one or more of the five categories:

- Fire
- Invasive species
- Restoration
- Sagebrush and sage-grouse
- Climate and weather science

Find your area of expertise or interest and submit your comments by the end of the month! They will incorporate feedback into the overall 2017 meeting summary which will inform fire managers, natural resource managers and researchers working to protect, conserve and restore sagebrush ecosystems.

[Submit your comments here](#) by **February 28**.

Tri-County Firesafe Working Group Lead Receives National Wildfire Mitigation Award

Pat McKelvey, project manager with the Tri-County Firesafe Working Group in Helena, Montana, received one of nine 2018 National Wildfire Mitigation Awards for his influential fire mitigation work. Initiated in 2014, the prestigious awards commend leadership and innovation in the field of wildfire mitigation and are sponsored by the [National Association of State Foresters](#) (NASF), the [International Association of Fire Chiefs](#) (IAFC), the [National Fire Protection Association](#) (NFPA), and the [USDA Forest Service](#) (USFS).

McKelvey has spent over three decades working in the field of wildfire mitigation and has helped countless residents of Broadwater, Jefferson, and Lewis and Clark counties prepare their properties and

from [Montana Public Radio](#).

UM Forest Scientists: Expect More Fire Seasons Like 2017, from [Montana Public Radio](#).

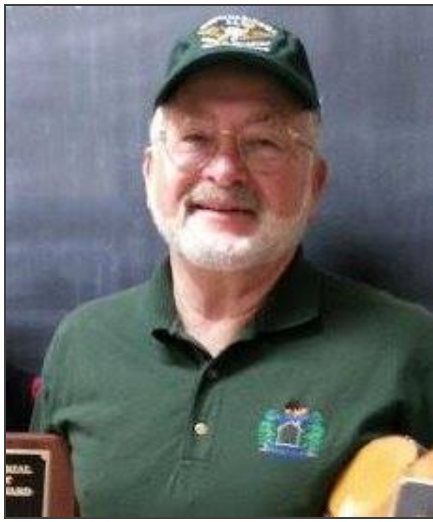
Forest fire surge may be blamed more by human touch than changing climates, from [PRI](#).

Bosworth, Williams: Wildfire and our failure of imagination, from [East Oregonian](#).

New fires, old assumptions, from [NFPA Journal](#).

Indigenous resiliency amidst changes in fire and ice, from [Indigenous Rights Radio](#).

Research forester: Americans must take ownership of wildfires, from the [Missoulian](#).



homes for wildfire season. In addition, McKelvey has informed state laws related to wildfire and worked to improve communication about wildfire to the media and public. The Northern Rockies Fire Science Network had the pleasure of working with McKelvey to bring the [Era of Megafires Presentation](#) to Helena in September 2017. Congratulations to Pat on this well-deserved award!

CONTACT US -- We'd like to hear your suggestions, ideas, and questions.

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