THE TECH SPEC

Meet the Wildland Fire Management Research Development & Application Team

Welcome to the first edition of the Wildland Fire Management RD&A quarterly newsletter. We are excited to deliver information about the program and current and ongoing activities. You can always visit our website and find up to date information at: http://wfmrda.nwcg.gov.

The WFMRD&A program was established in 2009 primarily to promote the application of wildland fire scientific knowledge, develop decision support tools, and assist with the improvement of decision making within wildland fire. Today in 2018 a staff of 18, most working virtually, continue to participate in a wide variety of fire management activities exploring innovative ideas and solutions to modern fire management issues.

IN THIS ISSUE…

"Whoever said small things don't matter has never seen a match start a wildfire"
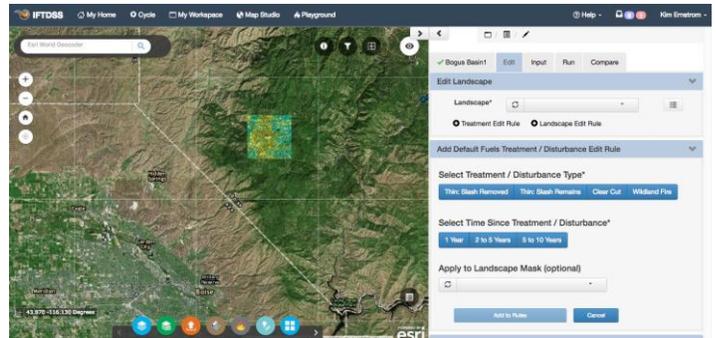
Message from the Program Manager: Tim Sexton

The WFM RD&A is completing a decade of service to the interagency Wildland Fire community. The pace of change has accelerated over the years. Like other programs, we are struggling to adapt to change. This newsletter is an example of our efforts to manage change and our part in it. Previously, we have published an annual report of accomplishments and plans for future projects. We believe that a timelier, quarterly report will keep our constituents better informed and enable greater access to the science, projects, and tools that we offer in support of wildland fire management. The Wildland Fire Decision Support System (WFDSS) has experienced

(cont'd) chronic problems with a wide range of features needed to make a Decision on a wildfire. We are working diligently with the Project Manager (PM) and the contractor to improve performance. Many of the problems have been resolved. WFDSS is not performing optimally yet. We have assigned additional staff to monitor, troubleshoot and work closely with the PM and contractor so that issues are addressed and resolved quickly.

The Interagency Fuels Treatment Decision Support System (IFTDSS) has reached another milestone with the imminent release of an updated version that includes the Fuels Treatment Effectiveness Monitoring (FTEM) application. This will enable field users to evaluate interactions between wildfire and fuel treatments to determine how well our fuel treatment program is working. FTEM automatically identifies any interactions between wildfires and fuel treatments and informs the local unit that an assessment should be conducted.

Our staff has participated in the development and implementation of Risk Management Assistance Teams. This initiative brings a wide range of analytical tools to provide local managers a range of options for managing wildfires. The options are evaluated to identify firefighter exposure, likelihood of success and how well each meets objectives.

FTEM in IFTDSS.

We hope you will spend a few minutes reviewing this newsletter every three months and provide feedback on our accomplishments and plans for future projects. Our intent is to deliver "user-friendly" science and technology to help managers tackle the increasingly complex mission of managing fire on our public lands.

Keeping Up with the Cohesive Strategy

WFMRD&A Fire Application Specialist Tami Parkinson is actively involved with the National Cohesive Strategy to share technology transfer ideas with researchers and practitioners. Tami joined the Western Region Cohesive Strategy Working group to initiate a national level workshop for "All Hands All Lands—Implementation Rooted in Science" in Reno, NV in 2017. The first workshop was considered a success, but lessons learned from this event drove the theme for the 2018 national workshop, "Making a Difference—Building Capacity, Improving Preparedness and Learning from Experience. Planning efforts are underway to host a 2019 workshop (dates and location to be determined). Locally, Tami assisted in April 2018 with the first Cohesive Strategy Learning Laboratory in the State of Idaho for McCall Valley county residents and officials. Participants included local elected officials, state and local fire protection entities and municipalities, local land owners and city/county planning and zoning personnel. Seventy people from the community participated in a day-long workshop to discuss priorities and concerns with regard to wildfire and the potential impacts to Valley County. Forty participants joined a field trip to discuss implementation activities on private, state, and federal land. The local workshop was a "first" and a big success for the State of Idaho. Visit **https://www.forestsandrangelands.gov/strategy/** for more information.

What is the Wildland Fire Management RD&A?

Although best known for being the managers of WFDSS and IFTDSS and providing Decision Support during the fire season, the staff of the WFMRD&A are involved in a multitude of interagency projects and collaborations across all fire management disciplines.

When the fire bell rings the WFMRD&A staff put on their decision support hats, grab their fire gear and computers and respond to a wide variety of requests from the field, Washington office, agency administrators and geographic areas. In general, staff assist on approximately 60 fires per year providing fire behavior analysis remotely and on-site. Staff travel as LTANs, FBANs, GISSs, SOPLs and technical specialists to individual fires and the busiest geographic areas to coordinate decision support centers and offer assistance to IMTs, local units and MAC groups. Once fire season slows down, the WFMRD&A change gears and jump into a wide variety of projects, committees and technology transfer endeavors. A few examples are listed here, but the opportunities are endless, we need more hours in the day to participate in everything that presents itself.

Program Mission

The WFMRD&A Program serves as a primary point of contact for communication between scientists and participating field managers, and as an advisor to program administrators at local, regional and national levels. In a nutshell, the WFMRD&A focuses on helping fire managers and practitioners make better decisions regarding fire management.

Current WFMRD&A Projects, Collaboration and Participation

- Wildfires Near Me,
- Developing Fire Management Objectives,
- IRWIN,
- National Line Officers Team,
- Teaching and coordinating S495 and S590,
- RMAT – Risk Management Assistance Teams
- Advanced Fire Environment Learning Unit,
- Mobile Technology Working Group
- Fire Behavior Sub-Committee
- Geospatial Data Sub Committee

For a full summary of activities check out *https://wfmrda.nwcg.gov*

Nicole Vaillant and Tessa Nicolet join the Team!

The WFMRD&A welcomed two new faces to the group in 2018. **Nicole Vaillant** who hails from Bend, OR joined the team in January as a long-term detailer. Nicole, who is well known for her work with ArcFuels, will spend most of her time with the IFTDSS team coordinating the development of the Quantitative Risk Assessment process and accompanying modeling aspects within IFTDSS. **Tessa Nicolet**, the Forest Service Region 3 Fire Ecologist out of Payson, AZ, began her 120-day detail in April and will provide a regional field perspective for the WFMRD&A's involvement in spatial fire planning. She will also be available as a skilled analyst throughout the fire season. We are very fortunate to have Nicole and Tessa on board!

Nicole Vaillant

Tessa Nicolet

WFDSS: Wildland Fire Decision Support System Version 6.0 Released for Fire Season 2018

On March 30th a new version of WFDSS was released to the fire community. A number of bugs and known issues were fixed, and new functionality and features were added. The URL changed for both Training and Production.

- Training:
  https://wfdss.usgs.gov/WfdssAppTrain/faces/facelets/login/WFDSSLogin.xhtml
- Production:
  https://wfdss.usgs.gov/WfdssApp/faces/facelets/login/WFDSSLogin.xhtml

A full description of the larger changes in the 6.0 release is available from the WFDSS Homepage in the left menu under Hot Picks titled 6.0 Release New Functionality and What You Need to Know About WFDSS -2018.

New Functionality Includes:

- Incident Groups now indicate a single incident as the Master to denote which incident contains a Decision covering the group of incidents.
- Partial Text Search to locate specific incidents.
- Names of users that upload/draw a fire perimeter are displayed.
- Incident Owners, Approvers, and Reviewers receive emails when Decisions are made Reviewable; Approvers can return Pending Decisions to an editable state.
- Relative Risk and Organization Assessment graphs automatically added to Decision content.
- The Fire Behavior Specialist role now includes capabilities of Super Analysts and there is more control over Notes in analyses.

WFDSS is entering its 10th year as the Decision Support System for Federal Wildfire Management. In 2017 24,715 fires were entered into the system. Among those fires, 9,308 fire behavior analyses were run to support fire decisions.

Analysts from the WFMRD&A will assist 2018 Risk Management Assistance Teams. RMAT's role is to strengthen a line officer's and incident management team's ability to examine alternative strategies that better consider the exposure tradeoffs, assess risk to highly valued resources and assets, and seek opportunities for realizing the beneficial effects of fire. In 2018 RMAT will use small teams led by an experienced line officer and supported by fire operations and risk management specialists. Analysts will support on-site and virtually. In 2017 RMAT tested their process on 15 wildland fires and came away with lessons learned to apply to this season. Teams will arrive early to fires to better engage with decision makers at key decision points. For more information visit
https://wfmrda.nwcg.gov/RMAT.html
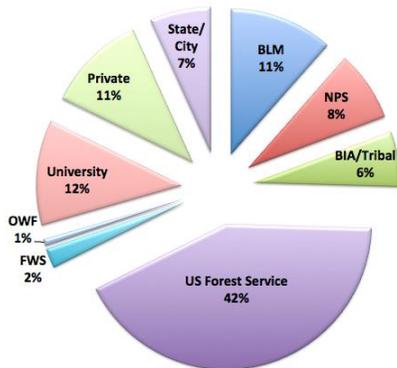
Are your Mobile Devices Ready for Fire Season?

With fires season already underway in the Southern and Southwest Areas it's time to get tablets and smartphones fire ready. The Wildland Fire Mobile Technology Working Group (WFMTWG) assembled a Mobile Technology Cheatsheet with QR links to apps, tutorials, policy, Avenza licensing info, and advice to select peripheral mobile equipment. If you have questions or suggestions for next year's Mobile Cheatsheet or the WFMTWG contact Sam Amato or Esther Godson.

(The WFMTWG is overseen by Wildland Fire Information and Technology (WFIT) Program Board to provide evaluation of new mobile technologies and innovation in Fire and Aviation; coordinate efforts in advancing mobile technology for the fire community and recommend solutions based on test results and field experience.)
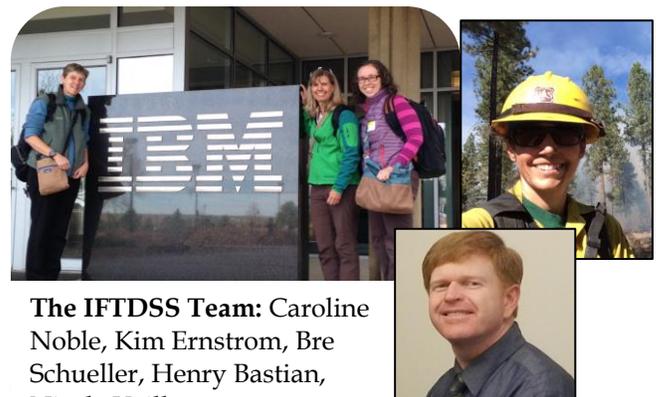
IFTDSS: The Interagency Fuels Treatment Decision Support System

After one year of development, IFTDSS is off and running. The first release of the new version occurred in April of 2017. Since then, the team has been hard at work developing online help, adding enhancements and offering webinars and demos of the new system and features. As of May, 900 users have set up accounts.

The majority of users are from the US Forest Service, but all federal agencies and many non-federal users are utilizing IFTDSS. Anyone is welcome to request an account. We encourage feedback through the User Forums in the online help system. Over the winter, the IFTDSS team coordinated with the Fuels Treatment Effectiveness Monitoring (FTEM) program to develop FTEM as a spatial module in IFTDSS. FTEM will be released in June 2018. Non-federal users can access FTEM as viewers of the data only. Check out IFTDSS in June for more information on FTEM.

iftdss.firenet.gov

The current version of IFTDSS allows users to view, edit and compare LANDFIRE landscapes and accompanying basic landscape fire behavior outputs with just a few button clicks on an easy to use mapping interface. This ability to develop and compare fuels treatment scenarios is found nowhere else in a single fire management application! IFTDSS contains basic Landscape fire behavior driven by FlamMap 5 and Wind Ninja, Landfire 2012 and 2014 data is available and many national reference data layers such as those found in WFDSS are also available. Users can upload their own shapefiles and view wildfire perimeters and fuel treatment points and polygons. Many account holders are using IFTDSS to write burn plans, conduct NEPA project analysis and develop fuel treatment comparison reports. The next 12 months will see work on Quantitative Risk Assessment and incorporation of additional fire behavior models.

The IFTDSS Team: Caroline Noble, Kim Ernstrom, Bre Schueller, Henry Bastian, Nicole Vaillant

Do you live in the Wildland Urban Interface? Have you ever wanted to find information about a wildfire quickly and keep up to date? Check out Wildfires Near Me:

https://wildfiresnearme.wfmrda.com/site/login

Wildfires Near Me is gearing up for a successful year three! In 2017 accounts numbered over 30,000 and over 300,000 user notifications were sent via email.

New for 2018:
- VIIRS and Modis Layers
- Ability to set monitoring radius
- User requested layout and design edits

Mobile Apps Coming Soon!
We're currently developing WFNM mobile for iOS and Android.

https://www.facebook.com/wildfiresnearme

Thoughts and Actions from the WFMRD&A on the Issue of Sexual Harassment…

Twice a year the WFMRD&A gets together as a team face to face. For a virtual organization this time together is invaluable. With the issue of sexual harassment at the forefront of emails and chatter, the WFMRD&A staff, led by the efforts of Erin Noonan-Wright and Morgan Pence, brought the topic to the table.

Through small group discussion, we reflected on experiences, opinions, ideas and questions surrounding sexual harassment. The diverse backgrounds of the staff enabled honest, open dialogue to brainstorm potential actions the WFMRD&A program could initiate given our spheres of influence. We seek to promote a better work environment for the fire management community both individually, and as a collective team.

Global Exchange of Fire Management Knowledge

Erin Noonan-Wright, tech transfer specialist from the WFM RD&A, facilitated an hour long presentation and discussion about the history of U.S. fire management along with some main points regarding the Wildland Fire Decision Support System – WFDSS to 11 delegates from India. Matt Jolly from the Firelab and Dave Calkin from the Human Dimensions Program, both from the Rocky Mountain Research Station, also participated in the week-long

Erin Noonan-Wright

event. The delegates were from local fire and land management agencies and from the Forest Survey of India (FSI), the main governmental environment, forest and climate change ministry of the Indian government. Participants shared information about fire management practices, geo-spatial technologies for fire detection and severity mapping, and risk management. The meeting was hosted by Geospatial Technology and Applications Center Program Leader, Brad Quayle, with assistance from the U.S. Agency for International Development (USAID) at the Lolo National Forest, Region 1, Montana. The event culminated in a field trip to the Sunrise Fire outside of Missoula, MT, from April 16 – 20, 2018.

"We're going to have to live with fire. We're going to have to make sense of it. And we have to do that collectively. Fire doesn't care. Fire isn't listening. – Stephen Pyne