

Applications and Tools used to Inform Wildland Fire Decision Support and Incident Management

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Program

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Overview



- ▶ Who we are
- ▶ Decision support applications
- ▶ How to get additional information

Who is the WFM RD&A?

- ▶ Interagency group of 20 people –US FS FAM and RMRS/DOI – NPS/OWF
- ▶ <https://wfmrda.nwccg.gov/>
- ▶ Promote scientific knowledge
- ▶ Develop decision support tools
- ▶ Provide science application delivery
- ▶ Technology transfer
- ▶ Manage several applications and development of new applications
- ▶ Provide incident support in various capacities

Applications for Wildland Fire Decision Support

- WFDSS
- IFTDSS



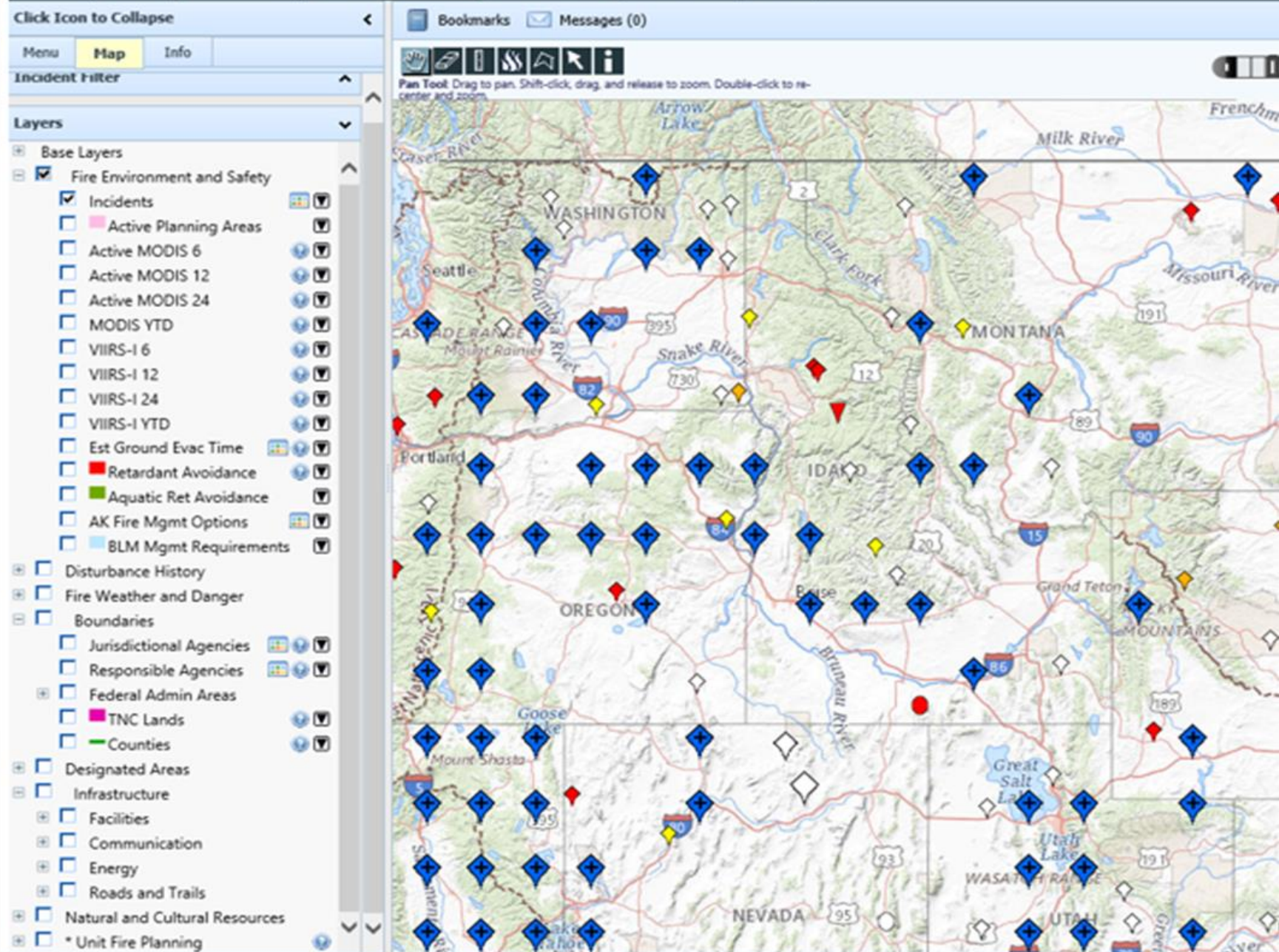
WFDSS - Wildland Fire Decision Support System

- **Federal land management agencies required use since 2010**
- **Spatial and scalable system for making risk-informed decisions**
- **One stop shopping for Wildfire Decision Documentation**



Incident Data

➔ National Geospatial Data Set



WFDSS Spatial Models

LANDFIRE Program: Home

Secure | https://landfire.gov

Apps WFDSS | Home National Employee Cr iffdss-general | WFMF ConnectHR: Login WFM RDA Program | www.nwcg.gov/pms/ Wildland Fire Library www.fs.fed.

LANDFIRE

Home About Data Products Contribute Data Methods & Applications Improvements Search Help

Alerts

Notifications

Get Data

**D
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A**

Reference Disturbance Vegetation Fuel Fire Regime Topographic

LANDFIRE (LF) is a program that provides over 20 national geo-spatial layers (e.g. vegetation, fuel, disturbance, etc.), databases, and ecological models that are available to the public for the US and insular areas. [Learn more...](#)

LAND

- land cover change
- endangered species monitoring
- climate-carbon-ecological modeling/research
- wildlife/habitat activities

FIRE

- fuel treatments
- fire suppression
- fire management planning
- active fire management

regional/national use
budget allocation
natural resource management
strategic decision support
updated regularly

LANDFIRE ... more than fire

SERVICES

- » Landscape (.LCP) File
- » Web Service Calls (WCS)
- » Modifying Geospatial Data Guidebook
- » LF Videos & Tutorials
- » Frequently Asked Questions

LANDFIRE NEWS

- » LF 2014 CONUS released
- » LF Data Product Review
- » LF Engagement Opportunities
- » LF Bulletins/Postcards [Subscribe](#)

GET DATA

[Access](#) a dynamic map to view and download data

[Download](#) bulk mosaic data for US, AK, HI

TOOLS

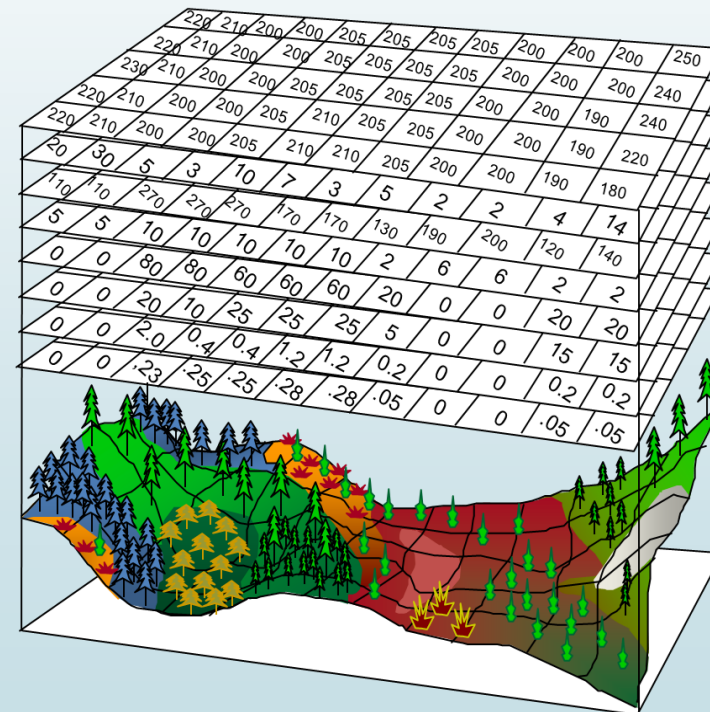
- » Data Distribution Site
- » LF Data Access Tool (LFDAT) Windows 10
- » LF Total Fuel Change Tool (LFTFCT)

Connect with LANDFIRE

Contact Us/ Need Help

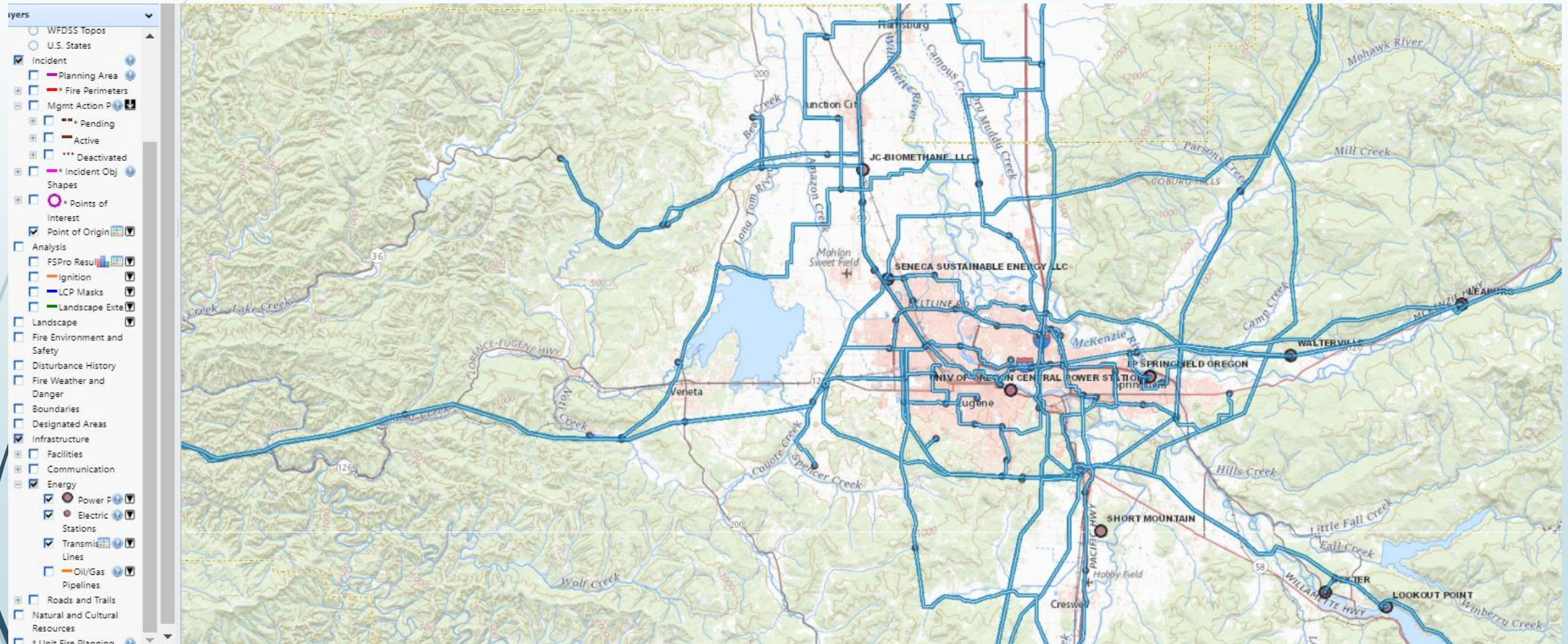
Forest Service: Accessibility / Privacy Policy / Important Notices / FOIA

DOI: Accessibility / Privacy Policy / Important Notices / FOIA

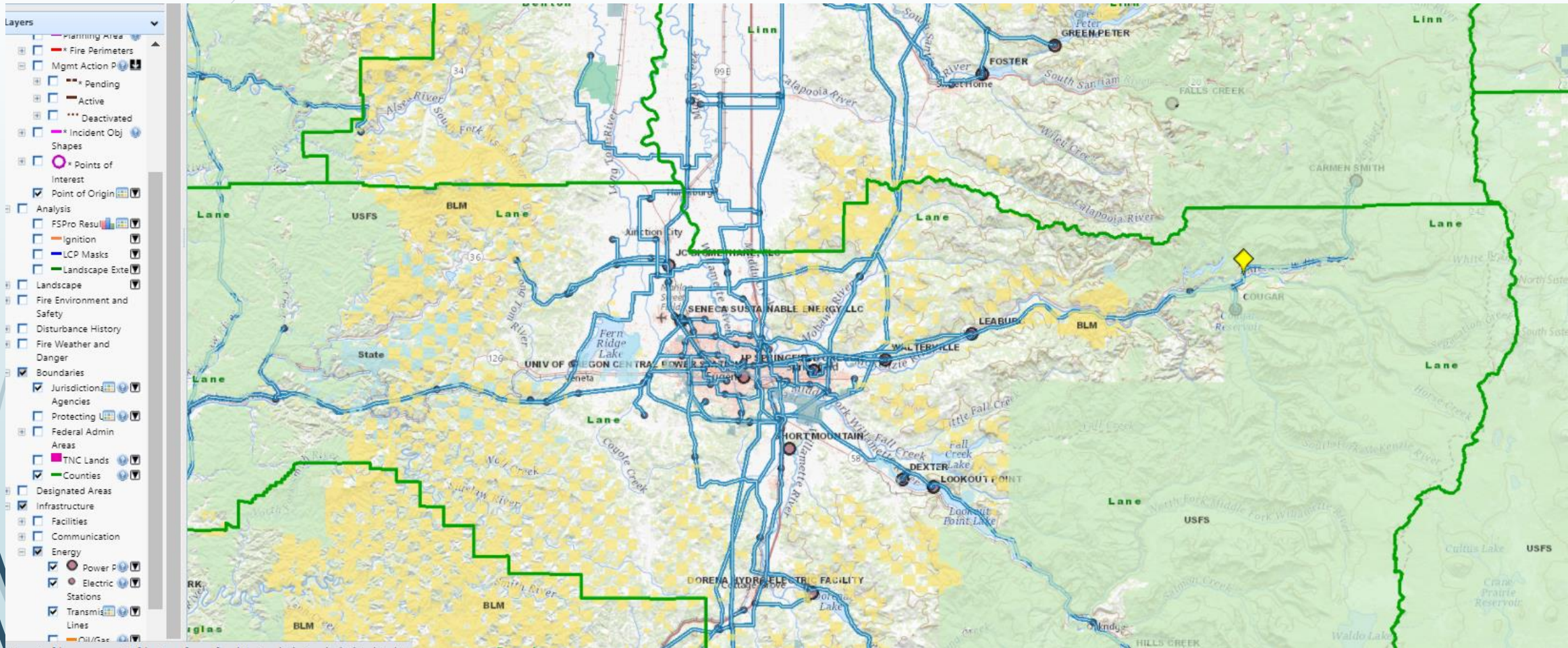


- Elevation
- Slope
- Aspect
- Fuel Model
- Canopy Cover
- Stand Height
- Canopy Base Height
- Canopy Bulk Density

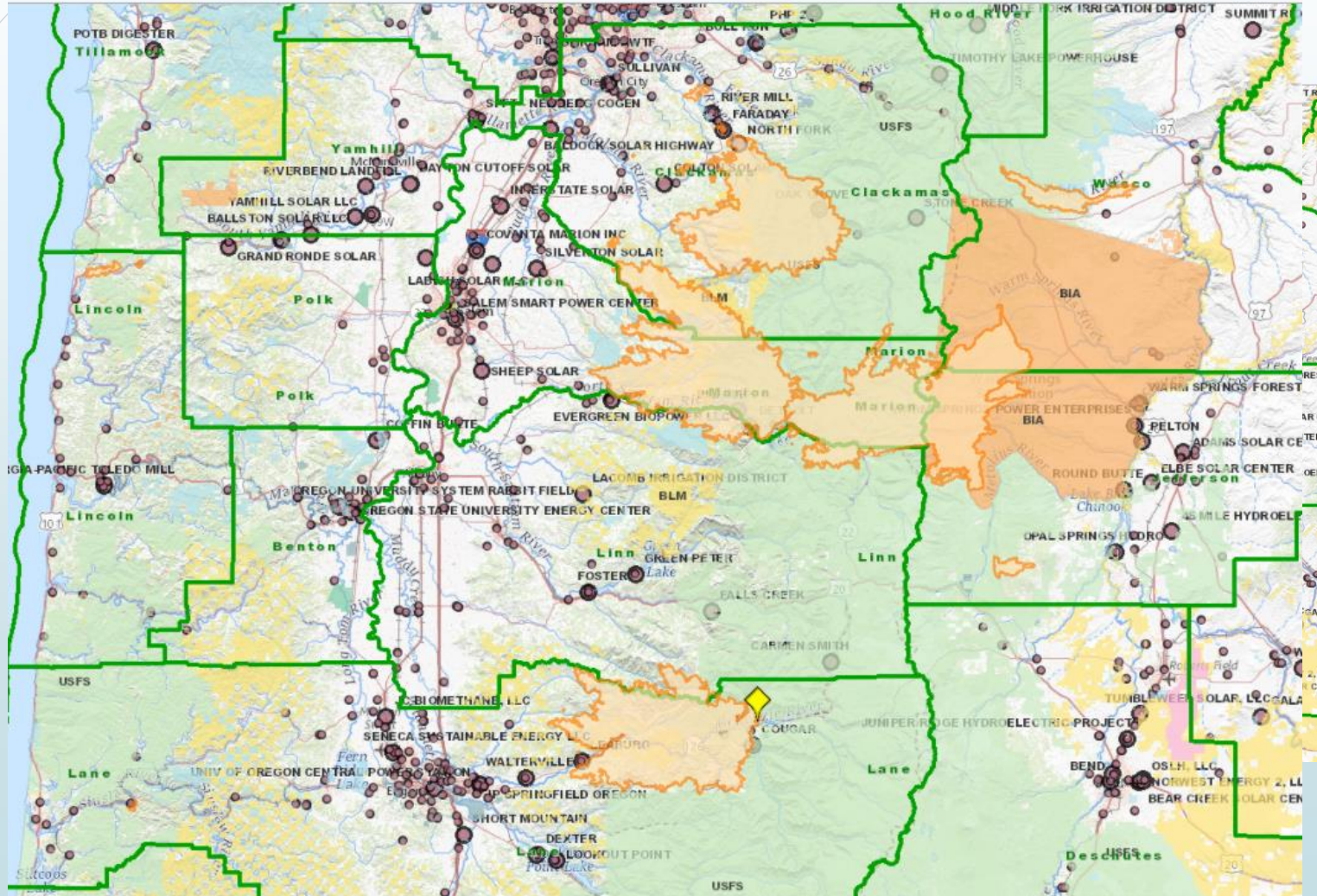
Data Layers



Data Layers

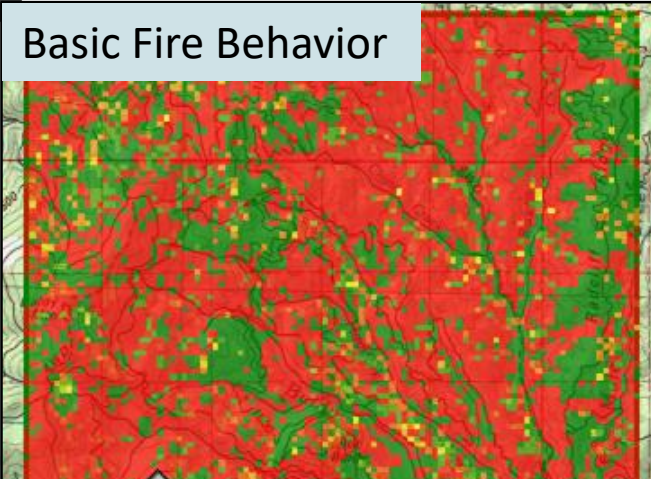


Data Layers

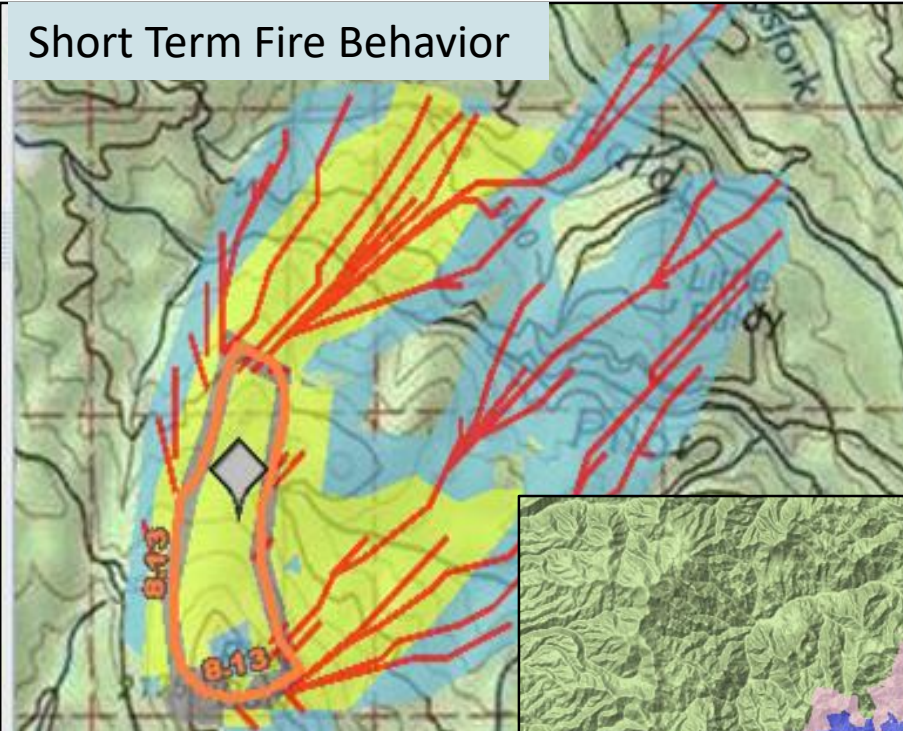


Spatial Models – Fire Behavior Analysis

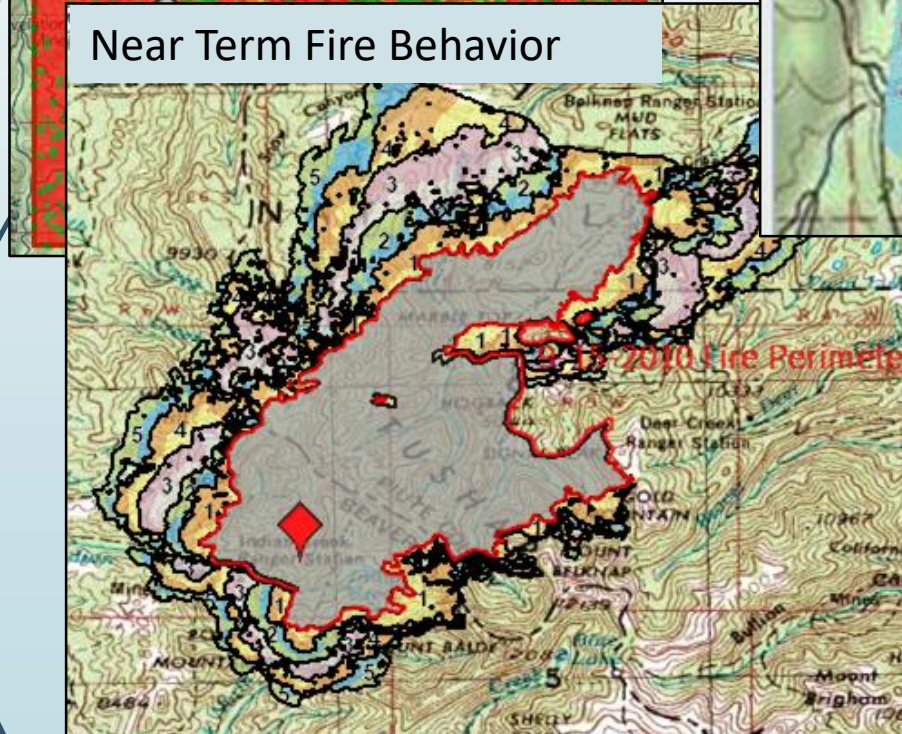
Basic Fire Behavior



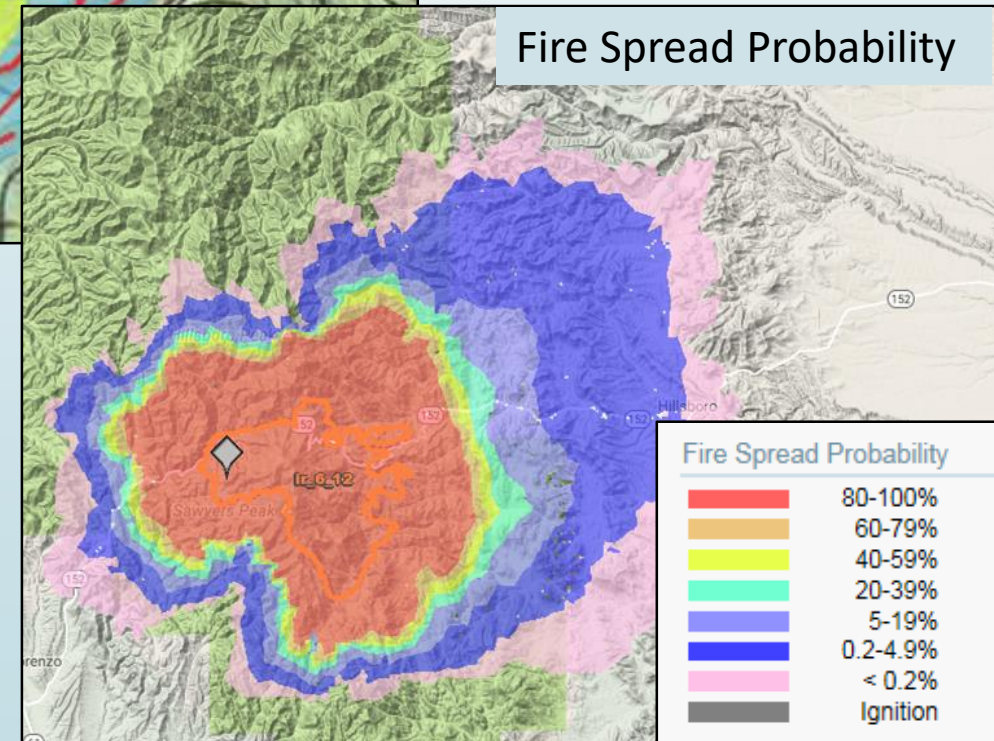
Short Term Fire Behavior



Near Term Fire Behavior



Fire Spread Probability



WIFTDSS Welcome to IFTDSS

The Interagency Fuel Treatment Decision Support System

[What's New](#)

[About](#)

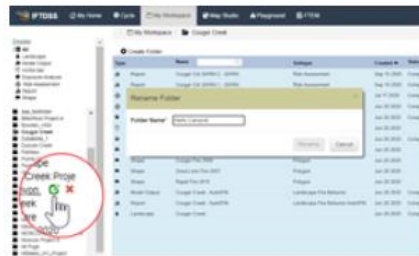
[User Support](#)

[Login](#)



Use Google Chrome with IFTDSS IFTDSS has been developed and tested for Google Chrome. If you don't currently have Google Chrome installed, visit our [Chrome help page](#) for agency-specific guidance.

IFTDSS Enhancements



[Rename Folders](#)

[Move Files](#)

[Updated Reference Layers](#)

Get Started With IFTDSS



[Take an IFTDSS Overview Course](#)

[Read Introductory Help Topics](#)

[Read Case Study Examples](#)

[Agency Users: Learn About FTEM](#)

Run Risk Assessments



[Read About Risk Assessment \(PDF\)](#)

[Visit Risk Assessment Help Topics](#)

[Watch the Webinar](#)

[Watch the Risk Intro Video](#)

Announcements



[Download Shapes and Shapefiles](#)

[Model MTT Fire Spread](#)

[Check out the forum](#)

[Watch Recorded Webinars](#)

IFTDSS

IFTDSS Reference Layers My Layers

Check the additional layers to add to the map

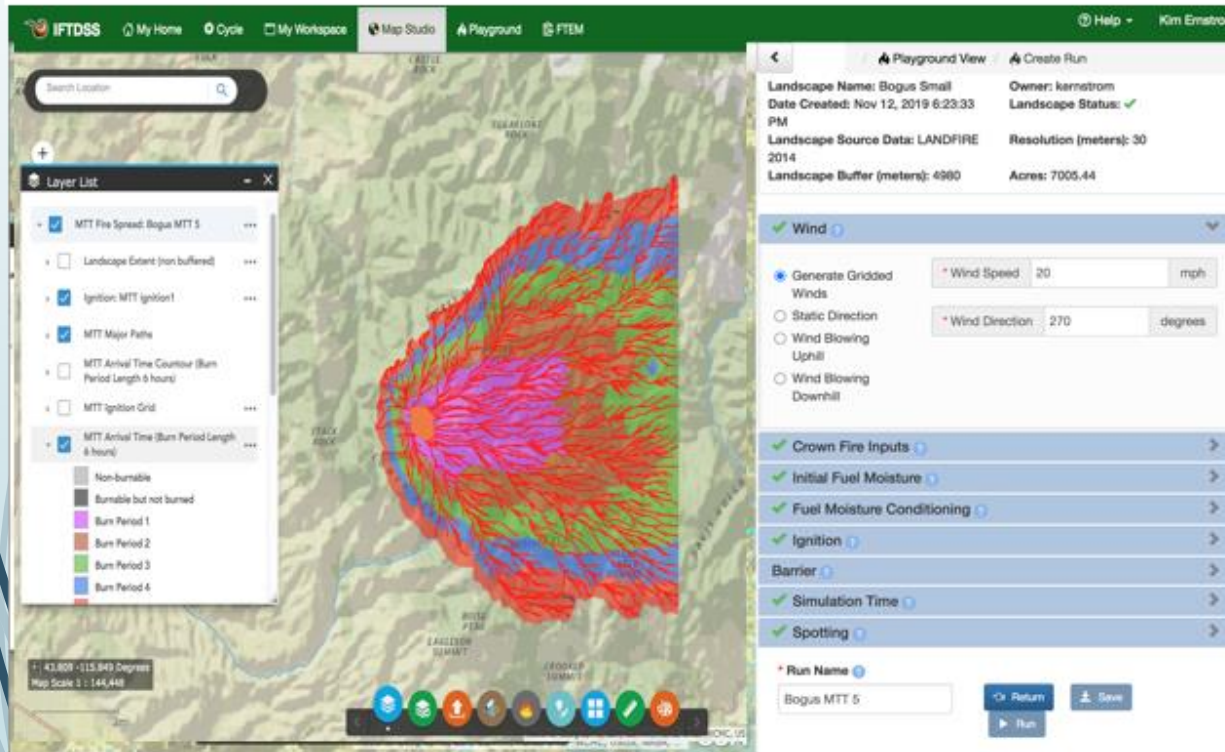
- ▶ Disturbance History
 - ▶ Disturbance History - Historic Wildfire Perimeters
- ▶ Infrastructure - Facilities
- ▶ Infrastructure - Communication
- ▶ Infrastructure - Energy
- ▶ Designated Areas
 - ▶ Designated Areas - BLM
 - ▶ Designated Areas - Potential Wilderness
- ▶ Special Designated Areas
- ▶ Boundaries
 - ▶ Boundaries - Federal Admin Areas
- ▼ Natural & Cultural Resources
 - Critical Habitat (line)
 - Critical Habitat (polygon)
 - Sage Grouse
 - ▶ Natural & Cultural Resources - Air Quality
 - ▶ Natural & Cultural Resources - Roads and Trails



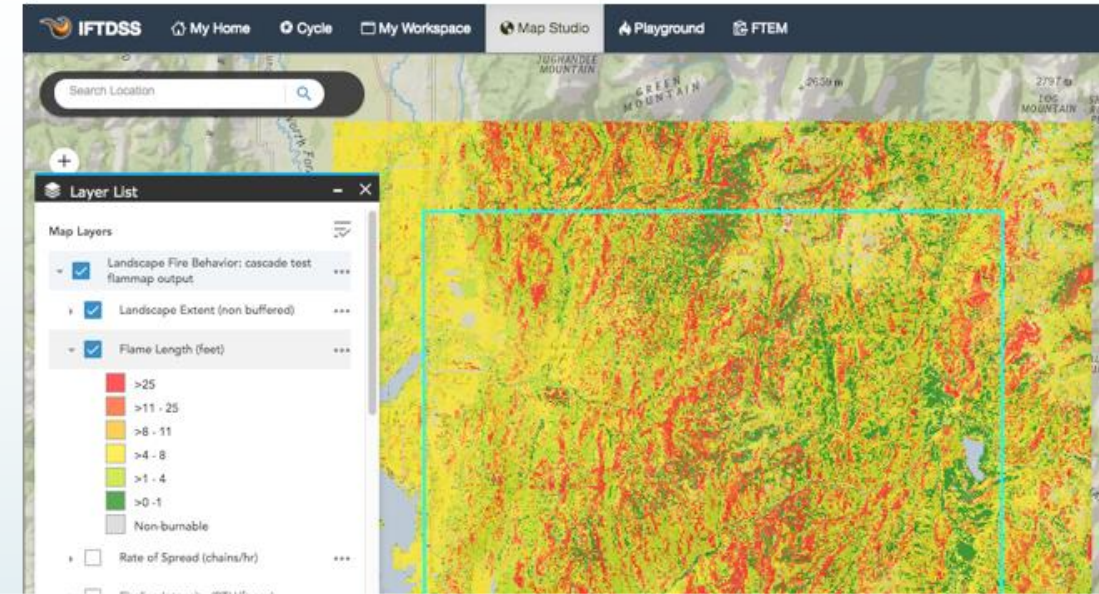
- ▶ Data Layers to Access
 - ▶ Fuels treatments
 - ▶ Fire history
 - ▶ Infrastructure
 - ▶ Designated areas
 - ▶ Jurisdictional boundaries

Fire Behavior Modeling

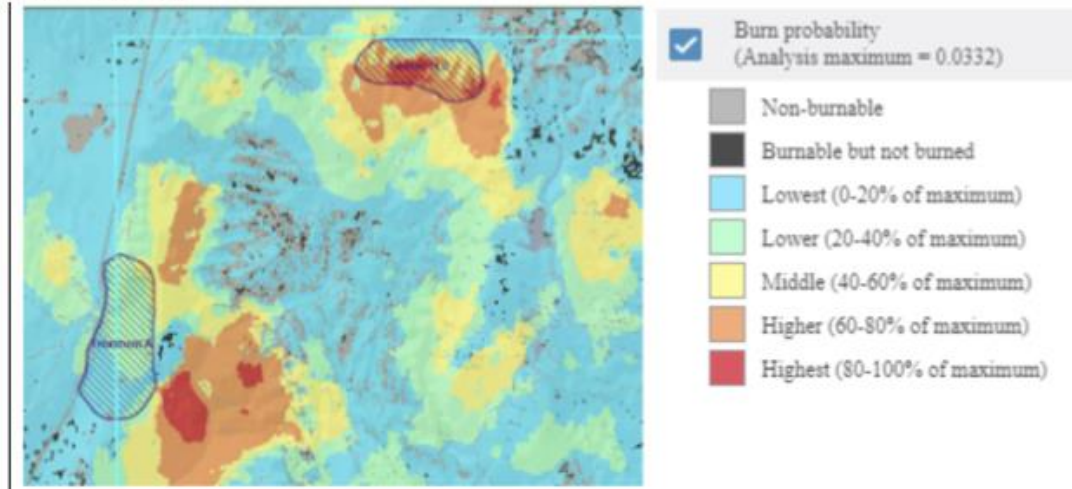
MTT Fire Spread: Time of Arrival, Major Paths



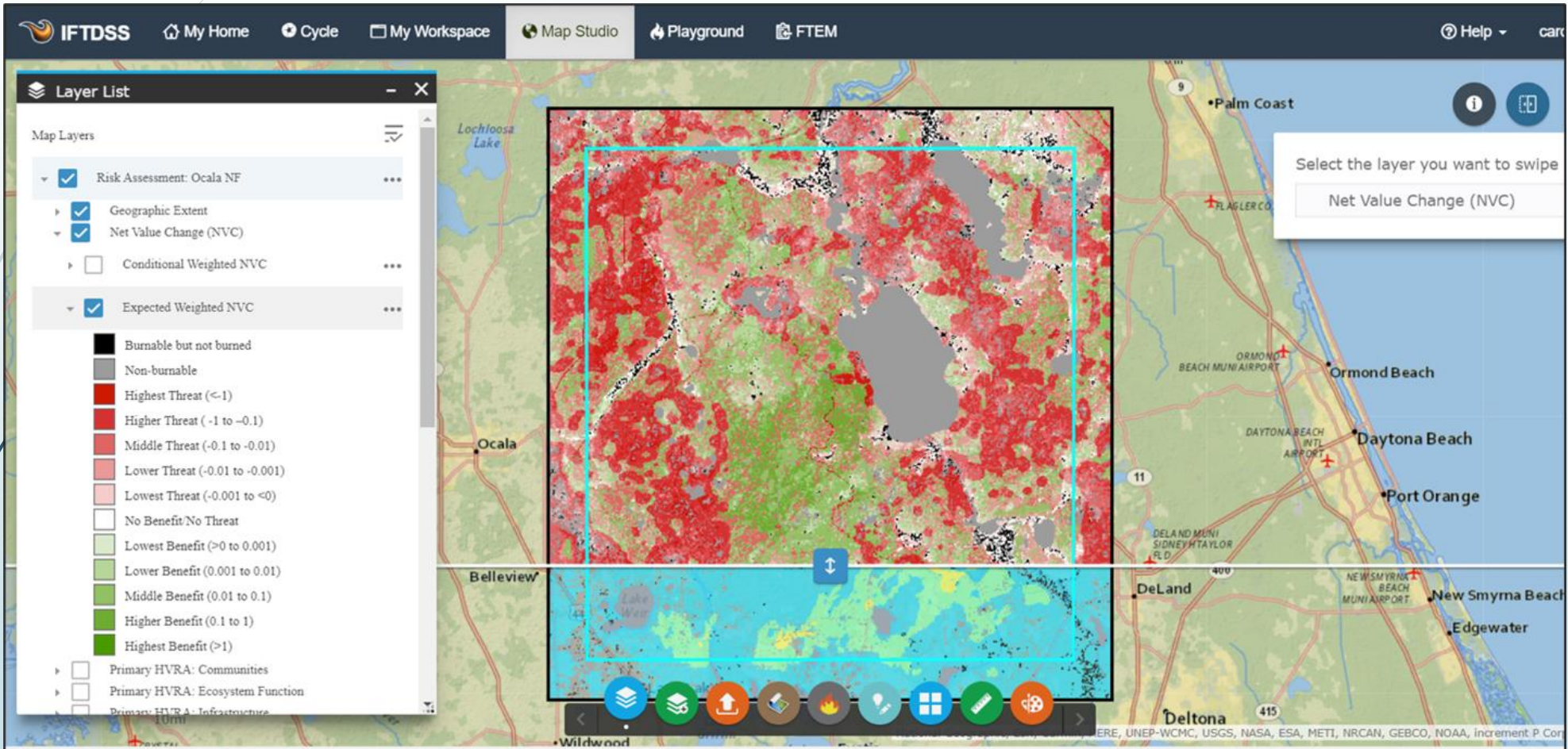
BASIC LANDSCAPE FIRE BEHAVIOR Flame Length, Rate of Spread, Fireline Intensity, Crown Fire



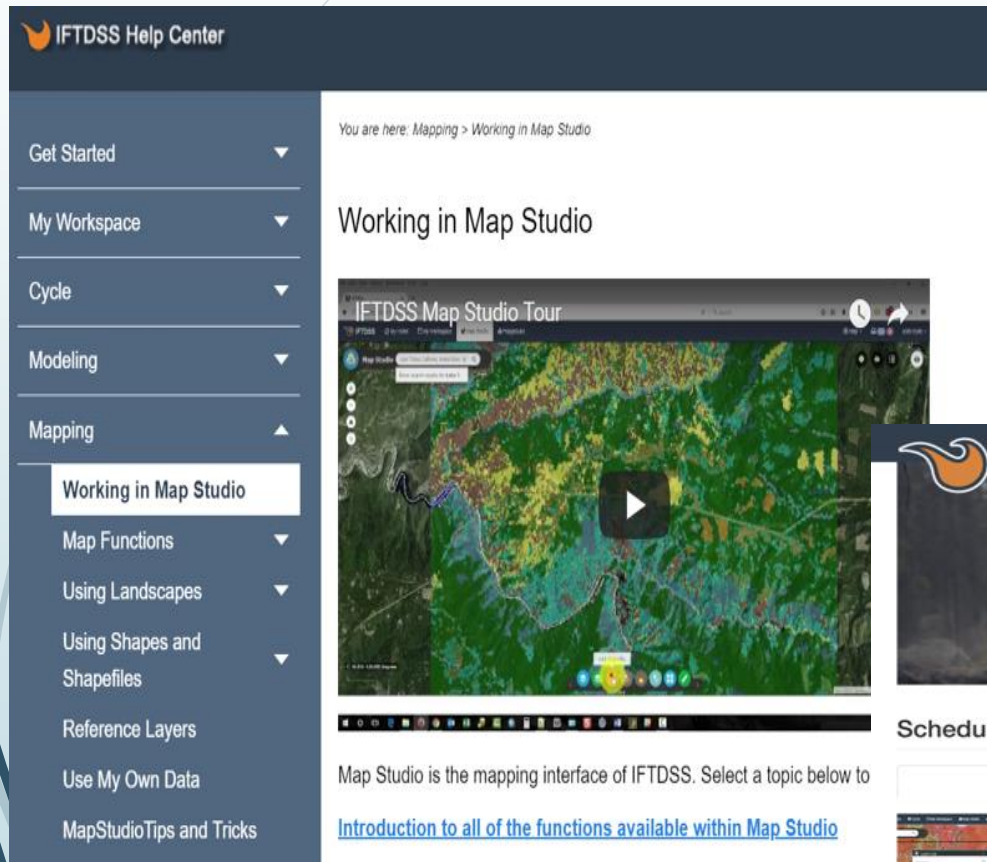
Burn Probability quantifies the likelihood of a fire occurring under a fixed set of weather and fuel moisture conditions



IFTDSS Qualitative Risk Assessment



IFTDSS




IFTDSS Help Center

- Get Started
- My Workspace
- Cycle
- Modeling
- Mapping
 - Working in Map Studio**
 - Map Functions
 - Using Landscapes
 - Using Shapes and Shapefiles
 - Reference Layers
 - Use My Own Data
 - MapStudioTips and Tricks

You are here: Mapping > Working in Map Studio

Working in Map Studio



IFTDSS Map Studio Tour

Map Studio is the mapping interface of IFTDSS. Select a topic below to [Introduction to all of the functions available within Map Studio](#)

IFTDSS Support System

Home Forums

How can we help you today?

Enter your search term here...

SEARCH

Community forums

[Start a new topic](#)

IFTDSS

? Questions & Answers Forum (21)

💡 Ideas Exchange (19)

💬 [Welcome to the IFTDSS Q&A Forum!](#)

Posted by IFTDSS Support Team, 2 years ago

💬 [Welcome to the Ideas Exchange](#)

Posted by IFTDSS Support Team, 2 years ago

💬 [FTEM - Documenting suppression benefits of ...](#)

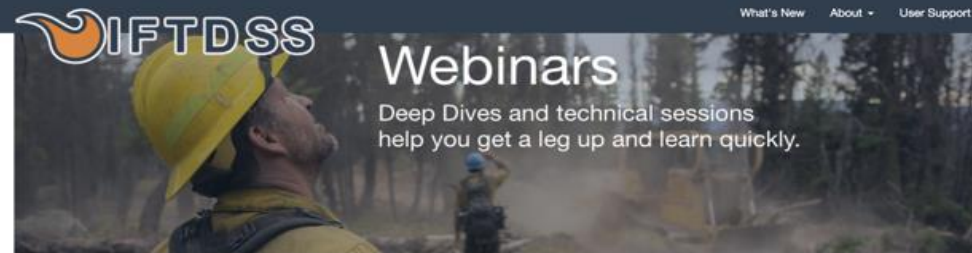
Posted by Jeff Crawford, 15 days ago ,

[Last Reply](#) by Josh 15 days ago

💬 [Is there training available for IFTDSS?](#)

Posted by Annie Benoit, a year ago ,

[Last Reply](#) by Josh 4 months ago



IFTDSS Webinars

Deep Dives and technical sessions help you get a leg up and learn quickly.

Scheduled and Recorded Webinars

Scheduled Webinars

Recorded Webinars



Development Status and Using Map Values (11/26/2019 1200-1300 MST)

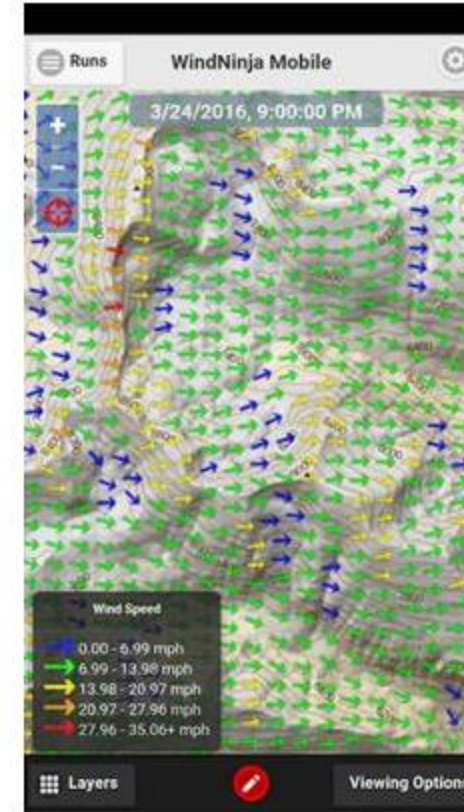
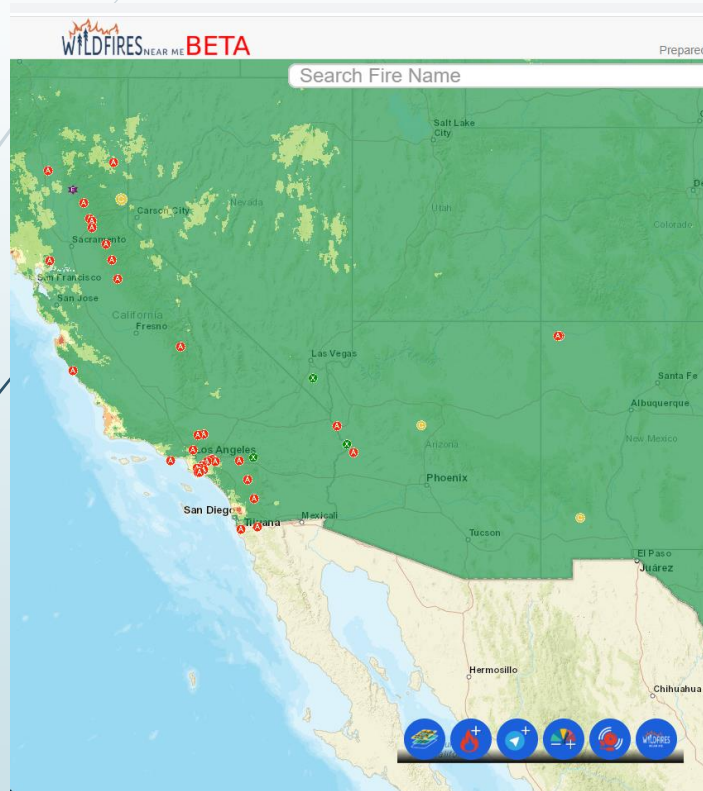
Current and future development of IFTDSS and a demonstration of the Map Values feature that was added in Version 3.2.0.2.

[Register](#)

Applications – Not Mandated but Useful

WindNinja Mobile Application

Wildfires Near Me



Runs WindNinja Run Creation

Name: Lolo

Forecast Model: HRRR CONUS 3km

Forecast Duration: (hours) 4

Vegetation: Trees

Notifications: The run will be completed on a remote server. Enable the text/email options below if you want to be notified when your run is ready for download.

Email: On

Text: On

Submit



References

- ▶ <https://www.fs.usda.gov/science-technology/fire/information> Landing page for Inciweb, interactive wildfire map, and wildfiresnearme
- ▶ <https://iftdss.firenet.gov/> IFTDSS
- ▶ <https://weather.firelab.org/windninja/mobile/> Wind Ninja mobile app

Thank You!

- Ben Curtis – Fire Management Planning Specialist – Regional Contact – 509-675-4485 c
- Dana Skelly – Regional Fuels Program Manager – 503-351-1738
- Tami Parkinson – Fire Management Specialist – 208-866-7293