

Getting Started

Welcome to
IFTDSS
Version 0.4

Current Condition Hazard Analysis

IFTDSS currently supports

- Prescribed burn planning for a point location (fire behavior and effects)
- Current condition fire hazard analysis across a landscape (fire behavior)

Follow these steps to walk through an example current condition fire hazard analysis



Fire Hazard Analysis

The hazard analysis tools in IFTDSS can help address the following types of questions:

- *What is the potential fire behavior across the landscape under specific wind and moisture conditions?*
- *Are there areas within my landscape that may pose a potential hazard were a fire to occur?*
- *Are there areas within my landscape where I should focus attention and perform further fire hazard or risk analyses?*

Overview of IFTDSS Home Page

IFTDSS beta

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Home Collaborate Projects Data **About** General information about IFTDSS. Logged in as tamifunk

Actions

- Create a New Project
- Manage My Projects
- Manage My Datasets
- Search Published Projects
- Find Other Users
- Planning Resources
- What's New

Welcome tamifunk to IFTDSS!

tamifunk, before you get started, we recommend you do a few things.

- [Create your user profile](#)
This will help other users identify who you are and what you are working on.
- [Read the Getting Started Guide](#)
This will help give you an idea of how to use IFTDSS to accomplish your goals.

From here you can:

- Create a new project
- Manage existing projects
- Manage data (coming soon)
- Search published projects and find other users (coming soon)
- Access planning resources and documents
- Learn about what is new in this version of IFTDSS

Create a user profile by clicking here

If you already have a user profile your information will appear here

Wild Fire Science Program

PROTECTING COMMUNITIES & ENVIRONMENTS
Public Management Committee

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Creating a New Project

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Actions

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- [Manage My Datasets](#)
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My Bio [Edit](#)

I am the Manager of the Environmental Data Analysis group at STI and the IFTDSS Project Manager. My primary duties at STI are project management and the development of technology-based tools to display and analyze environmental data.



A project is like a workspace in IFTDSS. A single project can contain multiple analysis objectives and analysis activities (Runs).

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Create New Project

Project Name:

Description:

Organization of Projects, Objectives and Runs

```
graph TD
    Project --> Objective 1
    Project --> Objective 2
    Objective 1 --> Run 1
    Objective 1 --> Run 2
    Objective 2 --> Run 1
    Objective 2 --> Run 2
    Objective 2 --> Run 3
    Objective 2 --> Run 4
```

First Objective

- Prescribed burn planning
- Hazard analysis
- Spatially explicit fuels treatment assignment
- Fuels treatment effectiveness over time
- Risk assessment

[Next](#)

The hazard analysis work flow provides tools to perform a current condition assessment of fire hazard within an area of interest. The focus of this work flow is to identify areas that warrant further analysis based on potential fire hazard. High fire hazard is expressed by high potential fire behavior (i.e., flame length, rate of spread, fireline intensity, etc.) and/or undesirable fire effects (i.e., tree mortality, emissions, etc.) [Read more](#)

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Public Management Center

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Clicking on the **Create a New Project** link will take you to the Create New Project page. This is where you set up the new project in IFTDSS.

When creating a new project you must select your first analysis objective. Once you have set up a project you may add more objectives in subsequent screens. Choose the **Hazard Analysis** objective.

Defining an Area of Interest and Uploading Landscape Data

The screenshot shows the IFTDSS beta web application interface. The top navigation bar includes links for Home, Collaborate, Projects, Data, and About, along with user options like Getting Started, Feedback, and Sign Out. The user is logged in as Funk, Tami. The main content area is titled "Fire Hazard Analysis - Mariposa" and features a sidebar menu with options: Project Summary, Prescribed Burn, Hazard Analysis (selected), Treatment Assignment, Treatments over Time, Risk Assessment, and Data Management. The "Setup Hazard Analysis" section is active, displaying the instruction "Choose method to input the area of interest." with three radio button options: "Use spatial extent of an existing data set.", "Use spatial extent of a data set I will upload." (which is selected and highlighted by a red arrow), and "Define the spatial extent manually." A "Next" button is located at the bottom of the form.

The hazard analysis requires spatial data in landscape (.lcp) file format (LANDFIRE format). You can upload your own landscape data by clicking on the **Next** button. We have also provided a sample landscape data set on the **Planning Resources link** (located on the Home page).



Defining an Area of Interest and Uploading Landscape Data

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Fire Hazard Analysis - Mariposa

- Project Summary
- Prescribed Burn
- Hazard Analysis**
- Treatment Assignment
- Treatments over Time
- Risk Assessment
- Data Management

Setup Hazard Analysis

Dataset Upload

Instructions

1. Give the data set a name.
2. Choose the LCP file that you would like to upload.
3. Click "Add File".
4. Choose the corresponding PRJ file. Both the LCP and PRJ files are required.
5. Click "Add File".
6. Click "Finish".

Dataset
Name of Dataset:

Uploaded files

- Landscape_1.lcp ✗
- Landscape_1.prj ✗

Add file

Note: IFTDSS currently supports the upload of Landscape data (.lcp file format) and accompanying projection information (.prj file).

Your files will appear here after you click on the Add File button.

Follow these instructions to upload your landscape file. When uploading landscape data, two files are required: 1) a .lcp file and a 2) .prj file. The .prj file contains the geographic projection information for the landscape file. You will need to upload both files. Click on the **Add File** button after you have selected a file to upload.

Click the **Finish** button to upload your files to IFTDSS.



Setting Up a Project Run

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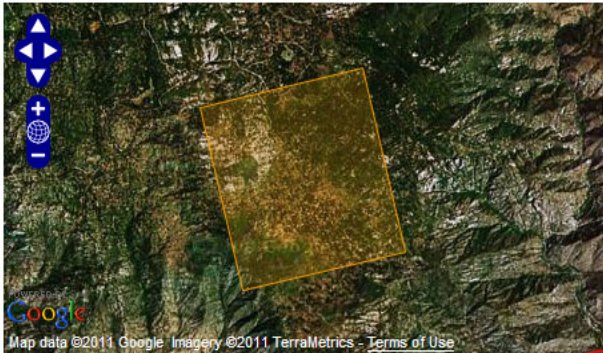
[Fire Hazard Analysis - Mariposa](#) » [Default](#) » [Create New Run](#)

Create Run

Run Name

Model FlamMap Surface Fire Behavior

Region Navigate map Draw Box



North

West East

South

Map data ©2011 Google Imagery ©2011 TerraMetrics - [Terms of Use](#)
Note: Your region might have shifted because of a coordinate system transformation.

The Create Run screen allows you to set up a FlamMap run using your landscape data as input.

You can view your area of interest and landscape data in the map window.

Click the **Save** button to continue.

Setting Up a FlamMap Model Run

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Fire Hazard Analysis - Mariposa » Hazard Analysis » Run 1

Configure Inputs Review Input Data Outputs

Information about the FlamMap model



FlamMap Surface Fire Behavior - Run 1

FlamMap is a fire behavior mapping and analysis program that computes potential fire behavior characteristics (spread rate, flame length, fireline intensity, etc.) over an entire landscape for constant weather and fuel moisture conditions.

Crown fire calculation method: Finney method

Select landscape data: Mariposa_LCP



Saved Dataset or upload a new dataset

Next >

This is where you set up a FlamMap model run.

Select the crown fire calculation method you would like to use.

Click **Next** to go to the FlamMap input data screen.



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FlamMap Input Data

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Configure Inputs Review Input Data Outputs





FlamMap Surface Fire Behavior - Run 1 Help

FlamMap Inputs

	Simulation #1	Units
Moisture of 1-hr fuels	<input type="text" value="6"/>	percent
Moisture of 10-hr fuels	<input type="text" value="7"/>	percent
Moisture of 100-hr fuels	<input type="text" value="8"/>	percent
Live herb moisture	<input type="text" value="60"/>	percent
Live woody moisture	<input type="text" value="90"/>	percent
Wind direction	<input type="text" value="290"/>	degrees
Wind speed	<input type="text" value="15"/>	miles per hour

< Back Next >

Click **Next** to run FlamMap



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This is the FlamMap input screen. Enter the moisture and wind settings for your FlamMap run. Click **Next** to view your landscape input data.

FlamMap Input Data

The screenshot shows the IFTDSS beta web application interface. At the top, there is a navigation bar with links for Home, Collaborate, Projects, Data, and About. On the right side of the navigation bar, there are links for Getting Started, Feedback, and Sign Out, along with the text "Logged in as Funk, Tami". Below the navigation bar, the breadcrumb trail reads "Fire Hazard Analysis - Mariposa > Hazard Analysis > Run 1". A series of four buttons labeled "Configure", "Inputs", "Review Input Data", and "Outputs" are displayed, with "Review Input Data" being the active step. To the right of these buttons is a small thumbnail image of a landscape with the text "FlamMap 3.0" and "Fire Sciences Lab". Below this is a section titled "FlamMap Surface Fire Behavior - Run 1" with the instruction: "You may review your spatial input data using the map below. When you are ready to execute the model, click 'Next'." The main content area is divided into three sections: a "Parameter" list on the left, a central map, and a "Legend" on the right. The "Parameter" list includes "Fuel Model", "Elevation", "Slope", "Aspect", "Canopy coverage", "Canopy height", "Canopy base height", and "Canopy bulk density". A red arrow points to the "Aspect" parameter. The central map is a satellite-style image of a landscape with a cyan-colored square overlaid on it. The "Legend" section is titled "Fuel Models" and lists ten categories with corresponding color swatches: FM1: Short grass (yellow), FM2: Timber grass and understory (cyan), FM3: Tall grass (orange), FM4: Chaparral (dark red), FM5: Brush (brown), FM6: Dormant brush (dark brown), FM7: Southern rough (light brown), FM8: Compact timber litter (blue), FM9: Hardwood litter (teal), and FM10: Timber litter and understory (light green). At the bottom of the interface, there are two buttons: "< Back" and "Next >".

Parameter

- Fuel Model
- Elevation
- Slope
- Aspect
- Canopy coverage
- Canopy height
- Canopy base height
- Canopy bulk density

Legend

Fuel Models

- FM1: Short grass
- FM2: Timber grass and understory
- FM3: Tall grass
- FM4: Chaparral
- FM5: Brush
- FM6: Dormant brush
- FM7: Southern rough
- FM8: Compact timber litter
- FM9: Hardwood litter
- FM10: Timber litter and understory

Select parameter to view

Here you can view your landscape spatial data. You can view different map layers by selecting the layer you would like to view on the left. Click on the **Next** button to run the FlamMap model.

FlamMap Output – Map Format

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Fire Hazard Analysis - Mariposa > Hazard Analysis > Run 1

Configure Inputs Review Input Data Outputs

FlamMap Surface Fire Behavior - Run 1

Views	Parameter
View Output Data	Flame length
	Rate of spread
	Fireline intensity
	Heat per unit area
	Crown fire activity
	Mid-flame wind speed
	Horizontal movement rate
	Direction of maximum spread
	Fuel Model
	Elevation
	Slope
	Aspect
	Canopy coverage
	Canopy height
	Canopy base height
	Canopy bulk density

Legend

Flame Length

All values in feet

< 0
0 to 1.08
1.08 to 2.2
2.2 to 3.28
3.28 to 4.36
4.36 to 5.48
5.48 to 6.56
6.56 to 7.64
7.64 to 8.76
8.76 to 9.84
9.84 to 11.48

Map data ©2011 Google, Imagery ©2011 DigitalGlobe, GeoEye, U.S. Geological Survey, USDA

Download KML File - Output Data

Download KML File - Input Data

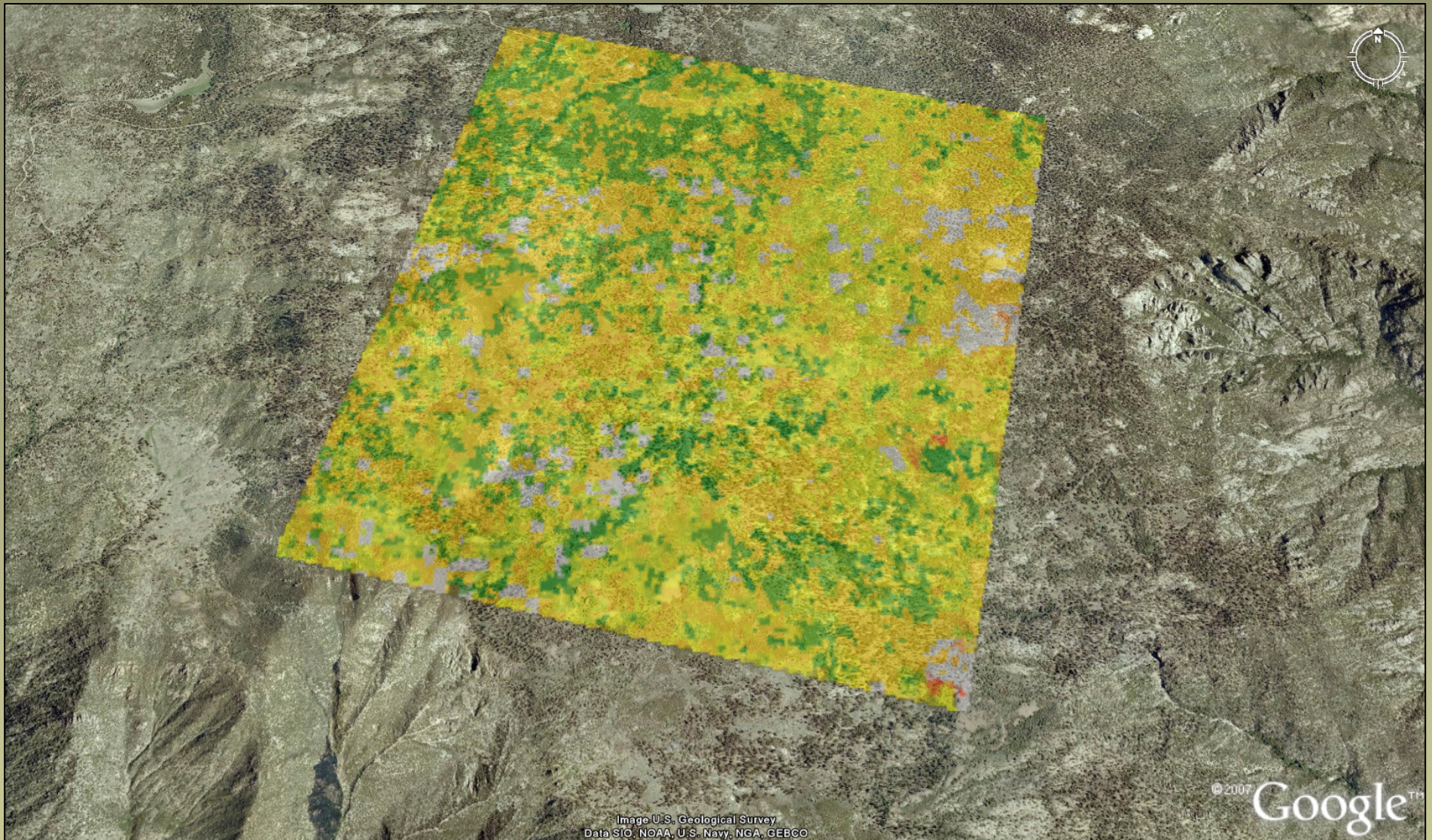
< Back

Select parameter to view

This is the FlamMap output screen. You can view the FlamMap output layers by selecting the layer you would like to view on the left. You can also zoom in and out in the map window.

You can export the input and output from FlamMap to Google Earth by clicking on the **Download KML file** links below the map window.

FlamMap Output – Google Earth



By clicking on the **Download KML** file, the input and output map layers from FlamMap are exported to Google Earth.

Next Steps...

- If you have non-spatial data you can perform a **Prescribed Burn Planning** analysis
- For general information about logging in and navigating IFTDSS, please refer to the **Getting Started: System Overview**