

# Getting Started

Welcome to  
IFT-DSS Version 0.3.0

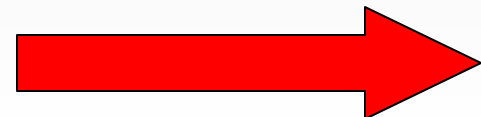
# IFT-DSS currently supports

- Prescribed burn planning for a point location and fuel consumption estimates
- Strategic planning spatial analysis

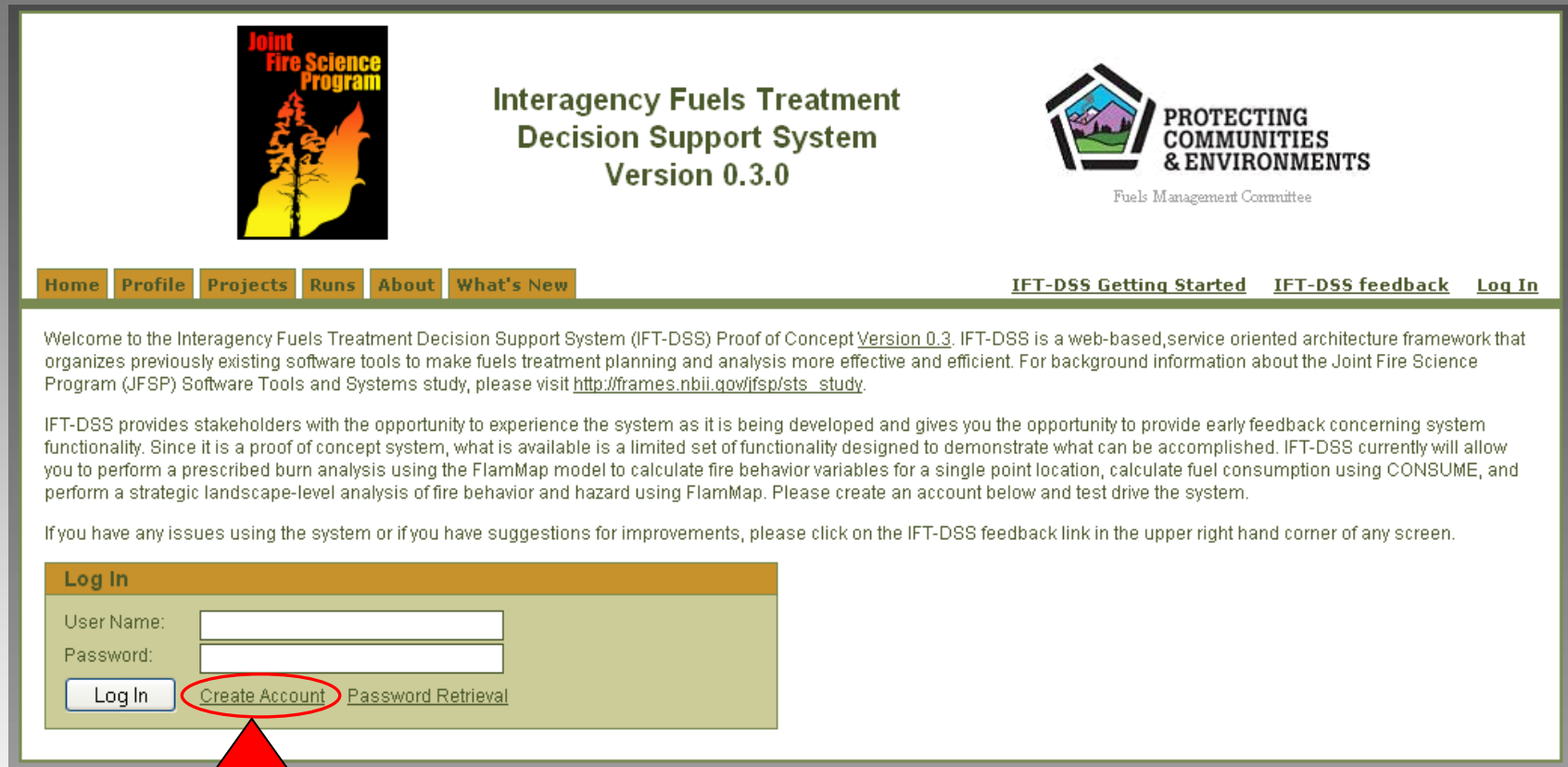
At any time, you can return to a previous screen by closing an active Run window.

For additional help on FlamMap and Consume, please refer to the help links within the IFT-DSS.

Follow these steps to get started



# Step 1: Create a user account



**Joint Fire Science Program**

**Interagency Fuels Treatment Decision Support System**  
Version 0.3.0

**PROTECTING COMMUNITIES & ENVIRONMENTS**  
Fuels Management Committee

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Welcome to the Interagency Fuels Treatment Decision Support System (IFT-DSS) Proof of Concept Version 0.3. IFT-DSS is a web-based, service oriented architecture framework that organizes previously existing software tools to make fuels treatment planning and analysis more effective and efficient. For background information about the Joint Fire Science Program (JFSP) Software Tools and Systems study, please visit [http://frames.nbii.gov/jfsp/sts\\_study](http://frames.nbii.gov/jfsp/sts_study).

IFT-DSS provides stakeholders with the opportunity to experience the system as it is being developed and gives you the opportunity to provide early feedback concerning system functionality. Since it is a proof of concept system, what is available is a limited set of functionality designed to demonstrate what can be accomplished. IFT-DSS currently will allow you to perform a prescribed burn analysis using the FlamMap model to calculate fire behavior variables for a single point location, calculate fuel consumption using CONSUME, and perform a strategic landscape-level analysis of fire behavior and hazard using FlamMap. Please create an account below and test drive the system.

If you have any issues using the system or if you have suggestions for improvements, please click on the IFT-DSS feedback link in the upper right hand corner of any screen.

**Log In**

User Name:

Password:

[Password Retrieval](#)

Select **Create Account** in the Log In window


# Step 1: Create a user account

**Enter Test Code**


Enter Test Code:

Having Trouble? Please contact [IFT-DSS feedback](#)

Enter "testdrive" and click **OK**



Interagency Fuels Treatment  
Decision Support System  
Version 0.3.0



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**Create Account**

User Name:

Password:

Email:

First Name:

Last Name:

Title:


Address:

Zip:


Telephone:

Organization:

\* Required Fields

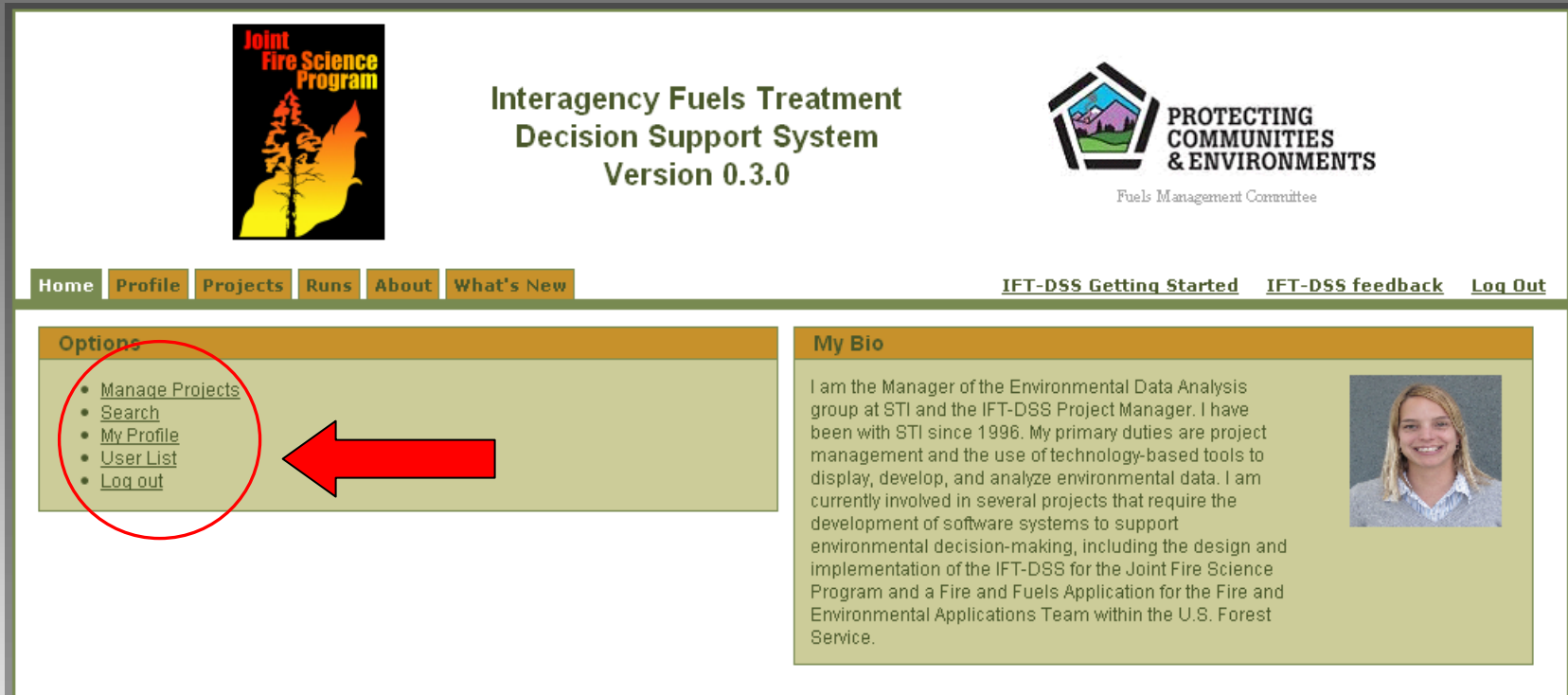


Click the link above to view  
the Getting Started Guide



Fill in the boxes to  
create an account

# Step 2: Log in to the IFT-DSS



The screenshot shows the IFT-DSS Home page. At the top left is the 'Joint Fire Science Program' logo. In the center is the title 'Interagency Fuels Treatment Decision Support System Version 0.3.0'. To the right is the 'PROTECTING COMMUNITIES & ENVIRONMENTS' logo with the text 'Fuels Management Committee' below it. A navigation bar contains links: Home, Profile, Projects, Runs, About, What's New, IFT-DSS Getting Started, IFT-DSS feedback, and Log Out. The main content area is divided into two columns. The left column, titled 'Options', contains a list of links: Manage Projects, Search, My Profile, User List, and Log out. A red circle highlights this list, and a large red arrow points to it from the right. The right column, titled 'My Bio', contains a paragraph of text and a portrait photo of a woman.

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**Options**

- [Manage Projects](#)
- [Search](#)
- [My Profile](#)
- [User List](#)
- [Log out](#)

**My Bio**

I am the Manager of the Environmental Data Analysis group at STI and the IFT-DSS Project Manager. I have been with STI since 1996. My primary duties are project management and the use of technology-based tools to display, develop, and analyze environmental data. I am currently involved in several projects that require the development of software systems to support environmental decision-making, including the design and implementation of the IFT-DSS for the Joint Fire Science Program and a Fire and Fuels Application for the Fire and Environmental Applications Team within the U.S. Forest Service.

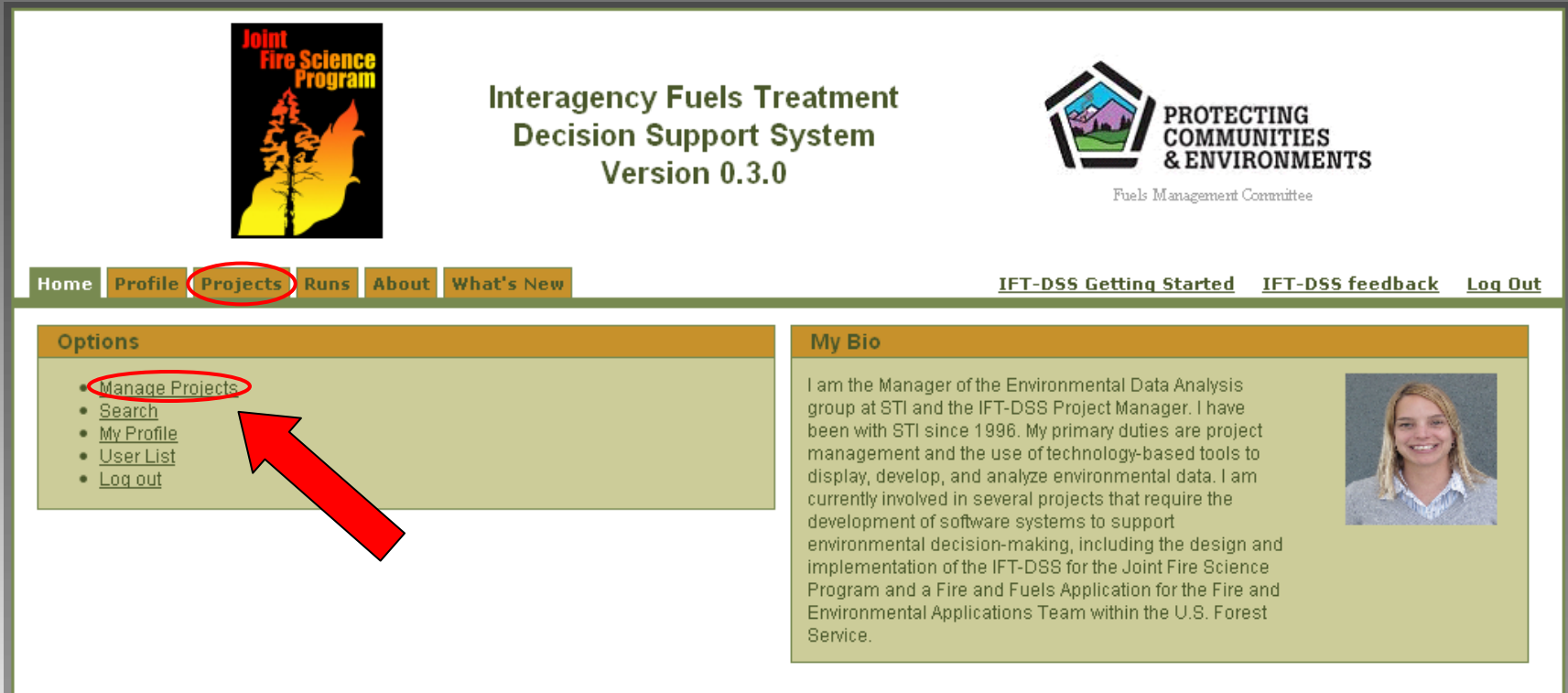


After you log in to the system, the Home page appears.

## From here you can

- Manage projects
- View/edit your user profile
- View a list of other IFT-DSS users
- Log out of the system

# Step 3: Create a new project



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Home Profile **Projects** Runs About What's New


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**Options**

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A **project** is an analysis with a specific objective (e.g., prescribed burn planning analysis or strategic planning analysis).

This Getting Started Guide will walk you through the steps for

- performing a prescribed burn planning analysis
- estimating natural fuel consumption
- performing a strategic planning analysis

# Step 3: Create a new project

First, select **New** to create a new project

3a

Second, enter information about your project in the Project Details screen and click the **Save** button

Third, check the new project's **Select** box and click **Manage Runs** to open the Run List screen

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Home Profile Projects Runs About What's New

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Project List

Active Projects | Archived Projects

Select	Name	Author	Duration	Date Created	# Runs
<input type="checkbox"/>	Rx Burn Planning - Unit 1	Tami Funk	2010	2010-05-25	4
<input type="checkbox"/>	Strategic Planning - Landscape	Tami Funk	2010	2010-05-25	1

3b

Manage Runs Edit **New** Delete Archive ☐ Select All

Project Details

IFT-DSS feedback

Project Name:

Description:

Date Created: 06-01-2010

Duration:

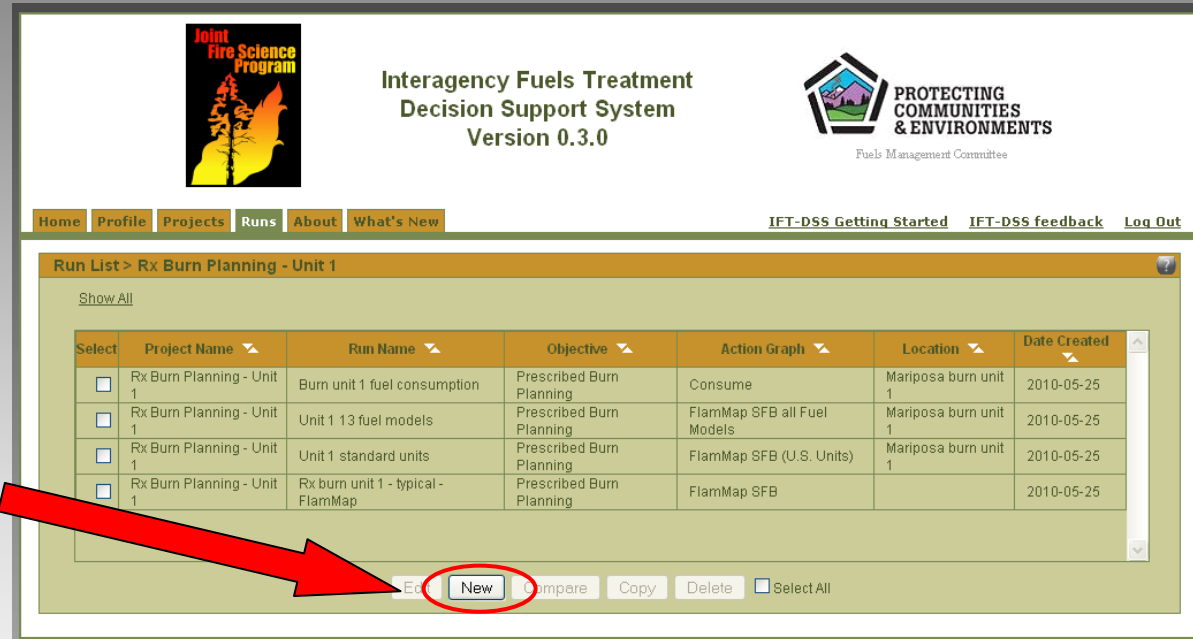
Location:

☐ Use Landscape Data (required for spatial analysis)

**Save** Cancel \* Required Fields

## Step 4: Create a new run

Select **New** to  
open the Run  
Details screen



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Run List > Rx Burn Planning - Unit 1

[Show All](#)

Select	Project Name ▾	Run Name ▾	Objective ▾	Action Graph ▾	Location ▾	Date Created ▾
<input type="checkbox"/>	Rx Burn Planning - Unit 1	Burn unit 1 fuel consumption	Prescribed Burn Planning	Consume	Mariposa burn unit 1	2010-05-25
<input type="checkbox"/>	Rx Burn Planning - Unit 1	Unit 1 13 fuel models	Prescribed Burn Planning	FlamMap SFB all Fuel Models	Mariposa burn unit 1	2010-05-25
<input type="checkbox"/>	Rx Burn Planning - Unit 1	Unit 1 standard units	Prescribed Burn Planning	FlamMap SFB (U.S. Units)	Mariposa burn unit 1	2010-05-25
<input type="checkbox"/>	Rx Burn Planning - Unit 1	Rx burn unit 1 - typical - FlamMap	Prescribed Burn Planning	FlamMap SFB		2010-05-25

Ec **New** Compare Copy Delete ☐ Select All



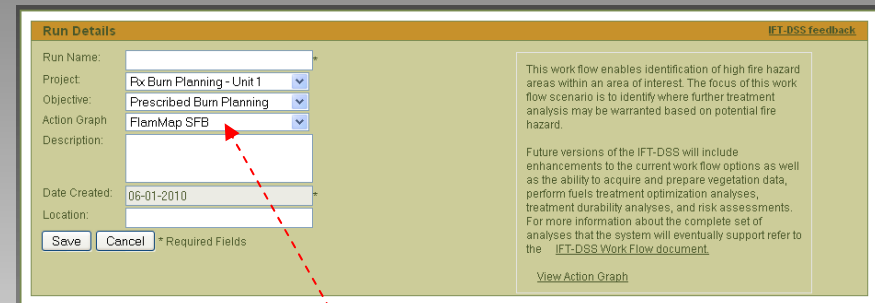
## Step 4: Create a new run

- Enter information about the run
- Select the analysis objective
- Choose the action graph

The action graph indicates the model(s) to be used for the analysis. The three action graph options for a non-spatial analysis in this version of IFT-DSS are

- **FlamMap SFB** (surface fire behavior) – runs FlamMap for a point location and five fuel models
- **FlamMap SFB all fuel models** – runs FlamMap SFB for a point location and 13 fuel models
- **Consume** – runs the natural consumption algorithm in Consume 3.0

Future versions of the IFT-DSS will contain more options (models) for modeling fire behavior.



**Run Details** IFT-DSS feedback

Run Name:

Project: Rx Burn Planning - Unit 1

Objective: Prescribed Burn Planning

Action Graph: **FlamMap SFB**

Description:

Date Created: 06-01-2010

Location:

\* Required Fields

This work flow enables identification of high fire hazard areas within an area of interest. The focus of this work flow scenario is to identify where further treatment analysis may be warranted based on potential fire hazard.

Future versions of the IFT-DSS will include enhancements to the current work flow options as well as the ability to acquire and prepare vegetation data, perform fuels treatment optimization analyses, treatment durability analyses, and risk assessments. For more information about the complete set of analyses that the system will eventually support refer to the [IFT-DSS Work Flow document](#).

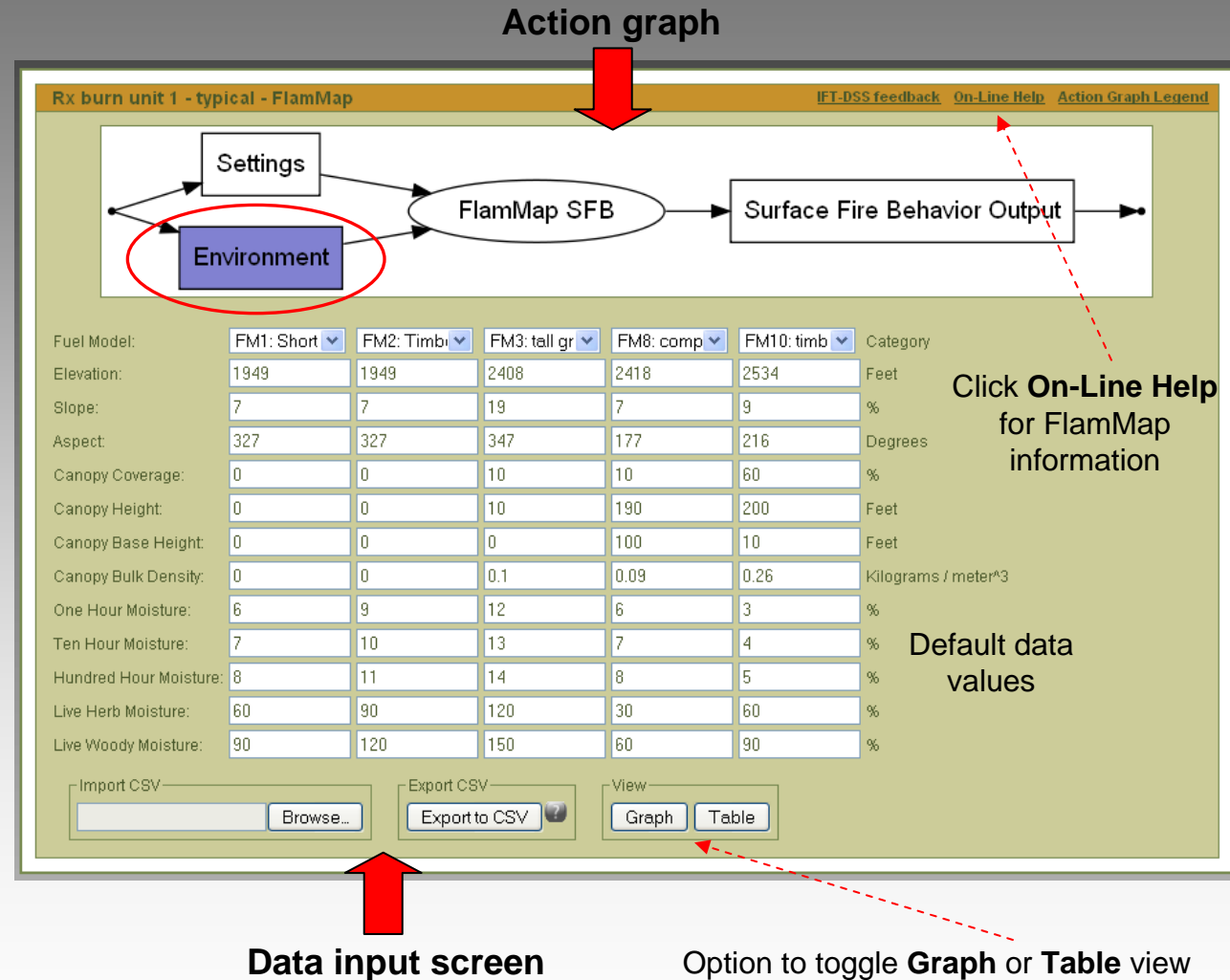
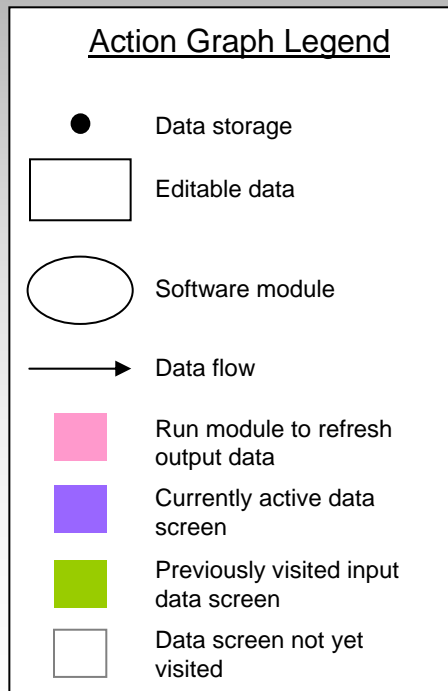
[View Action Graph](#)

NOTE: **FlamMap SFB** is selected for this run.

# Step 5: Input landscape and moisture values

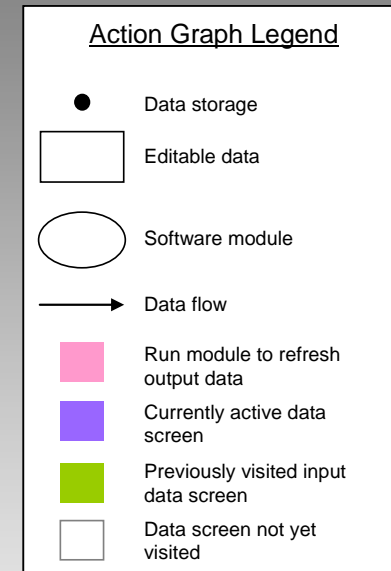
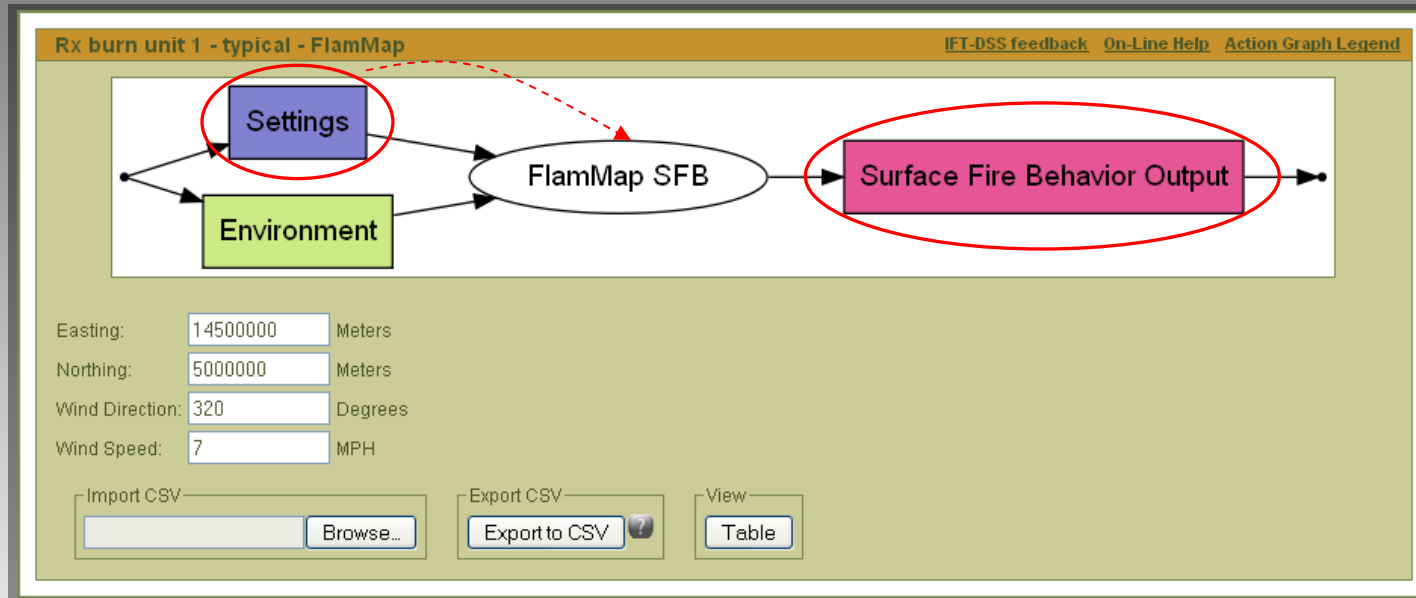
When a run is saved, an action graph (top) and data input screen (bottom) appear. The action graph shows the process flow and inputs required by FlamMap to model SFB (i.e., settings, landscape, and moisture parameters). The color coding indicates where you are in the modeling process.

## Landscape and moisture input screen for FlamMap SFB



# Step 6: Input wind speed and direction, and then run FlamMap

## Wind and location input screen for FlamMap SFB

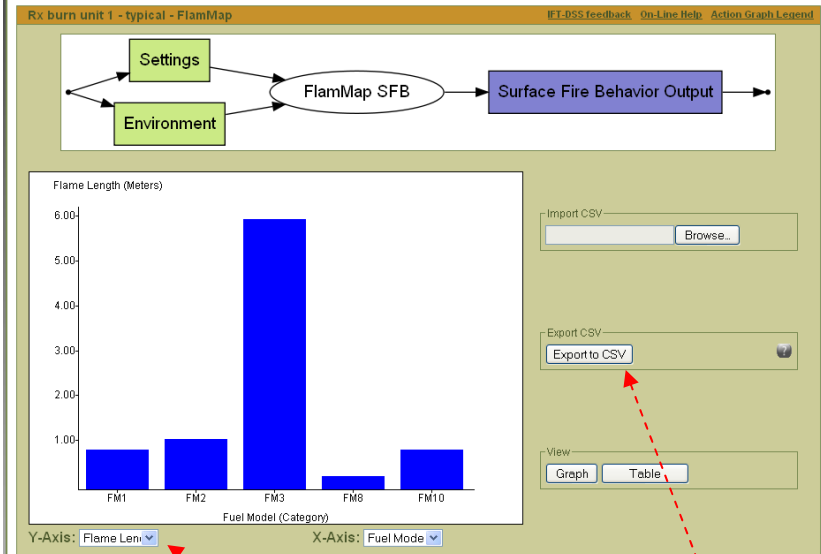
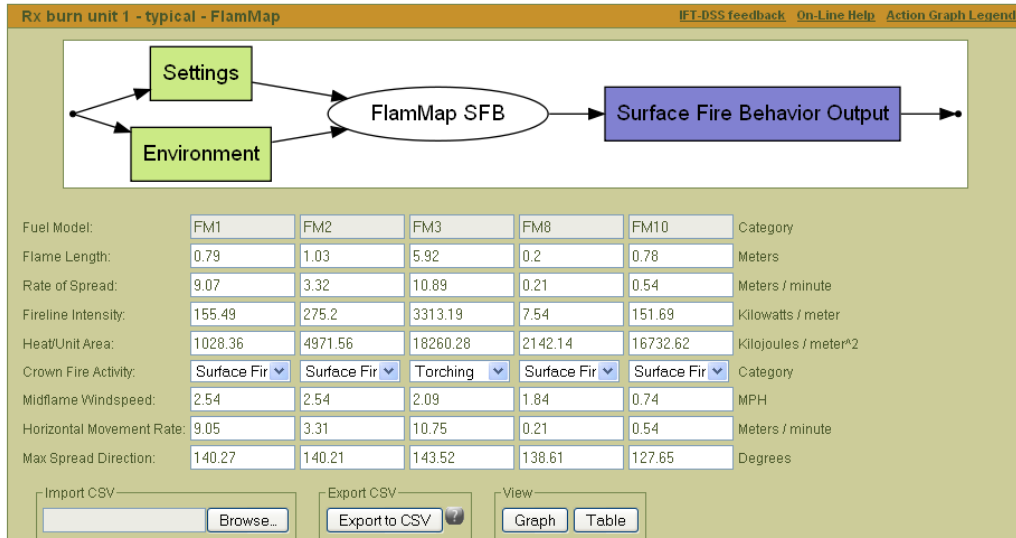


After the wind speed and direction values are entered, click the **FlamMap SFB** oval to execute the FlamMap model.

# Step 7: View and export FlamMap output

## FlamMap output table

## FlamMap output graph



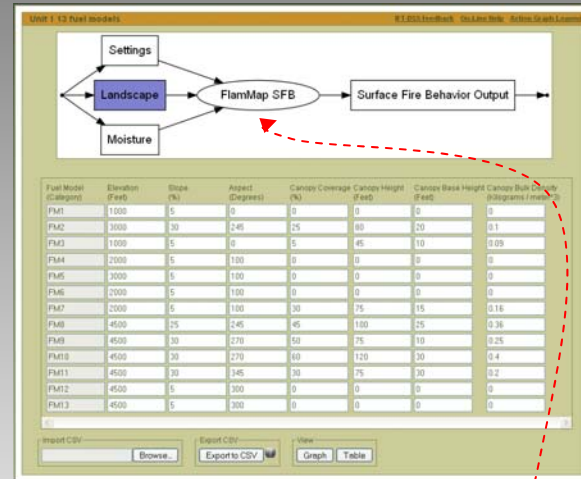
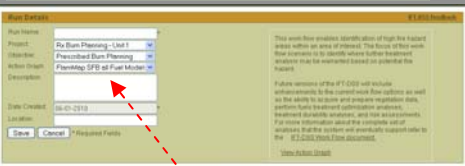
- View FlamMap fire behavior outputs in tabular or graphical format
- New in this version of IFT-DSS is the ability to perform multiple runs and view the output in different windows
- When you are done, you can save your input data and FlamMap output data to a .csv file that can be viewed directly in Excel

You can view different fire behavior outputs on the Y-Axis by clicking the drop-down menu

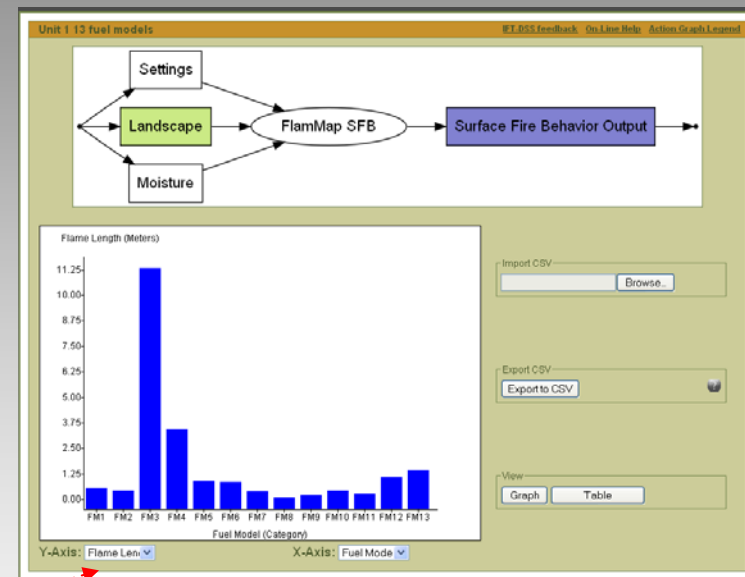
# The following screens will show you how to

- Use FlamMap SFB for all fuel models
- Run Consume 3.0 to estimate natural fuel consumption

# Using FlamMap SFB for 13 fuel models



**STEP 2:**  
Enter landscape, moisture, and wind settings. Click the **FlamMap SFB** oval to run FlamMap.



**STEP 3:**  
View the FlamMap SFB output for the 13 fuel models in either graphical or tabular format. You can show different output data on the Y-Axis of the graph by clicking the drop-down menu.

# Running Consume 3.0 to estimate fuel consumption



Thousand Hour Moisture	%
50	
Fire Type	RCC Prescribed
Acres Burned	50
1 Hour Fuel	0.5
10 Hour Fuel	1.4
100 Hour Fuel	1.2
1000 Hour Fuel	4
10000 Hour Fuel	2
> 10000 Hour Fuel	0
Shrub Fuel	1.5
Grass Fuel	0.8
Rot Fuel	2.5
Duff Depth	2
Litter Fuel	2
Canopy Fuel	26.2

Consumption Type	Rate (Tons/acre)
Flaming Consumption	5.93
Smoldering Consumption	1.24
Residual Consumption	0.39
Duff Consumption	0

**STEP 1:**  
Return to the Run screen and begin a new run. In the Run Details window, select **Consume** and click the **Save** button.

**STEP 2:**  
Enter the following data into the Consume input screen

- fuel moisture
- type of fire
- acres burned
- fuel information

Click the **Consume** oval to run Consume 3.0.

**STEP 3:**  
View the fuel consumption output from the Consume model.

*Note that the Consume 3.0 natural consumption module is currently being accessed by the IFT-DSS via a web service call to the BlueSky Smoke Modeling Framework. Future versions of the IFT-DSS will include all Consume 3.0 modules as well as the FCCS and FEPS developed by the Fire and Environmental Research Applications (FERA) Team.*

The following screens will show you how to use FlamMap SFB and Landscape (.LCP) data to perform a strategic analysis of fire hazard.

The objective of the strategic analysis is to quickly identify areas within a landscape that may warrant fuel treatment.



# Performing a strategic analysis using landscape data



## STEP 1:

Return to the Project screen and begin a new project. In the Project Details window, upload a landscape data file (.LCP) and name your dataset. First, browse to your landscape data file (.LCP) and click **Open**. Then browse to the landscape projection file (.PRJ) and click open. Now your landscape data are loaded into the system.

## STEP 2:

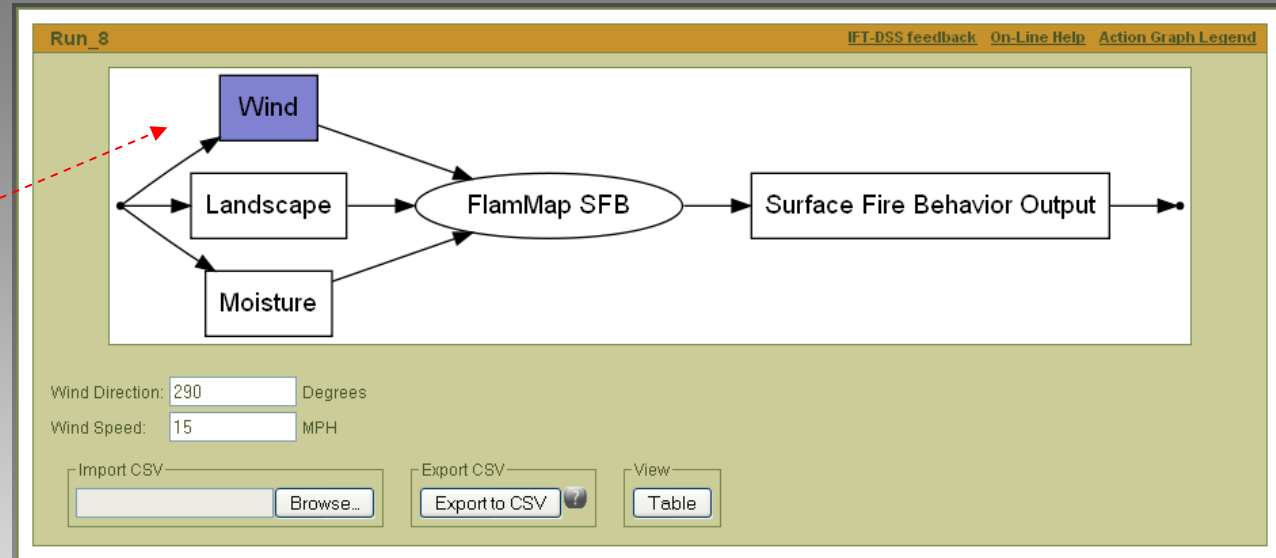
Create a new run. Select **Strategic Planning** in the Objective drop-down menu and **Spatial FlamMap SFB** in the Action Graph menu. Finally, click **Save**.

# Performing a strategic analysis using landscape data

## STEP 3:

Enter wind direction and speed inputs. The action graph and data input screens (lower half of page) are dynamically linked. Click the **Wind**, **Landscape**, and **Moisture** boxes in the action graph to enter FlamMap input data.

Click the **FlamMap SFB** oval in the action graph to run the FlamMap model.

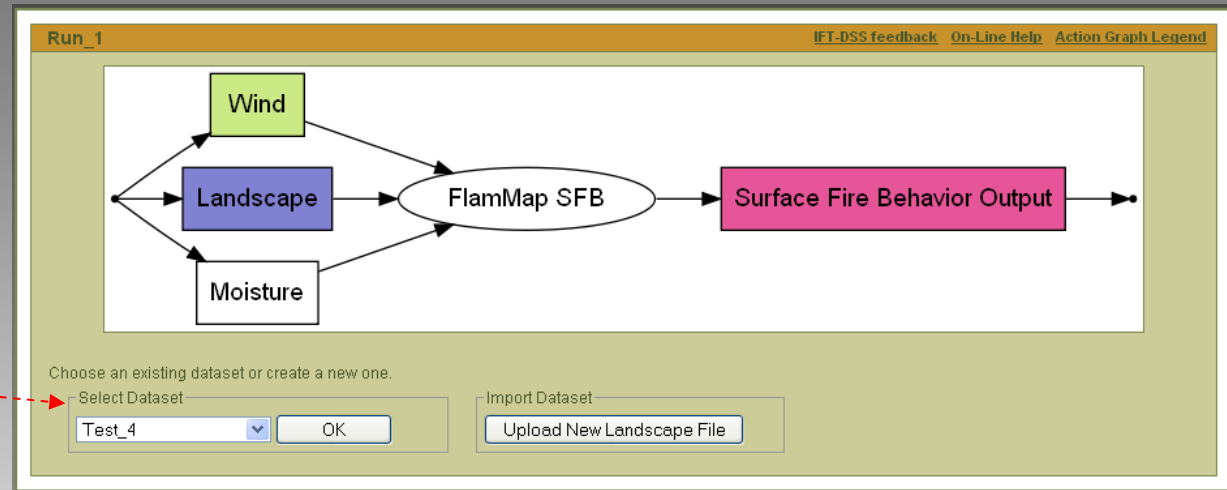


# Performing a strategic analysis using landscape data

## STEP 4:

Click on the Landscape box to upload or select the data you would like to use for the Run. The action graph and data input screens (lower half of page) are dynamically linked. Click the **Wind**, **Landscape**, and **Moisture** boxes in the action graph to enter FlamMap input data.

Click the **FlamMap SFB** oval in the action graph to run the FlamMap model.



# Performing a strategic analysis using landscape data

## STEP 5:

View your landscape input data in the map viewer window. The action graph and map viewer are dynamically linked. Click the **Wind**, **Landscape**, and **Moisture** boxes in the action graph to enter FlamMap input data.

Click the **FlamMap SFB** oval in the action graph to run the FlamMap model.

The screenshot displays the IFT-DSS feedback interface. At the top, there is a title bar with 'Run\_1' and links for 'IFT-DSS feedback', 'On-Line Help', and 'Action Graph Legend'. Below this is an action graph with the following components: 'Wind' (green box), 'Landscape' (blue box), 'Moisture' (white box), 'FlamMap SFB' (oval), and 'Surface Fire Behavior Output' (pink box). Arrows indicate the flow from 'Wind', 'Landscape', and 'Moisture' to 'FlamMap SFB', and then to 'Surface Fire Behavior Output'. A red dashed arrow points from the 'Landscape' box to the map viewer. The map viewer shows a satellite image of a landscape with a cyan-colored polygon overlaid. To the left of the map is a list of overlays: 'Elevation', 'Slope', 'Aspect', 'Fuel models' (checked), 'Canopy cover', 'Canopy height' (checked), 'Canopy base height', and 'Canopy bulk density'. A red dashed arrow points from the 'FlamMap SFB' oval to the 'View Map Legend' button in the top right corner of the map viewer. At the bottom left of the map viewer is an 'Export KML' button.

Click here to view  
the map legend

# Performing a strategic analysis using landscape data

## STEP 6:

Click on the Moisture box to enter moisture input data.

Click the **FlamMap SFB** oval in the action graph to run the FlamMap model.

Run\_1 [IFT-DSS Feedback](#) [On-Line Help](#) [Action Graph Legend](#)

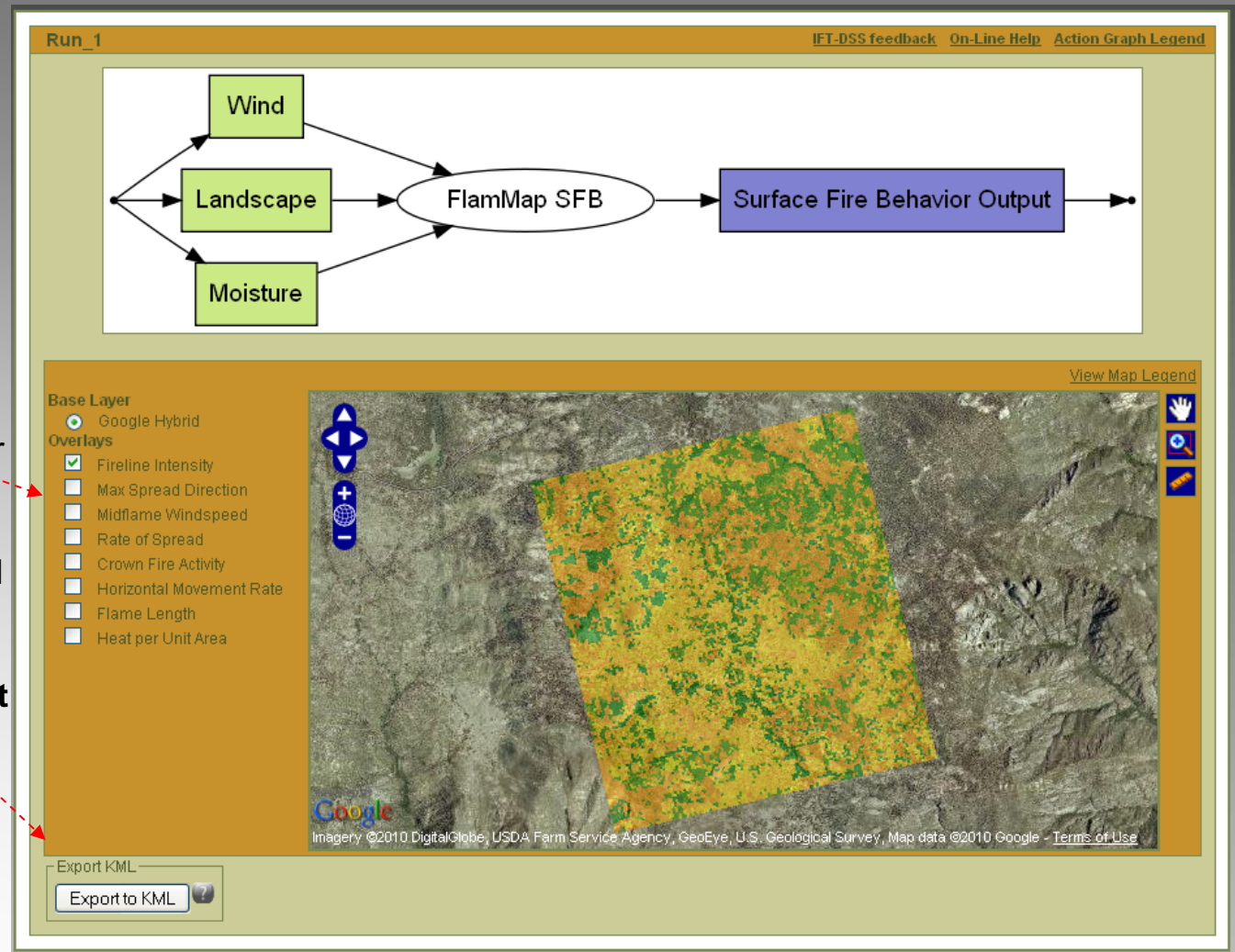
```
graph LR; Wind[Wind] --> FlamMapSFB((FlamMap SFB)); Landscape[Landscape] --> FlamMapSFB; Moisture[Moisture] --> FlamMapSFB; FlamMapSFB --> SurfaceFireBehaviorOutput[Surface Fire Behavior Output];
```

Fuel Model (Category)	One Hour Moisture (%)	Ten Hour Moisture (%)	Hundred Hour Moisture (%)	Live Herb Moisture (%)	Live Woody Moisture (%)
FM1	3	4	5	30	60
FM2	3	4	5	30	60
FM3	3	4	5	30	60
FM4	3	4	5	30	60
FM5	3	4	5	30	60
FM6	3	4	5	30	60
FM7	3	4	5	30	60
FM8	3	4	5	30	60
FM9	3	4	5	30	60
FM10	3	4	5	30	60
FM11	3	4	5	30	60
FM12	3	4	5	30	60
FM13	3	4	5	30	60

Import CSV:

Export CSV:

# Performing a strategic analysis using landscape data



## STEP 7:

View the FlamMap SFB output data in the map viewer window.

You may export the input and output map layers to Google Earth (or another KML viewer) by clicking the **Export to KML** button.

# Thank You for Visiting IFT-DSS!

Please send us your comments and feedback

[IFT-DSSfeedback@sonomatech.com](mailto:IFT-DSSfeedback@sonomatech.com)