

IFTDSS Workshop

Handout 5: Hazard Analysis – Calculate Fire Behavior Across a Landscape (IFT-FlamMap)

1. On the Project Summary page, select **Create New Run**.

HomeCollaborateProjectsData

Logged in as Banwell, Erin

IFTDSS Portland Workshop

Create New Run

Project Summary

Help

Information

Edit

Organization Name:

Project Start Date:

Project End Date:

Project Size:

Treatment Type:


Project Status: Planned

Description:

Date Modified: 12/02/2012

Date Created: 12/02/2012

Area of Interest



Northeast corner:
Latitude: 38.2283047°
Longitude: -122.6637947°

Southwest corner:
Latitude: 38.1891157°
Longitude: -122.7151747°

Total Area:
4,837.07 Acres
19,575,000 m²

Resolution: 30.0m x 30.0m

Import Landscape data from LANDFIRE

Import Fuelbeds from LANDFIRE

Upload Landscape Data Set

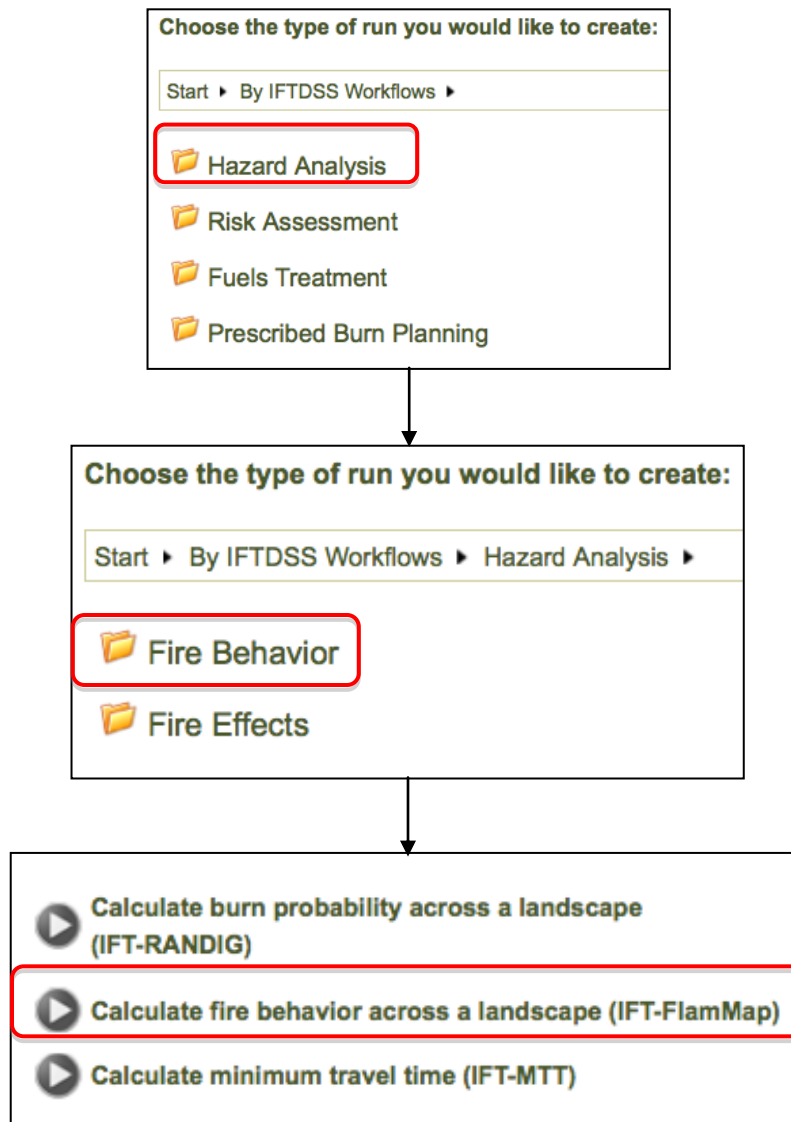
Runs

Run Name	Pathway	Date Modified	Date Created	Actions
No data available in table				

Filters: (all) (all) (all)

Create New Run

2. Select **Hazard Analysis**, then **Fire Behavior**, then **Calculate fire behavior across a landscape (IFT-FlamMap)**.



3. Name your run and select **Next**.

Create New Run: Calculate fire behavior across a landscape (IFT-FlamMap)


Run Name:

North:
West: East:
South:

The extent of the box in the map window shows the project area that you have selected for this run. To change the area for this run, use the Draw Box tool to select a smaller area within the box shown in the map window.

☒ Navigate Map ☐ Draw Box

Selected area: 7,563.62 acres



4. The LANDFIRE data set you acquired will be selected as your data set. Select **Next**.

Select Data Set

Available Data Sets:

Percentages next to data set names indicate the percent that the data set covers the selected run area. Data sets below 100% coverage will display a smaller area of data than the selected run area.

A copy of the data set that you select will be made for this run. Changes to the original data set will not affect the data in this run. If you would like to re-import the selected data set into this run, return to this step later and click the Edit button.

- Now, you are on the Inputs step. Customize the IFT-FlamMap inputs and select **Next**.

Configure

Inputs

Review Landscape Data

Outputs

Classify

Classified Outputs

Run S ▶

Novato Hazard Analysis - Calculate fire behavior across a landscape (IFT-FlamMap)

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Properties

Crown Fire Calculation Method Scott & Reinhardt Method ▼

Generate Gridded Winds No ▼

Fuel Moisture

Parameter	Unit	Simulation #1
1-hr Fuel Moisture	percent	6
10-hr Fuel Moisture	percent	7
100-hr Fuel Moisture	percent	8
Live Herbaceous Fuel Moisture	percent	60
Live Woody Fuel Moisture	percent	90

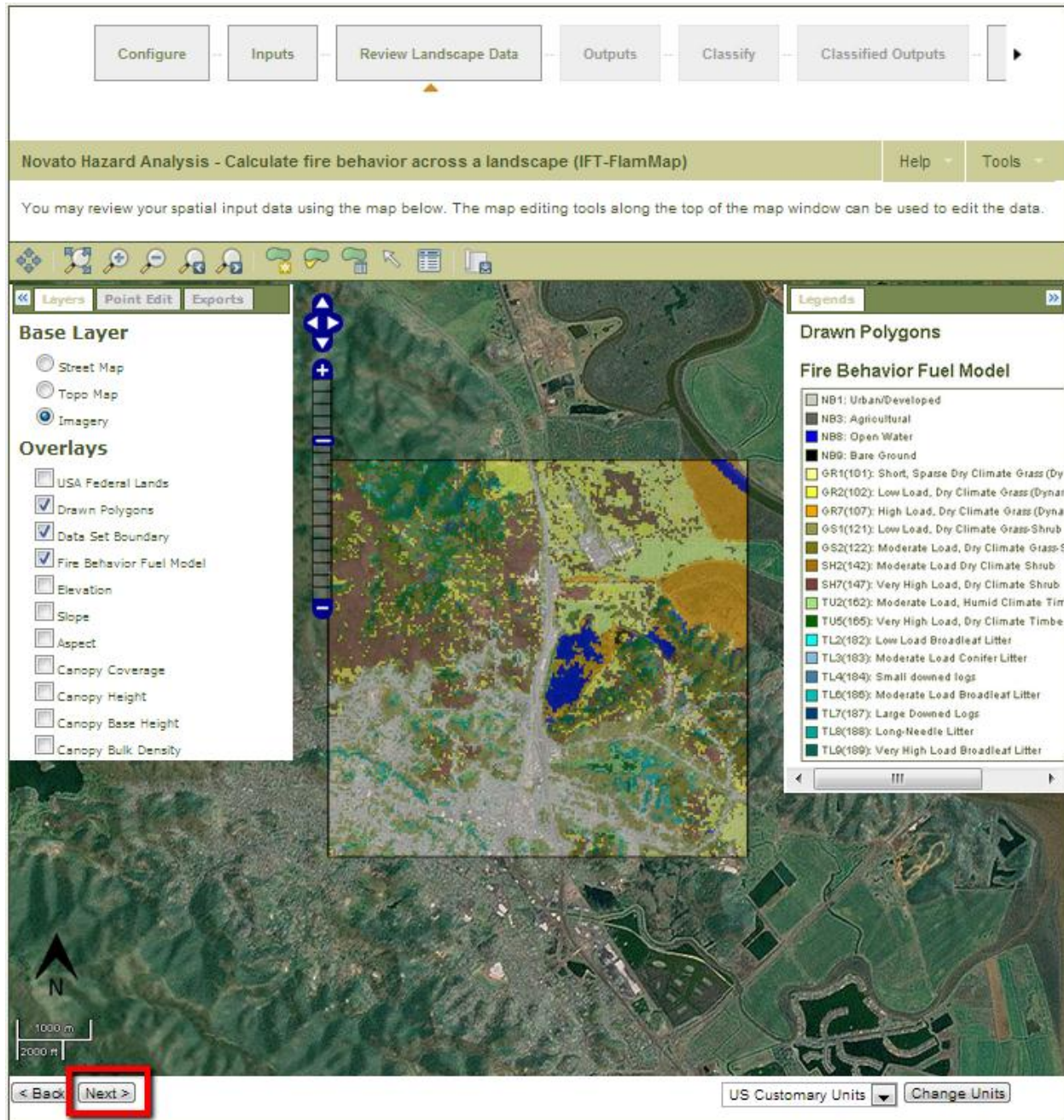
Weather

Parameter	Unit	Simulation #1
Wind Direction	deg	290
20-ft Wind Speed	mi/h	15.00

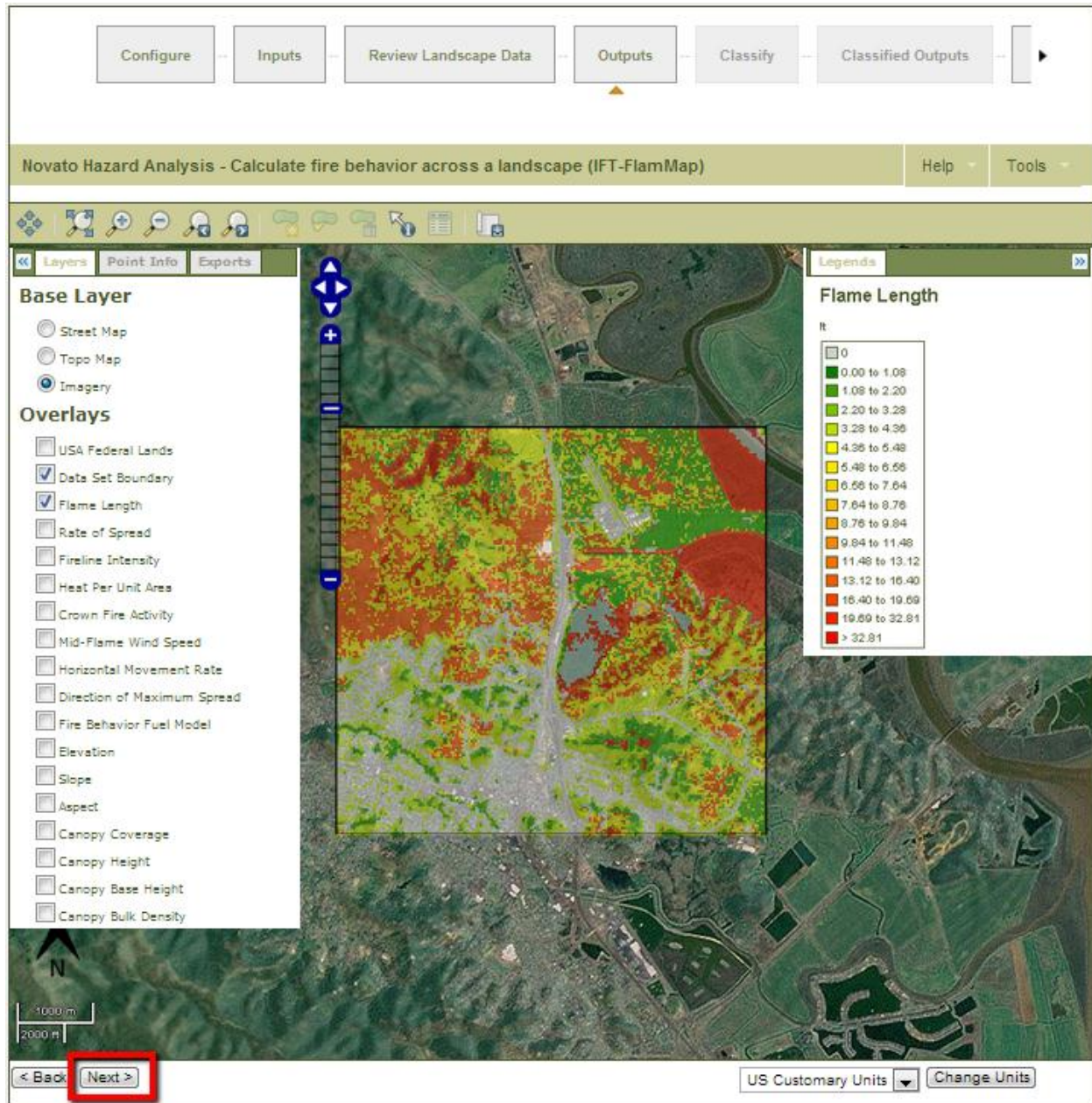
< Back
Next >

US Customary Units ▼
Change Units

- Now, you can review your spatial landscape data using the Overlays panel on the left. After reviewing your data, select **Next**.



- Now you are on the Outputs step. Review the spatial fire behavior overlays and the landscape data, and then click **Next**.



8. In the Classify step, you can classify output parameters, including flame length, rate of spread, fireline intensity, and heat per unit area, into different classes and group outputs into relative categories.
 - a. Under the Classify Parameters heading, specify the minimum value for each class of each parameter. The four classes are Low, Medium, High, and Very High. The minimum value for the Low class of each parameter is zero by default and is not displayed in the form.

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Specify the MINIMUM value for each class of each parameter. The minimum value for the Low class of each parameter is zero and not displayed on the form.

Classify Parameters

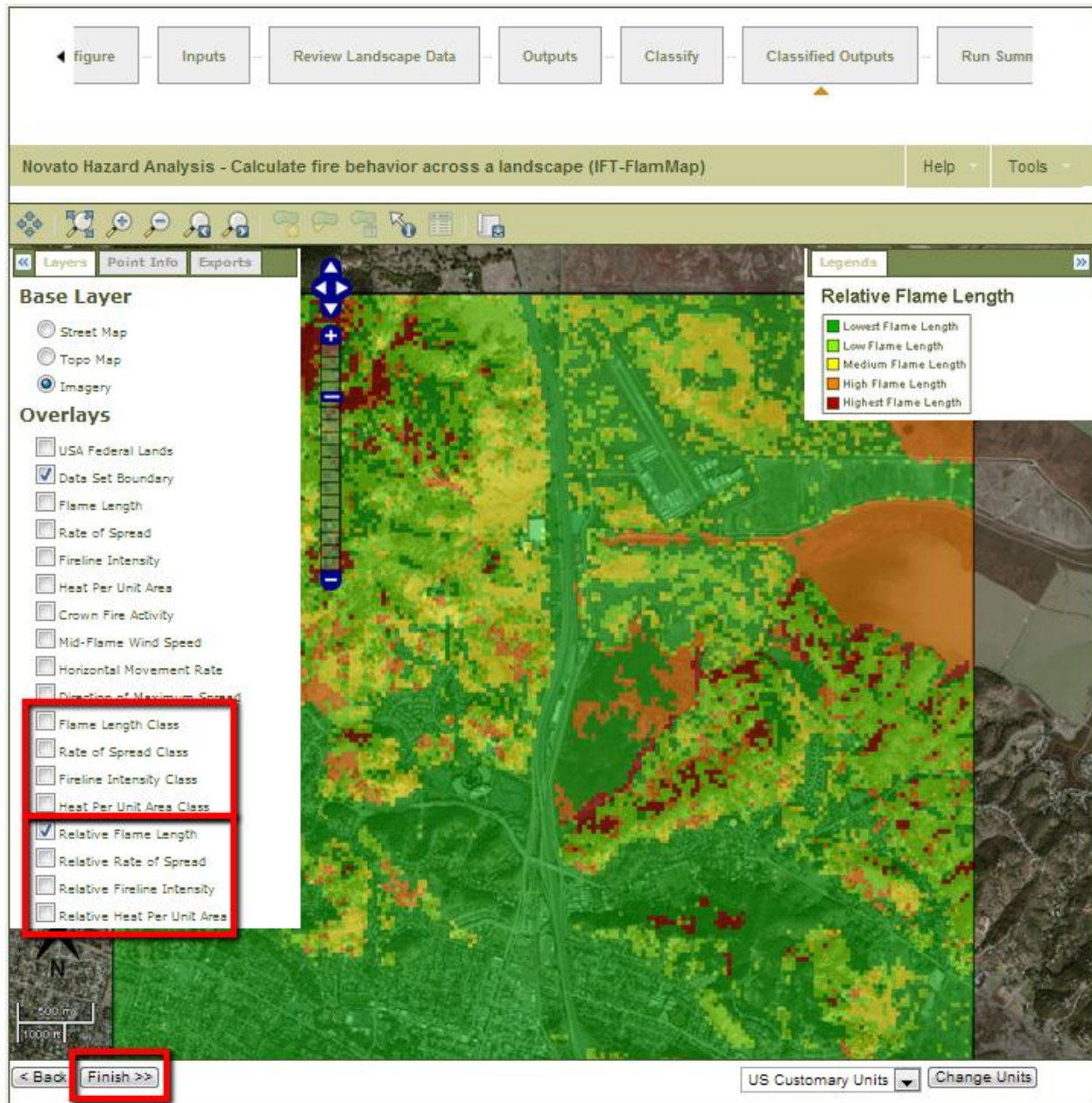
Parameter	Unit	Simulation #1
Medium Flame Length	ft	<input type="text" value="4.00"/>
High Flame Length	ft	<input type="text" value="8.00"/>
Very High Flame Length	ft	<input type="text" value="11.00"/>
Medium Rate of Spread	chains/hr	<input type="text" value="20.00"/>
High Rate of Spread	chains/hr	<input type="text" value="90.00"/>
Very High Rate of Spread	chains/hr	<input type="text" value="150.00"/>
Medium Fireline Intensity	Btu/ft/s	<input type="text" value="100.00"/>
High Fireline Intensity	Btu/ft/s	<input type="text" value="500.00"/>
Very High Fireline Intensity	Btu/ft/s	<input type="text" value="1,000.00"/>
Medium Heat Per Unit Area	Btu/ft²	<input type="text" value="100.00"/>
High Heat Per Unit Area	Btu/ft²	<input type="text" value="500.00"/>
Very High Heat Per Unit Area	Btu/ft²	<input type="text" value="1,000.00"/>

Input the minimum value for each class of each parameter

- b. In the Classify step, you can also set the relative category percentage breakdown for flame length, rate of spread, fireline intensity, and heat per unit area. There are five relative categories for each parameter: Lowest, Low, Medium, High, and Highest. The percentage values need to add up to 100. Click **Next** on the bottom of the screen after all relative category percentages are set.

Relative Flame Length Category Percentage	
Lowest Flame Length	<input type="text" value="50"/>
Low Flame Length	<input type="text" value="25"/>
Medium Flame Length	<input type="text" value="10"/>
High Flame Length	<input type="text" value="10"/>
Highest Flame Length	<input type="text" value="5"/>
Relative Rate of Spread Category Percentage	
Lowest Rate of Spread	<input type="text" value="50"/>
Low Rate of Spread	<input type="text" value="25"/>
Medium Rate of Spread	<input type="text" value="10"/>
High Rate of Spread	<input type="text" value="10"/>
Highest Rate of Spread	<input type="text" value="5"/>
Relative Fireline Intensity Category Percentage	
Lowest Fireline Intensity	<input type="text" value="50"/>
Low Fireline Intensity	<input type="text" value="25"/>
Medium Fireline Intensity	<input type="text" value="10"/>
High Fireline Intensity	<input type="text" value="10"/>
Highest Fireline Intensity	<input type="text" value="5"/>
Percentage Heat Per Unit Area by Relative Category	
Lowest Heat Per Unit Area	<input type="text" value="50"/>
Low Heat Per Unit Area	<input type="text" value="25"/>
Medium Heat Per Unit Area	<input type="text" value="10"/>
High Heat Per Unit Area	<input type="text" value="10"/>
Highest Heat Per Unit Area	<input type="text" value="5"/>
<input type="button" value="Back"/> <input type="button" value="Next >"/>	
<div>US Customary Units ▼</div> <div>Change Units</div>	

9. Now, you are on the Classified Outputs screen. You can review outputs in classes and relative categories, in addition to the raw FlamMap outputs. Use the Overlays panel on the left side of the map to view different outputs.



10. Click **Finish** to end the run and go to the Run Summary page.