

## Automated Basic Fire Behavior (BFB)

WFDSS Automated Basic Fire Behavior (BFB) is a web-based fire behavior application. It gives "snapshot in time" fire behavior outputs (flame lengths, rates of spread, fireline intensities, etc.) for an entire user-defined landscape extent using one set (per cell) of wind and fuel moisture conditions. WFDSS BFB can be thought of as a "spatial BEHAVE or BehavePlus". Using fuels, topography, and weather data, fire behavior characteristics are calculated and displayed for every cell of the landscape extent.

Incident Authors and Owners need to understand how to prepare for, and run the Basic Fire Behavior (BFB) model. This includes:

- Creating an incident on their home unit, an area of equal familiarity, or recreate a past fire.
- Preparing to run the model by drawing landscape extents.
- Running the model and interpreting the results.

Before you begin:

- Ensure you have a WFDSS User Name and Password. For information on requesting an account see [http://wfdss.usgs.gov/wfdss\\_help/WFDSSHelp\\_request\\_acct.html](http://wfdss.usgs.gov/wfdss_help/WFDSSHelp_request_acct.html).
- Have access to the WFDSS Training site.
- (Optional) Print the exercise for your reference.

### Creating a New Incident

You must have the following information before you can create an incident in WFDSS:

- Location of incident (preferably latitude and longitude)
- Discovery date and time
- Name of incident
- Discovery Size

To prevent duplicate entries for incidents, WFDSS warns you if the incident you are creating meets **both** the following criteria:

- Incident is within 1/2 mile of an existing incident.
- The discovery date and time are within 6 hours of the existing incident.

The list of suspected duplicate incidents appears, and you can review each to verify whether the incident is, in fact, a duplicate. If you determine that it is a new incident, you can click **Create New Incident** to continue entering information about the incident. See [Creating an Incident](#) for further information.

#### To create a New Incident:

1. Login to WFDSS Training.
2. Click the **Intelligence** tab.
3. Click  to see detailed instructions for creating a new incident. If you create an incident using the data entry fields, you must enter the latitude and longitude in WGS84 or NAD83 format.

4. Select a location on your home unit, a familiar area, or recreate a past. Make sure this location contains burnable fuels.
5. When the information is complete, click **SAVE**. You can now draw a landscape extent around the area you want to analyze.

## Drawing a Landscape Extent

The landscape extent determines the size of the landscape file used for fire behavior modeling. See [Drawing a Landscape Extent](#) for further information.

### To draw a Landscape Extent:

1. From the Analysis list, select the analysis you want to create a landscape extent for.
2. Click **View Information**. The analysis General Information page appears.
3. Choose **Analysis Map** from the menu options on the left. The Analysis Map appears.
4. Zoom in on the incident marker.
5. Select the Landscape Extent  tool.
6. Position your cursor where you want to start the landscape extent, then click and drag the mouse until the shape is the right size. A green box appears that delineates your landscape extent.
7. Choose the Info tab to view the latitude and the longitude boundaries in the Landscape Extent section.
8. If you are satisfied with the extent shown by the green box you drew, click **Save**. Otherwise re-draw the extent until you are satisfied.

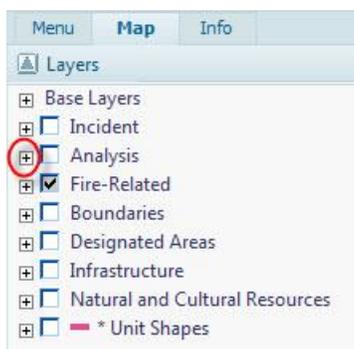
A message appears stating that your landscape extent was saved.

## Running an Automated Basic Fire Behavior (BFB) Model

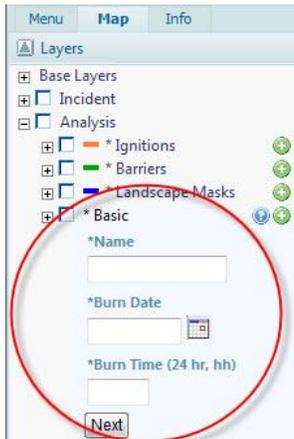
The automated version of Basic Fire Behavior (BFB) is a very simple way to get "snapshot in time" fire behavior outputs for every cell on the user-defined landscape extent. See [Running an Automated Basic Fire Behavior Analysis](#) for more information.

### To run an automated Basic Fire Behavior model:

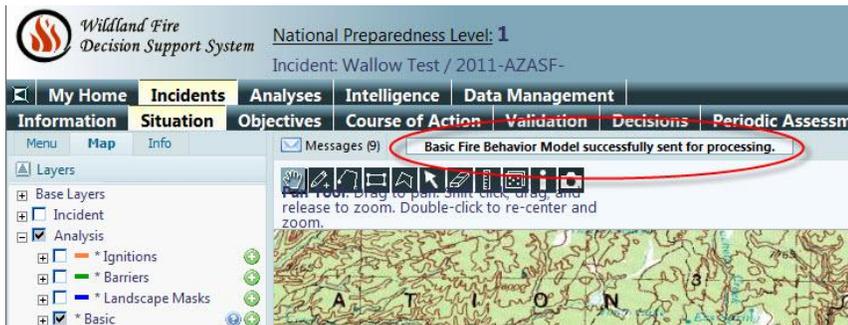
1. Click the **Situation** tab. The Situation page appears.
2. Click the **Map** tab, click the + sign next to Analysis. The list expands.



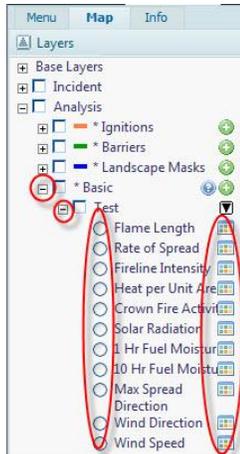
3. Click the Basic checkbox.
4. Click  to expand the list and create a new BFB analysis.



5. Enter the Name, Burn Date and Burn Time.
6. Click **Next**. The wind data for the Burn Date and Burn Time displays. Edit this information if needed.
7. Click **Run Model**. Processing may take several minutes. A message appears at the top of the map if the run was successfully sent. If you get an error message check your inputs, it is likely you forgot something such as your landscape extent.



8. Click the Situation tab to refresh the page.
9. Click the + sign to the left of **Basic** and then the + sign to the left of your analysis name to display the output options.
10. Click the appropriate radio buttons to view each of output options on the map. Clicking on the Legend icon to the right of each output brings up a Legend window for that output option.



Search for these related topics in the help:

- [WFDSS Basic – What it is](#)
- [WFDSS Automated BFB – What it needs \(inputs\)](#)
- [WFDSS Basic - What it does \(outputs\)](#)
- [WFDSS Basic – Why use it – \(potential uses\)](#)
- [WFDSS Basic – Assumptions and Limitations](#)
- [WFDSS Basic – What it means – \(interpretations\)](#)