

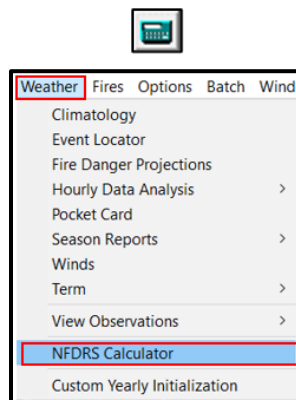
## Job Aid 8. NFDRS Calculator

### Introduction

The NFDRS Calculator is used to analyze relationships between inputs, fuel models, and NFDRS outputs. It includes a list of [Fuel Model Parameters](#) for reference. It is also used to [Calculate NFDRS Outputs](#), allowing you to examine sensitivity of NFDRS outputs to fuel models and their inputs. If an output is sensitive to a given input, a small change in that input may lead to a large change in the output.

### Opening the NFDRS Calculator

1. From the Working Set window, select **Weather > NFDRS Calculator** or click on the **NFDRS Calculator** icon on the main toolbar.



### Fuel Model Parameters

Use the Fuel Model Parameters table to learn more about the characteristics of individual fuel models.

2. If necessary, open the NFDRS Calculator.
3. Click on the **Fuel Model Parameters** icon at the bottom left.

A screenshot of the 'NFDRS Calculator' window. The window is titled 'NFDRS Calculator' and has a close button (X) in the top right corner. It contains several sections for input and calculation. The 'Site' section has a 'Fuel Model' dropdown set to 'Y - Timber' and a 'Slope' dropdown set to '1 : 0 - 25%'. The 'Weather' section has 'Temperature' set to 80, '20'' set to 5, and 'SOW' set to '1 - Scattered Clouds'. The 'Fuel Moistures' section has a table with inputs for 1-Hr, 10-Hr, 100-Hr, 1000-Hr, Herb FM, and Woody FM. The '88 Model Inputs' section has a 'Season' dropdown set to '3 - Summer', 'Woody Greenness' set to 5, 'KBDI' set to 107, and checkboxes for 'Rain Event' and 'Deciduous Shrubs'. The 'Calculated Indices' section shows results for SC (2.68), ERC (50.72), BI (28.84), and IC (50.62). The 'NFDRS2016 Specific' section has inputs for GSI (0.5), KBDI (100), SCM (5), Max GSI (1), GSI Greenup Threshold (0.5), and Fuel (80). There is a 'Humid MXD' checkbox. At the bottom, there are three buttons: 'Fuel Model Parameters' (highlighted with a red box), 'KBDI Calculator', and 'Calculate'.

- Select a Fuel Model in the associated drop-down list.
- Click **Add to Table**.

- Repeat this process to add more fuel models. Each time, a new row is added to the table.

## Calculate NFDRS Outputs

- If necessary, open the NFDRS Calculator.
- Make selections in the **Weather** box (Temperature and 20-ft Wind Speed).  
*Tip: Some variables are not required for NFDRS2016 (SOW).*
- Set the **Fuel Model** and **Slope** in the **Site** box at the top left.

- Enter **Fuel Moisture** for every size class (1-hour, 10-hour, 100-hour, 1000-hour, Herbaceous, and Woody) as needed; this depends on the selected fuel model.

*Tip: If the Fuel Moisture box is gray, you do not need to enter a value; it has no impact on the results. Only change it when the box is white.*

- Adjust **NFDRS2016 Specific** parameters (GSI, KBDI, SCM, Max GSI, GSI Greenup Threshold, and Fuel) to simulate fuel load transfer in the box at the bottom of the window.
- Check the box next to **Humid MXD** if you are working in a humid area.
- Click **Calculate** at the bottom right. Values appear in the **Calculated Indices** box.

The screenshot shows the NFDRS Calculator window with the following settings:

- Site:** Fuel Model: Y - Timber, Slope: 1 : 0 - 25%, Use 88 Model: ☐
- Weather:** Temperature: 80, 20', SOW: 1 - Scattered Clouds
- Fuel Moistures:** 1 - Hr: 4.00, 10 - Hr: 5.00, 100 - Hr: 10.00, 1000 - Hr: 12.00, Herb FM: 30.00, Woody FM: 60.00
- 88 Model Inputs:** Season: 3 - Summer, Woody Greenness: 5, KBDI: 107, Rain Event: ☐, Deciduous Shrubs: ☐
- NFDRS2016 Specific:** GSI: 0.5, KBDI: 100, SCM: 5, Max GSI: 1, GSI Greenup Threshold: 0.5, Fuel: 80, ☐ Humid MXD
- Calculated Indices:** SC: 2.68, ERC: 50.72, BI: 28.84, IC: 50.62

Buttons at the bottom: Fuel Model Parameters, KBDI Calculator, Calculate.