

Job Aid 2

FireFamilyPlus Primer

Create a New Database

- Click on **Fire > New**.
- Browse to folder and rename untitled.mdb to a meaningful name in the File name box.
- Click **Save**.
- Add a meaningful **Description**.

Import Data (Data > Import or)

WIMS Station Catalogs (Stations Pane)

- Browse to *wlstinv*.txt*.
- **Open** and **View Log**.

FW9/FW13 Files (Weather Pane)

- Browse to *wx*.fw13*.
- **Open** and **View Log**.

Fires (Fires Pane)

- Select Fire Agency from **Agency** box:
 - ◇ **USFS: RAW Files** button. Browse and select an *flnfmas2*.raw* file.
 - ◇ **DOI Agencies: WFMI Fire Import** button. Browse and select a WFMI/DOI text import file (*PchaFtp.txt, *csv).
 - ◇ **NASF: NASF CSV** button. Browse and select a *.csv file obtained from Data Warehouse.
- **Open** and **View Log**.

Compact the data using **Data > Compact**

- Compact the data each time you make a major edit (add, delete, or modify data) to the database, your answers change with each calculation in odd ways, or if the database starts to run more slowly than usual.
- Databases **must be less than 1 GB** in size.

Set up your Station in the Active Working Set

- Select **Station** or **SIG** with the drop-down arrow.
- Set **Annual Filter** and **Data Years**.
- Set **Analysis Period Length**.
- Set **Fire Associations**. Click Agency, Regions, Unit, and Subunits to highlight selections.

Station Catalog Information Using Data > Stations or

Tip: Many of these options are also available in the SIG/Station Metadata section of the Working Set.

- Highlight station and **Edit**. If any changes are made, click **OK**.

Tip: To change the station name, simply type the new name into the **Name** box.

- Check all information, but common concerns are:
 - ◇ Select **NFDRS Fuel Model** of your choice (V, W, X, Y, or Z).
 - ◇ Check **Herbs are Annuals** box if herbaceous vegetation is annual; leave unchecked if perennial.
 - ◇ In the **NFDRS 2016 Specific** pane, check the **Humid** box if the area is humid.

Check Data Quality for Errors and Continuity

Tip: Common errors include: wind speed, precipitation amount, and relative humidity. Make note of time periods with large amounts of missing or erroneous data.

Weather > Climatology or

- Check **Stats Graph** to look for outlier data.
- Check **Data Count** on a weather variable to look for periods of missing data.

Tip: Change the **Analysis Period Length (Days)** to 10 days or 28 (Monthly) days for easy interpretation.

Weather > Event Locator or

Tip: To search for anomalies, look at values greater than 99.9 percentile (less than 0.1 percentile for Relative Humidity).


- Daily Data: **Weather > Event Locator**.
- Hourly Data: **Weather > Hourly Data Analysis > Hourly Event Locator**.

Weather > View Observations > All

- Right-click at the top of column and sort to find outliers.

Examine Fire History

Tip: Look for big fire years, seasonal distributions, size class distributions, and fires/fire day.

- Click **Fires > Summary > Working Set** or  to view data for a SIG/Station Fire Association and time period.
 - ◇ Click **View Fires** to see the list of fires in the dataset and view specific fires.
 - ◇ Click **OK** to create summary graphs.
- Click **Fires > Summary > General** to view fires for selected Agency/Region/Unit. Set years in **Years** tab to see all data for each year.
 - ◇ Click **View Fires** to see the list of fires in the dataset and view specific fires.
 - ◇ Click **OK** to create summary graphs.
- Interpret graph data.
 - ◇ Use **Options > View Graph Data** for more detail and fire acre percentile values.
 - ◇ Use **Options > View Class Definitions** for definitions of fire cause codes and class sizes.



Interactive Batch

***Tip:** For best results, create Stats Graph for ERC-Y from the main Working Set for an NFDRS variable before running Interactive Batch on a SIG or large number of stations.*

- Click **Batch > Interactive** and select the SIG/Station(s) of your choice. Most FireFamilyPlus analyses are shown for all variables in FireFamilyPlus at one time.


Determine Percentiles

Climatological Breakpoints

- Set critical percentiles (CP #1, CP #2) for Stats Graphs or Daily Frequencies in **Weather > Climatology** or .
- **Stats Graph:** Find output value associated with critical percentiles by clicking on horizontal black line and reading the Y Value in the lower right-hand corner of the window.
- **Percentiles Graph:** Click on intersection of red horizontal/vertical line and green line. Read the X Value (index value) and Y Value (percentile) in the lower right-hand corner of the window.
***Tip:** Switch between Stats Graph and Percentiles Graphs by dragging the vertical gray bar to the left or right. Or, double-click on the graph you wish to view.*
- **Daily Frequencies** table: Select **Daily Freqs** in **Weather > Climatology** or . Critical Percentiles (CP #1 and CP #2) are shown below the variable name. Find the desired range of values (first column) and read the Cumulative Percentile (last column).

Modifying Graphs and Viewing Graph Data

Stats Graphs

- Stats Graphs are created via the Climatological Options window or . Click in the Stats Graph box for variables of interest to add it (X) and remove it (blank) from the list of **Selected Outputs** at the bottom of the window. Click **Run**.
- Change graph type by going to **Options > Graph Type** and selecting either **Statistical Bars** or **Line at Average** (default).
- Add individual years of data to a Stats Graph: **Options > Overlays...**
 - ◇ Click **New** to add a row and **Delete** to remove a row. You can add three years of data to the graph.
 - ◇ Select the Year in the drop-down menu. Select **Color**, **Width**, and **Line Style**. Click **Apply** and **OK**.
- A number of Graph Display Options are available. From the Stats Graph, click on **Options > Graph Options**. Select **Set As Default** for this database (current and future Stats Graphs), **Close** the window, **Apply** changes to the current graph, or **Apply to All** open graphs.
 - ◇ **General:** Set preferences for Grid Lines, Graph Type, and Overall Percentiles.
 - ◇ **Bar Graph:** Turn on/off Range Tics and Critical Percentile Tics, which are on by default.
 - ◇ **Line At Average:** Turn on/off Mins, Maxs, CP1, and CP2 by clicking in the box. Change the Color and Width of each Line. Average cannot be turned off, but you can change the color to White.
 - ◇ **Fires:** Determine the Fire Types (Fire Days, Large Fire Days, Multi Fire Days) and Cause (All, Lighting, Human) of interest. Enter values for Large Fires (Acres) and Multi Fire Day (Fires).


- Add fire data to Stats graphs for individual years. From the Stats Graph, click on **Options > Graph Options > Fires** tab.
 - ◇ **Types:** Identify fire days, large fire days, and multiple fire days.
 - ◇ **Cause:** Select specific cause(s) of interest or **All**.
 - ◇ Set size of large fires and number of multiple fires.
 - ◇ Click **Apply** or **Apply To All** (if more than one graph).

Fire Summary Charts


From the Fire Summary charts you can view the data.

- **Options > View Class Definitions...** defines the Size Classes and USFS statistical Cause Classes used in these charts.
- **Options > View Graph Data** shows the data for all five graphs. Of particular interest is the Fire Size Percentiles Distribution at the bottom of the page. These data are not graphed, but provide more detailed information than the fires by Size Class graph.

Analyze Outputs and Fire Business



- Click **Fires > Fire Analysis** or  **> Both (Analysis Type) > OK**.
 - ◇ Look for variables with curved lines and good separation between percentile curves.
 - ◇ Look for variables with low Chi square values and adequate Decision Space.

Create a PocketCard


- Click **Weather > Pocket Card** or .
- Use best analysis variables, location information, and meaningful local history to complete the PocketCard.

Export, Print, or Delete Data, Graphs, or Tables

Export data: click on **Weather > View Observations > Daily** () or **All** ().


- Click **Export** icon ().
 - ◇ Select desired output format (Do not select FW9 as it is obsolete.): FW13, Custom, or FlamMap/FARSITE Stream).
 - ◇ If **Custom Format:** Add variables to the **Selected Fields** column using >>>> and select **Field Delimiter** (**Space**, **Comma** (preferred), or **None**).
 - ◇ For all file options: Click **OK > Save**, to export/save the file.
- Select **Print** icon ().
 - ◇ Select **Options**.
 - ◇ Add variables to the **Selected Fields** column using >>>>.
 - ◇ Click **OK**.

Warning: Printing data uses a lot of paper. Make sure this is really what you want to do!



- Select **Delete Records** icon ().
 - ◇ Determine which lines of data you wish to delete.
 - ◇ Enter the **Start Record** and **End Record**.
 - ◇ Click **OK**.

Tip: This cannot be undone.

Output Tables


- Open Table using **Weather > Climatology** or .

*Tip: You can add/remove headers and change column delimiters from the main Working Set window by clicking **Options > Report Options**.*

 - ◇ To save the table, click **File > Save As** or .
 - Enter file name.
 - Click **OK** to save the file.
 - ◇ To print the table, click **File > Print** or .

Graphs


- **File > Save:** Select the graph you wish to save and click **Save**. For best results, save it as a PNG (*.png) file.

*Tip: The Save icon does not work with graphs; you must click **File > Save**.*
- **File > Export Graph Data:**
 - ◇ Change options in **Options > Report Options**.
 - ◇ View the graph with the data you want to export.
 - ◇ Export the data by clicking **File > Save As** or .
- **File > Print > Graph:**
 - ◇ Select the graph to print.
 - ◇ Select the printer.

Tip: Graphs are automatically sized for the paper size and orientation.

 - ◇ Click **OK**.

NFDRS Calculator



































- From Working Set window, click **Weather > NFDRS Calculator** or .
- Set Fuel Model, Slope Class, Temperature, and 20-ft Wind (Speed).

Tip: Some variables are not needed for NFDRS 2016.
- Enter fuel moisture values for all size classes.
- Adjust **NFDRS2016 Specific** parameters as needed.
- Click **Calculate** to view **Calculated Indices**.
- Click **Fuel Model Parameters** tab to view parameters for all fuel models.

See the next page for a summary of all FireFamilyPlus icons.

FireFamilyPlus Icons

Icons provide shortcuts to the most commonly used commands in FireFamilyPlus. This table describes their functions. If they are grayed out, they are unavailable from the current window.

Icon	Working Set ¹	Icon	Working Set	Icon	Interactive Batch ²
	Save tables or data		NFDRS Calculator		Save tables or data as a text file
	Print tables or data		Fires Summary Chart for Working Set		Print tables or data
	Import Data		Fires Analysis for Working Set		Open Working Set
	Edit weather stations		Graph Options (Working Set & Stats Graph)		Open Graph Options (all graphs)
	Edit Special Interest Groups (SIGs)		Add Overlays (Working Set & Stats Graph)		Add Overlays to Graphs (all Graphs)
	Climatology Reports		Add a candidate to Candidates Table (Fires Probability Analysis)		Set Fire Associations
	Daily Listing		View Candidates Table (Working Set)		Change Fires Options
	PocketCard		Decision Point Tool (Working Set & Fires Probability Analysis)		Add a candidate to the Candidates (Table) (Fires Analysis Report or Graph)
	Percentile Weather Analysis		Table of daily weather observations		View the Candidates Table
	Daily Event Locator		Table of hourly weather observations	Icon	Table and Data
	Fire Danger Projections		About FireFamilyPlus		Save tables or data as a text file
¹ Working Set unless otherwise specified ² All tabs unless otherwise specified					Print data
					Delete records