

# FireFamilyPlus: Frequently Asked Questions

The list of questions below are the most common questions we have received over time. If you have further questions, please contact the [IIA Help Desk](#).

**Phone:** 866-224-7677, 616-323-1667

**Website:** <https://iiahelpdesk.nwcg.gov>

**Email and Chat** available through the website.

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## General

### 1. Which version of the US National Fire Danger Rating System is the “current” version?

NFDRS v4 is the current version of the US National Fire Danger Rating System. The models for this version were developed and released in 2016, while software development took longer to develop.

The versions of the US NFDRS are outlined as follows:

- **NFDRS v1:** Released in 1972, this was the first release of a national fire danger rating system in the US.
- **NFDRS v2:** Released in 1978, this version provided an update to v1. Outputs (ERC, SC, BI, IC) published in 1978 are calculated in the same way today.
- **NFDRS v3:** Released in 1988, this version modified v2 to account for humid areas such as the southeastern US. Minor modifications were made to some of the fuel models at the same time.
- **NFDRS v4:** Released in 2016, v4 changed the calculation of both the dead and live fuel moisture, reduced the number of fuel models to 5, and \_\_\_\_\_. Calculation of the outputs remain the same as in v2.

### 2. How do I install the latest version of FireFamilyPlus?

Installation of FireFamilyPlus varies by agency. Contact your local IT personnel for assistance.

## Databases

### 3. Why is my database blank?

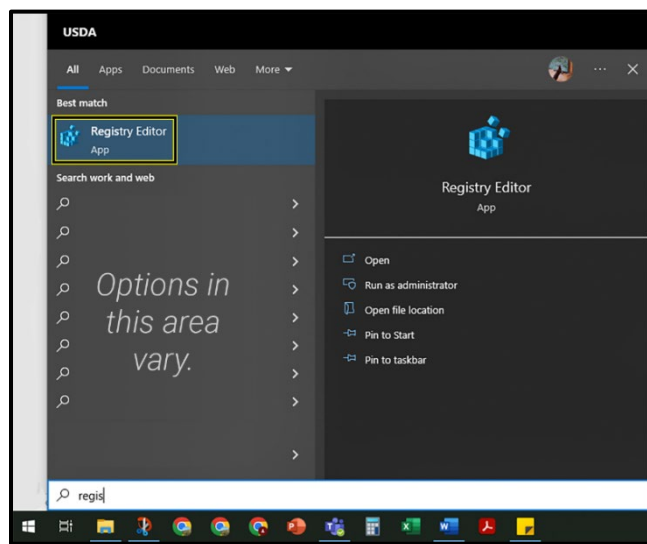
Ensure that you did not select **File > New**. If you did, the database was overwritten and cannot be recovered.

If you select **Fire > Open**, the database crashed and it was blank when you reopened FireFamilyPlus, you may be able to get it back. Go to the folder where the database is located. If there is a \*.ldb file associated with the database file, make sure FireFamilyPlus is closed and delete only the \*.ldb file. This may restore the database. If not, save a backup of the file (zip) and review the next question.

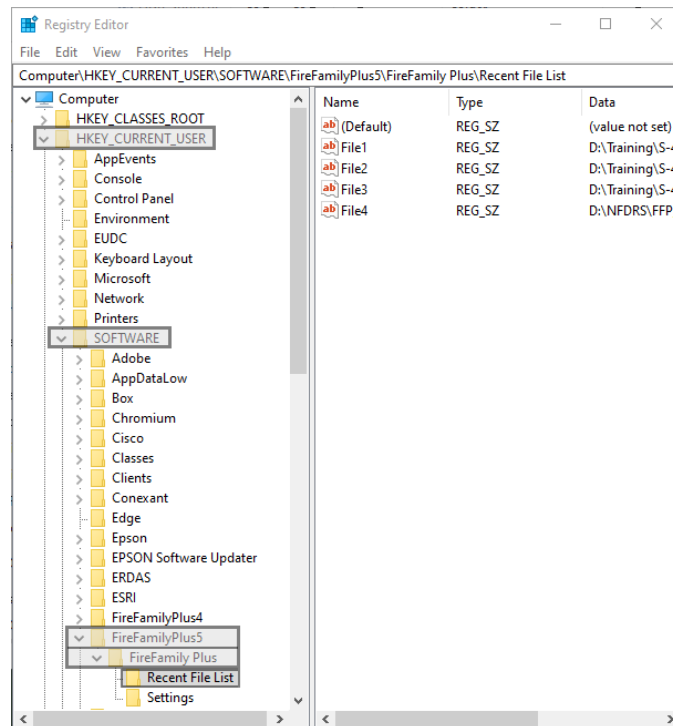
### 4. My database crashed, and when I try to open it, FF+ closes immediately. What now?

See the previous question, if that does not work, you can try this solution.

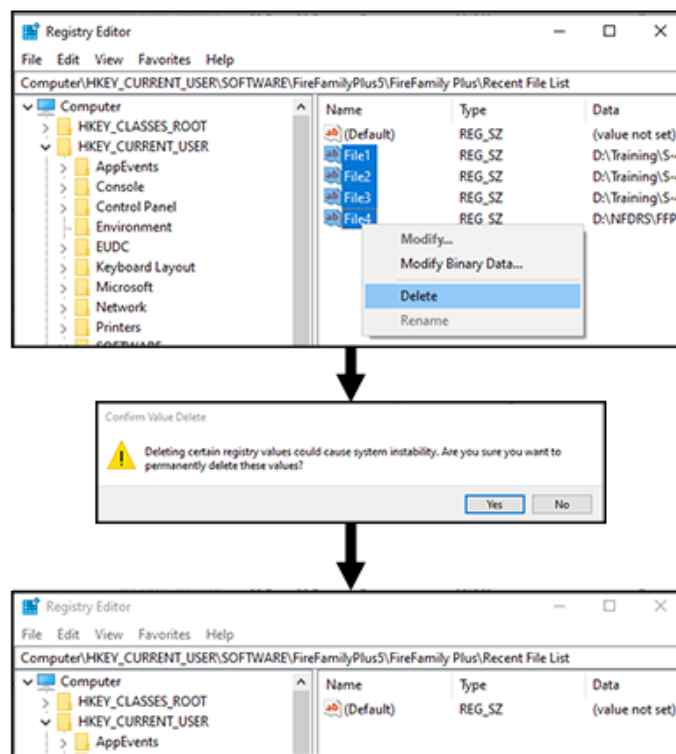
Do not try to open FireFamilyPlus again. Instead, you should edit your registry. Click on the **Windows Start menu** and immediately start typing *Registry Editor*. It should show up as the Best Match. Click on the **Registry Editor App**. USFS computers do not currently require administrative privileges to edit the registry. USE CAUTION WHEN EDITING ANYTHING IN THE REGISTRY EDITOR.



When the Registry Editor is open, use the folder structure on the left-hand side to navigate to **Computer > HKEY\_CURRENT\_USER > SOFTWARE > FireFamilyPlus5 > FireFamily Plus > Recent File List**. It should look similar to the image below.



Highlight the files named **File1** through **File4**. Right-click on them and select **Delete**. Click **Yes** on the warning window. When you are finished, there should be a single file: (Default).



When you are finished, close the **Registry Editor**. Then open FireFamilyPlus, navigate to the database, and try to open it. If this does not work, contact the Help Desk for assistance.

**5. What is the size limit for a FireFamilyPlus database?**

The current size limit for a FireFamilyPlus database is **1 GB**. Files larger than this can generate increasingly nonsensical outputs. Compacting the database often decreases its size temporarily. However, if you are working with a number of weather stations, you may need to delete unused/older data or create multiple databases. For example, you can create a database for each Fire Assignment or for each Fire Danger Rating Area (FDRA) when developing a Fire Danger Operating Plan (FDOP).

**6. How do I save a backup of my FireFamilyPlus database?**

The easiest way to save a backup of your database is to create a zip file. Ensure that the database is closed. Right-click on the database and select **Send to > Compressed (zipped) folder**. Do this every time you make major changes to the database to ensure you always have a recent copy.

**7. Why is my database running so slowly?**

There are a number of reasons why the database is running slowly, including updates to Windows, the size of the database, and the amount of data being processed (particularly when initially calculating dead fuel moisture values). Try compacting the database. If this does not help, you may need to decrease the size of the database (see [Question 3](#)). See the Troubleshooting Guide for more information.

**Input Data**

**8. Who will have a FireFamilyPlus database for us when we show up on an incident?**

Contact the local Fire Planner or Dispatch Center Manager to see if they have an updated database. Otherwise, you will need to create a database on your own.

**9. Can I download weather from WFDSS for use in FireFamilyPlus? How do I do that?**

For the latest information about downloading weather data, obtain the latest Job Aids and review Job Aid 4. If this Job Aid is inaccurate, please contact the IIA Help Desk (information at end of document).

Weather from the [Wildland Fire Decision Support System \(WFDSS\)](#) cannot easily be downloaded and put into FireFamilyPlus. You can download a daily FWX file from FSPro, but you cannot specify the data filter; all available data for the station are downloaded. This file must be modified to include only relevant information and imported as generic weather data as outlined in Job Aid 4.

**10. Where can I find station catalogs?**

While station catalog data can be found in WIMS, a station catalog formatted for direct input into FireFamilyPlus can be downloaded from the Data Warehouse (see Job Aid 4).

**11. Where do I go to get weather data?**

There are a number of sources of weather data. See Job Aid 4 for details. Most of these sites provide data in either the FW13 or FW21 format that can be readily imported into FireFamilyPlus.

**12. Should I download FW13 or FW21 weather files?**

You can download either format.

- FW21 is the newest format and contains only the data required for NFDRS v4.
- If you want to use NFDRS v2 or v3, you will need to download data in the FW13 format.

**13. Where do I go to get fire data?**

There are also a number of places to get fire data. The most recent is [InFORM](#). You must obtain a NIFC account and request access to InFORM. See the website for more information. Job Aid 5 contains information about additional fire data sources.

#### 14. How do I add new fire data?

See Job Aid 5 for the latest information on fire data. To import custom fire data, see Job Aid 10.

#### 15. How often should I update the data?

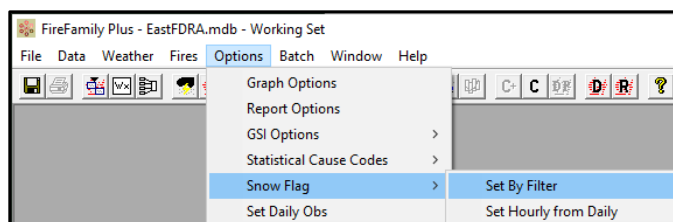
Updating data depends on how you are using the data. For some people, updating the data once/year is enough. Others are updating it weekly, or even daily. There isn't a "correct" answer to this question.

#### 16. How do I set the snow flags in FireFamilyPlus? How accurate are these snow flags?

The Snow Flags in FireFamilyPlus are brought in with the data from other sources. If there are no data, it will be left blank. The data themselves are only as good as their source. Data in WIMS are manually input. Data from the CEFA website (soon to be turned off), contain snow flags that were manually created. It is always good to check data quality, including snow flags.

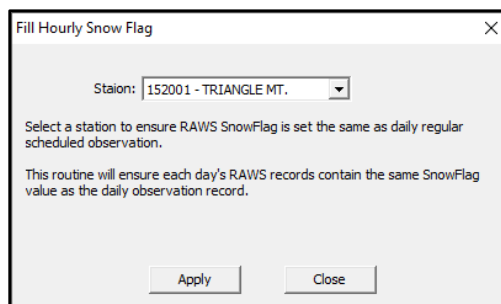
To set snow flags in FireFamilyPlus, use the following steps.

- Click on **Options > Snow Flag**.
- You can select either **Set by Filter** or **Set Hourly from Daily**.



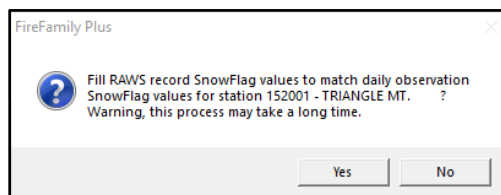
- a. Select **Set Hourly from Daily** to use the Snow Flag reported at 1300 by WIMS to fill in the values for the remaining 23-hours per day.

- Click on **Options > Snow Flag > Set Hourly from Daily**.
- In the Fill Hourly Snow Flag window, select a **Station** and click **Apply**.



A FireFamilyPlus window appears verifying that you want to proceed with this change. Click on **Yes** or **No**. The process can take some time.

**Tip:** All data are processed; you cannot select a given time frame.



- When it is finished, select another weather station, or click **Close**.
- b. **Set by Filter** allows you to set the Snow Flag for a period of time for a given station.
- Click on **Options > Snow Flag > Set by Filter**.
  - In the Snow Flag Management window, select a **Station**. The station must have data, and you can only select one station at a time.

- Select a **Snow Flag Value**: A Snow Flag of **0** indicates there is no snow, while a Snow Flag of **1** indicates snow is present.
- Identify the **Years** to modify: The first and last year of data are shown once you select a station.
- Select an **Annual Filter (Time of Year)**. If you want to enter data for the winter months, you will need to add snow flags for the beginning of the year (e.g., January-February) and end of the year (e.g., December) separately. FireFamilyPlus will *only* change the data within the selected Working Set.
- Click **Apply** to set the snow flags or **Close** to close the window.

- Once you click **Apply**, a verification window will appear. Select **Yes** to change the snow flags or **No** to close the window without changing them.

- A summary of the changes is shown. Click **OK** to return to the Snow Flag Management window.

**Note:** Once the snow flags have been modified, you will need to recalculate the dead fuel moisture and fuel temperature values for the time period. You do not have to do this immediately; it will be done automatically the next time you create a Stats Graph or other output.

- Modify the settings for another time period or station or click **Close** to exit the Snow Flag Management window.

## Calculations

### 17. How often do I need to compact? What happens if I don't?

Compacting the database deletes temporary data and removes blank lines within the dataset. For large databases, best practice is to compact the database one or more times/day if you are doing a large number of analyses or your database is large.

### 18. Can we change the GSI values used for our area?

Yes, but care is needed when selecting values. Select values that match seasonal greenup and curing in your area.

**19. What is a batch file used for?**

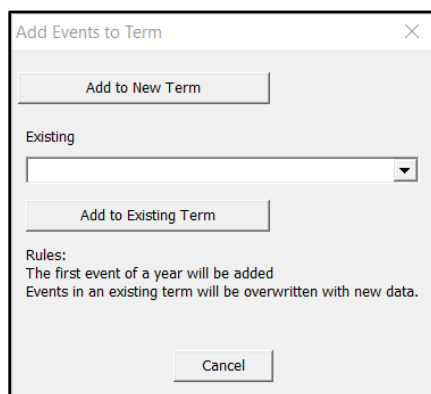
A batch file allows you to pre-program a series of analyses that you do regularly. For example, you may want to create daily Stats Graphs for an area. You can set up FireFamilyPlus to do this. As you import new data, you can run the batch file and receive Stats Graphs with updated data. However, FireFamilyPlus is currently unable to download and import weather data automatically. You will need to do that first.

**20. What is the difference between a batch file and Interactive Batch?**

While a batch file is a pre-programmed set of outputs that you create, Interactive Batch automatically creates most of the reports, graphs, and analyses available for a selected weather station or SIG. You can select multiple weather stations or SIGs at a time. Results are created for the weather data, US NFDRS outputs and Canadian outputs. Simply find the output of interest and view the results.

**21. I used Event Locator to populate the Term file. What do I need to know?**

Set up an Event Locator session with the established season slowing/ending conditions. Once the Event Locator file has been created, click on **Options > Add to Term**. Note: The first event that matches your criteria will be added to the term file. This may or may not represent the end of your fire season, so choose the time period carefully or examine the Event Locator data yourself.



**Working Set Window**

**22. When do I need to select “Force NFDRS Recompute”?**

If you have made significant changes to existing weather data for a weather station, you will need to check the box next to **Force NFDRS Recompute**. If you are adding new data to the dataset, you do not need to force a recompute.

Perhaps the easiest way to recompute the data is to create a Stats Graph (e.g., ERC-Y). Once the Stats Graph has been created, uncheck the box next to **Force NFDRS Recompute** and continue your calculations.

**23. What happened to “Enable Auxiliary Years Overlay”?**

Because of the confusion it caused, **Enable Auxiliary Years Overlay** was removed in 2023. Calculations are now made for all weather data included in the Station or SIG, regardless of the Working Set. This allows users to add overlays at any point during their analysis. See [Question 25](#) for possible issues.






**NFDRS Outputs**

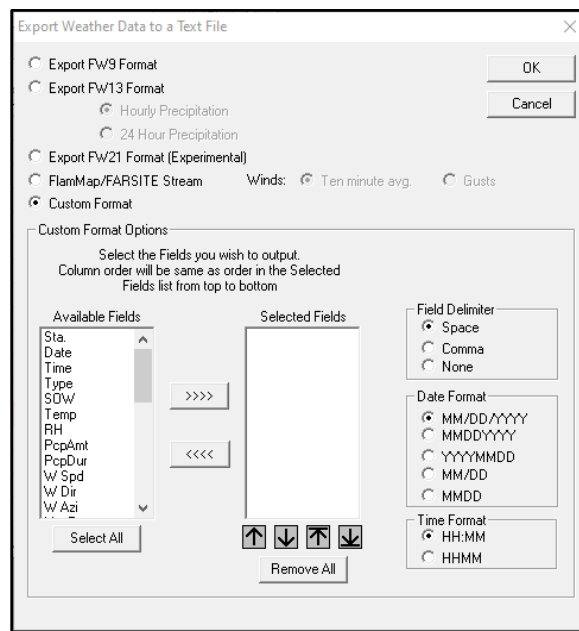
**24. Why is the Y-axis so long? All the lines are crammed at the bottom of the graph.**

We recently removed the checkbox for Enable Auxiliary Years. FireFamilyPlus now calculates the fire danger for all of the data in the file so that you can overlay any year in the dataset on a graph without rerunning it. If the lines are not taking up the entire graph, there is an erroneous datapoint somewhere in the database but outside of your current working set. Search the input data to find the error, delete it, and try again. Look for the data point prior to contacting the help desk. It is there.


## 25. How do I export weather data?

Weather data are exported via the Observations window.




- Click on **Weather > View Observations** and then either **Daily** or **All** or select the shortcut icons:  for daily and  for all observations.
- There are three options in the upper left corner of the Observations table. You can save (  ), print (  ), or delete (  ) observations.
- Observations can be exported as **FW9** (deprecated), **FW13**, **FW21**, **FlamMap/FARSITE Stream**, or **Custom Format**.
  - The first four options have pre-determined formats.
    - **Export FW13 Format** allows you to select between **Hourly Precipitation** and **24 Hour Precipitation**.
    - **FlamMap/FARSITE Stream** allows you to select **Winds** that are either **Ten minute avg.** or **Gusts**.
  - If you select **Custom Format**, you can select from all available fields. Change the output format as desired (e.g., change **Field Delimiter** to **Comma** for ease of use).



## 26. How do I export fire data?

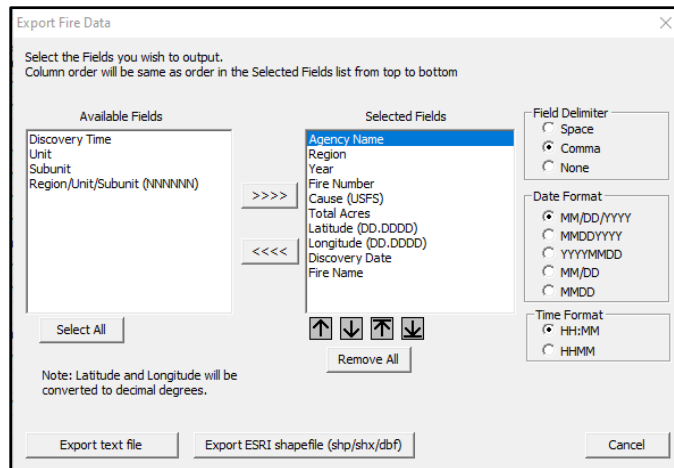
View the fire data by going to Fire data **Fires > Summary**. Select either **Working Set** (  ) or **General**. For **Working Set**, you must have specified **Fire Associations** for the Station or SIG. **General** allows you to identify any fire associations you would like as well as the years to display. Selections in **General** do not affect the Working Set in any way.

- Click on Fires Summary and select either Working Set or General.
- In the **Select Fires for Summary for...** window, select the Agencies, Regions, Units, and Sub Units as desired.
- Click on **View Fires**.

There are three options in the upper left corner of the Observations table. You can save (  ), print (  ), or delete (  ) observations.

- To export data, click on the **Save** button.
- Identify the **Selected Fields** and export the data using **Export text file** or **Export ESRI shapefile (shp/shx/dbf)**.
  - When using **Export text file**, set preferences for the file on the right. For best results, select **Comma** for **Field Delimiter**.
  - **Export ESRI shapefile** has a defined format. Make sure to include the **Latitude** and **Longitude**.





## 27. How do I export Stats Graph data?

Sometimes you want to export data from a graph for use in other software.

- Create a Stats Graph for the variable(s) of interest.
- Click on **File > Export Graph Data**.
- Delete any lines of text above variable names.
- Delete the line of dashes between the variable names and the data.

The final data (example below) can be imported into Excel for graphing.

Period	Mean	Min	Max	St. Dev.
1/1	9.75	0.00	24.63	7.89
1/2	6.85	0.00	13.24	4.50
1/3	5.26	0.00	15.10	5.42
1/4	7.65	0.00	12.10	4.57
1/5	8.01	0.00	14.48	4.90
1/6	9.33	0.00	22.25	7.20
1/7	8.20	0.00	18.97	5.67
1/8	6.43	0.00	19.16	6.82
1/9	4.60	0.00	11.54	4.92
1/10	5.31	0.00	10.81	4.52
1/11	3.92	0.00	13.90	5.19

## Other Fire Danger Products

### 28. What is the latest FEMS news, and what does that mean for FireFamilyPlus users?

To find out the latest news about the Fire Environment Mapping System (FEMS), visit [their website](#) or [sign up for their quarterly newsletter](#). Once FEMS 1.0 is operational, FireFamilyPlus users should be able to go to a single location for easily downloadable historical weather data, which includes gap-filled data, if desired. FireFamilyPlus will continue to be available for off-line use, including training. Outputs from both systems should be identical.

### 29. What is the 8–14-day Climate Prediction Center NFDPS product? Explain how it works.

This product is not developed by the US Forest Service, and as such the developers of FireFamilyPlus are not responsible for its maintenance. Based on our research, the Climate Prediction Center (CPC) produces a [Fire-weather Week 2 \(8-14 Day\) Forecast](#). The outputs are identified, as with other CPC products, by terciles (ranked and divided into thirds identified as *Below*, *Average*, and *Above*). *Below* indicates those values that are < 33.333% of the climatological average, while *Above* indicates those values > 66.667% of climatology.

Climatology is based on data from the [ECMWF ERA-5 reanalysis data](#) for 2000-2019, These data were used to create Climate Normals. Work for this product was done by researchers at the University of Colorado Boulder, and NOAA/ESRL, Physical Sciences Laboratory in Boulder, Colorado. Read the journal articles by Worsnop et al (2020, 2021; links on the website) or contact the developers to understand how it was developed.