

FireFamilyPlus Change Log



FireFamilyPlus is used for analysis of fire danger indices and weather. It is a Windows program that combines the fire climatology and occurrence analysis capabilities of the PCFIRDAT, PCSEASON, FIRES, and CLIMATOLOGY programs into a single package with a graphical user interface. The current version of the program is Version 4.2

(Build 24.19), released in September 2016. The most significant changes in previous Version 4 releases are provided here.

FireFamilyPlus Version 4.2 Build 24.19, Release September 2016.

Major Items of Note in FireFamilyPlus 4.2

- Corrected defects that caused the application to freeze on some 64-bit Windows 7/8/10 Operating Systems with 64-bit MS Access drivers.
- Added National Association of State Foresters (NASF) as a standard fire agency using State and County FIPS Codes as Region and Unit identifiers. Source data: FAMWEB Data Warehouse. For more details, see the online tutorial under the Help menu.
- Corrected hourly values of fuel moistures (and subsequent NFDRS indices) computed using Fosberg methods. Only 1-hour and 10-hour moistures are now computed from hourly observations; 100-hour, 1000-hour, live fuel moisture, and KBDI are computed only using the 1300 LST observation.
- New FlamMap/FARSITE Weather Stream (*.wxs) exports, with gust or average winds have been added to Hourly Weather Export options.

Minor Corrections and Enhancements

- The template database, ffplus4.ffp has been updated to reflect recent WIMS station catalog data for active stations. Historical stations were removed, and USFS and FWS agency structures were updated to reflect various consolidations and additions.
- Removed WRCC RAWs as a weather import option. Functionality to ingest hourly wind gust data is now in standard FW13 format from the Western Region Climate Center (WRCC).
- Enhanced Wind Rose graphics to use either 10-minute average or hourly gust values, or both.
- Removed the FARSITE Version 3 option in Hourly Data Analysis FARSITE Exports.
- Verbiage on PocketCard thresholds when percentile is ≤ 50 has been corrected.

- Stoplight on PocketCard has been removed.
- Default values for local parameters Wind, Relative Humidity, and Temperature have been removed. The user is required to make thoughtful entries.
- Various defects in Interactive Batch (IAB) were corrected for more consistency between Batch and Interactive working sets.
- Export Daily List to DL_Output table in database now works in batch mode.
- Export Hourly Listing to HL_Output table in database now works as expected.
- Various minor improvements have been made to FW9/FW13 and Generic Weather Import functions.
- Various minor improvements have been made to Generic Fire Import functions, including adding new unit/subunits as needed.
- Some rudimentary editing of USFS and DOI fire cause codes is available under **Options > Statistical Cause Codes**.
- When *Human* is selected in Fire Analysis, you can further restrict fires by statistical cause by clicking on the "More" button.
- Live Fuel Index values are correctly computed for a SIG.
- When *Daily* is selected as the category in **Event Locator**, the actual value is displayed instead of TRUE.
- When *Hourly* is selected as the category in **Hourly Event Locator**, the actual value is displayed instead of TRUE.

FireFamilyPlus Version 4.1 Build 1520, Release March 22, 2013

Major Items of Note in FireFamilyPlus 4.1

- **New Analysis Variables:**
 - Fosberg Fire Weather Index (FFWI).
 - Live Fuel Index Based Live Herbaceous Fuel Moisture (FLI HerbFM - Experimental).
 - Live Fuel Index Based Live Woody Fuel Moisture (FLI WoodyFM - Experimental).
- **New Station Metadata:**
 - WIMS Regular Scheduled Observation Time (RS)
 - NESDIS Station ID
 - WRCC Station ID
- **New NFDRS Processing Options to more closely align with WIMS Version 2:**
 - Process NFDRS for both traditional "O" records and WIMS Version 2.0 "R" records with calculated State of Weather and WetFlag. These "R" records, for the RS time, are currently only available from WIMS via the PLST or Dashboard (FW9/FW13 Export Functions).
 - State of Weather can be estimated for the RS observation from hourly weather data as is done in the WIMS RAWS Gateway. Solar Radiation and Precipitation Thresholds can be modified as in WIMS. **See Weather > Hourly Data Analysis > Calculated SOW/WetFlag.**
 - WIMS Snow Flag logic in NFDR computations. (The Snow Flag is not yet transmitted externally but should be part of FW13 exports by spring of 2013.)

- **Weather Data > Import and Export** accommodate both FW9 and new FW13 Fire Weather Transfer Formats. FW13 adds Solar Radiation, Hourly Gust and Snow Flag.
 - **TERM:** A Term module has been added (Weather > Term). Term files can be initially populated from the Event Locator or manually. Term files can be imported and exported to text files. See Help Topic "Term."
- **Fixes and Enhancements**
 - **Interactive Batch:** More robust with better continuity between working set in Interactive and Classic modes. Reports in Interactive Batch can be edited and Copy, Cut, and Paste functions work as in the classic mode (Ctrl-C, Ctrl-X, Ctrl-V, respectively). Left clicking mouse in Graph Window now returns X and Y values as in Classic mode
 - **Stats Graphs:** Overlay Year(s) are now included in File > Export Graph Data.
 - **Fire Occurrence Graphs:** File > View Graph Data moved to Option > View Graph Data.
 - **Fire Analysis Graphs:** Lines thicker and line types differ for Fire-Day types. **Fire Analysis Statistics:** Sum of Squares information removed for easier reading.
 - **Icons** added to Toolbar for Daily List (L), Viewing Daily Observations (D), viewing All Observations (R), and viewing Fire Business Candidates (C). The View Observations windows can now be minimized while performing other FFP functions.
 - **Data Count Report:** Reformatted for easier reading.
 - **Selecting Variables:** The display order may be changed by clicking the Variables button. Available orders are: Alphabetical, Grouped (WX/NFDRS/CFDR), and ID (from ffpClimateOptions table).
 - **Daily List:** Results of Daily List can be directly exported into the current FireFamilyPlus database as a table. Table is always overwritten and named "DL_Output." StationID or SIG name is included in each record. Memo field of first record in DL_Output holds the run parameters.
 - **Batch\Run Options:** Moved from Options to Batch on the main menu..
 - **NFDRS Calculator:** Validates field limits and recalls last session.
 - **Data->Import->Weather (FWX/FW9/FW13):** If the importer detects a station ID from the Western Region Climate Center (WRCC), you have the option to load the data under the WRCC ID (current functionality) or the associated WIMS ID (new functionality).

FireFamilyPlus Version 4.1 Beta Release, April 16, 2010

- **Added Features**
 - A TERM module (Weather > Term) has been added.
 - The "Term" module duplicates the functionality of the Waiting Time functions in the RERAP program.
 - Existing Term Files may be imported and any number of Term Files can be stored in the database. Term files are associated with the Active Working Set (Station/Sig) when the file was created.
 - There is capability for extensive commenting in the term file. Term files in the database can be edited or deleted.
 - Finally, results from the **Event Locator** can be used to provide initial dates for a term file. See the Help Topic entitled "Term."
- **Fixes and Enhancements**

- Interactive Batch:
 - User Variables are available.
 - Overlay Years are available.
 - Existing Dates in the Working Set are used instead of all available data; changes made to working sets in Interactive Batch are saved in the active working set.
- Importing Multiple FW9 Files: The "Operation Failed, No Current Record" Error has been fixed.
- Exporting Fires to Shapefiles: Fire Number not truncated in length; State Fire Cause Codes are now correct. (They were being remapped to DOI codes).
- Live Fuel Moisture Calculations: Certain warm climate stations would not properly green up every year because X1000 not reset to FM1000. This has been corrected in CFNDRS.dll.

FireFamilyPlus Version 4.0.2 Beta Release, December 1, 2008

- **Added Features**Files can now be run in "Batch Mode."
 - To facilitate building batch jobs, FFP "Runs" can be saved in the active database.
 - Runs are numbered sequentially, and all the parameters within a run (station, SIG, data years, seasonal filters, overlay years, etc.) are saved.
 - Once in a database, these Runs can be used to:
 1. build batch jobs consisting of one or more saved runs, or
 2. reload identical settings and Run FFP in the "classic" mode.
 - When running a batch job, output can be to the screen (flying windows) or auto- saved to disk.
- Files can also be run in "Interactive Batch Mode."
 - The interactive batch function allows you to "Run" any number of stations or SIG's at one time.
 - Every report for every variable in the database is generated for all years of data for each station.
 - Reports are tabs across the page top, stations and variables are expansion lists on the left side of the screen.
 - Icons allow you to change graph options, working set dates, overlay years, and fire- type selections to view. Changes are made to all reports and variables at once and redisplayed.
- **Fixes and Enhancements**
 - Fire Occurrence Data:
 - The new BLM WFMI Fire Occurrence Export format (pchaffp) is supported along with the new NWCG Unit Identifiers for BLM, NPS, and BIA fire associations. More DOI "fire types" can now be imported.
 - A Generic Fire Import module supports Comma Separated Value (CSV) files for importing Custom agency fire data. More fields (e.g. county, latitude, longitude, etc.) can be included. The FPL format is no longer supported, but existing FPL files should be easily converted to CSV files.
 - Fires from the Working Set Fire Associations can be exported to an ESRI shape file.
 - Weather Data:
 - ALL Station information from WIMS as of April 2007 is in the default FFP database structure. Therefore, if you create a new database or upgrade from a Version 3.0.5 FFP database you do not need to import catalogs. You may still wish to import a catalog to update information or when a new station has been added to

- WIMS.
 - Generic weather import functionality allows flexibility to import data from alternate sources. It displays all of the weather observation elements from the FireFamilyPlus WYOBS data table and allows you to select columns that match elements in your alternate weather file. You can select the field delimiter and date/time formats.
 - WRCC RAWs: This functionality allows flexibility in importing hourly RAWs data from the Western Region Climate Center's (WRCC) Data Lister (<http://www.raws.dri.edu/index.html>). You can include wind gust and solar radiation information to the FFP database.
 - **Note:** Data imported in any manner from the WRCC **will not** have a STATE OF WEATHER (SOW) code.
- Station Information and NFDRS:
 - The latitude and longitude are now GIS friendly.
 - When importing weather data, the WET FLAG data is now used and the WIMS snow cover logic has been implemented in FFP4.
 - Custom Yearly Initialization: To account for variable greenup dates and to better support the Canadian system, a Custom Yearly Initialization feature has been added to FFP. See **Weather > Custom Yearly Init**.
- Brush Dormant Date:
 - To support areas where freezes do not generally occur, the capacity to allow shrubs to go into dormancy is supported by a new dormant flag and date.
 - If the flag is set, a valid date is entered in the live fuel moisture model (78 models only), the vegetation state has cured, the observation date is greater than the dormant date, and the live fuel moisture model has dried the woody fuel moisture to its dormant value, the live vegetation state is put into a dormant state so that woody fuel moistures do not increase late in the fall with fall rains. This change was requested by Russ Gripp and allows FFP to better emulate user control in WIMS.
 - The default value for this field is unchecked.
- A "use weighed 10-hr sticks" flag tells FFP to ignore weighed sticks and compute the 1- and 10-hour moisture by algorithm for the period of record. This allows for a consistent climatology for stations that may have 15 years of weighed sticks and 15 years without.
- Reports:
 - Expanded report headers include all current settings and station metadata. The ability to control report header information is included under the **Options > Report Options** menu item. You can select a delimiter (e.g. comma) for some reports to facilitate importing into other applications such as spread sheets or statistical analysis programs.
 - There is a FlamMap Fire Risk Export function.
 - Wind roses are available for hourly data (FW9 or WRCC).