

## Job Aid 15. FireFamilyPlus Term Files

### Introduction

A term file is one way to assess the probability of long-term fire growth. It uses historical dates to calculate a probability of distribution for season-slowing or season-ending events. This information can be used in concert with current season forecasts to answer the question, “When will this season end?”

### Identifying Season-Slowing or Season-Ending Events

A term file in FireFamilyPlus identifies dates that meet the conditions you determine. The following steps are used to create a Term File.

1. Determine if you are creating a term file for a season-slowing or season-ending event.
2. Identify the conditions that lead to this event.
3. Set your Working Set.
4. Identify potential dates that meet the criteria by using the **Event Locator (Weather > Event Locator)**.



- If conditions are multiple day events, ensure that you set the **Period Length** correctly.
  - If you have multiple criteria, use the **Operator** to include them. This is especially important if all criteria must occur simultaneously (Operator = **And**).
5. Examine outputs from the Event Locator and identify a date or dates for each year on which the conditions were met.
    - Use dates appropriate for the question (season-slowing or season-ending).
    - If there are multiple possible dates, include all of them for further analysis.
    - **Document** why you chose the dates that you selected; you will need this information later.
  6. Use a Stats Graph with a year overlay to further refine dates or to identify dates during years when the criteria identified in Step 2 did not occur.
    - Double-check the **Data Years** in the Working Set.
    - Ensure the **Period Length** is correct in the Working Set.
    - **Create** a Stats Graph for the variable.
    - **Add** overlays for a year of interest (**Graph > Overlays...**). Set **Color**, **Width**, and **Line Style** as desired.
    - **Add** fires to the graph as follows.
      - Open the **Graph Display Options** window (**Options > Graph Options...**).
      - Click on **Fires** and check the boxes next to **Fire Days**, **Large Fire Days**, and **Multi Fire Days**.
      - Enter the values associated with a **Large Fire Day** (acres) and **Multiple Fire Day** (number of fires/day).
      - Click **Apply**, but do **not** close the **Graph Display Options** window yet.
    - It may be helpful to **Remove** the min/max lines, particularly if you are looking at a graph of precipitation.
      - Click on the tab for **Line at Average** and uncheck the boxes next to **Mins** and **Maxs**.
      - Click **Apply**.
- Tip:** If there is more than one Stats Graph open and you want to apply this change to all open graphs, select **Apply to All**.*
- Close the **Graph Display Options** box.

- Combine information from the graph with fire data to select a single event for each year.  
*Tip: If there are no dates that match your criteria for a given year, you may need to select the date of the last fire or the last large fire, depending on local fire history.*
- Document why you selected the dates that you selected; you will need this information later.

## Creating a Term File in FireFamilyPlus

- Create a new term file for your station/SIG of interest by going to **Weather > Term > Working Set**.  
*Tip: If you are opening or importing an existing term file, go to **Weather > Term > General**.*
- Select **New**, **Edit**, **Delete**, **Import**, **Copy**, or **Export** depending on your task.
  - In S491, you will **Import** a term file that has already been started for you.

| SIG/Station | Name | Start | Comment |
|-------------|------|-------|---------|
|-------------|------|-------|---------|

- The **Edit Term Data** window contains a lot of information.

Name: KEY\_Libby, 2003-2017      Start Day: 08/15      Key Probabilities

Comment:

Criteria are ERC <= 60th percentile and does not rebound. In case the ERC never gets below the 60th percentile by the end of October, the date of the last fire is used.

Start Year: 2003      End Year: 2017      Apply

| Year | Day   | Comment   |
|------|-------|---|
| 2003 | 10/12 | Date derived from Event Locator                               |
| 2004 | 08/20 | Date derived from Event Locator and verified with Stats Graph |
| 2005 | 09/29 | Date derived from Event Locator and verified with Stats Graph |
| 2006 | 10/14 | Date derived from Event Locator and verified with Stats Graph |
| 2007 | 09/27 | Date derived from Event Locator and verified with Stats Graph |
| 2008 | 09/20 | Date derived from Event Locator and verified with Stats Graph |
| 2009 | 10/13 | Date derived from Event Locator and verified with Stats Graph |
| 2010 | 09/01 | Date derived from Event Locator                               |
| 2011 | 10/01 | Date derived from Event Locator and verified with Stats Graph |
| 2012 | 10/13 | Date derived from Event Locator and verified with Stats Graph |
| 2013 | 09/16 | Date derived from Event Locator and verified with Stats Graph |
| 2014 | 10/10 | Date derived from Event Locator and verified with Stats Graph |
| 2015 | 10/17 | Date derived from Event Locator                               |
| 2016 | 09/04 | Date derived from Event Locator                               |
| 2017 | 10/16 | Date derived from Stats Graph                                 |

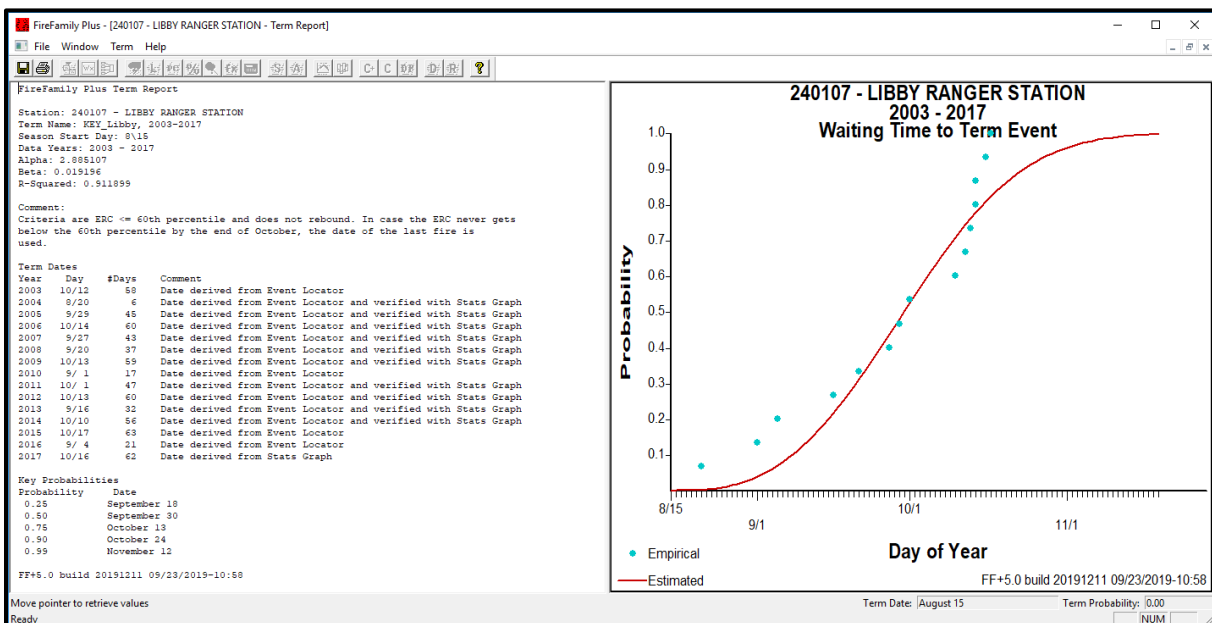
Save      Save & Run      Close

- Name:** Give the term file a meaningful name. Be specific as it can get confusing when there are multiple term files for a given SIG/Station.
- Start Day:** The Start Day must be before the first season-slows or season-ending date in the data file. It should be close to the first date to improve statistical fit.
- Comment:** Provide general comments about the Term Conditions used to create this file. This allows others to recreate your analysis.
- Start and End Year:** Ensure the Start and End Year match the data you want to use.

- Enter a **Start and End Year**.
- Click **Apply** to create a table with a row for each year in the list.
- **Day:** Enter the season-slowng or season-ending date, as appropriate here. You can type in the date directly (MM/DD/YYYY) or use the drop-down calendar.
- **Comment:** In the comment cell for each year, add the specific criteria used to identify the date you selected.
- **Save:** Click **Save** to save the information with your database.
- **Save and Run:** When all fields are completed, select **Save & Run** to generate a report.
- **Close:** When you close the file, no report is generated. Any changes made since the last “Save” are lost.

## Interpreting Term File Reports

The Term Report consists of a table (left) and a graph (right). The table shows information about the Working Set, the values entered in the Weibull distribution equation, the criteria you entered, and the Key Probabilities. The graph shows how well the probability curve (red line) matches the dates you entered (teal dots). Remember, the Key Probabilities are just that – probabilities. They are good for general planning. You do not always want to use the 99th percentile probability, particularly if it is cooler and wetter than average. Use this information in combination with outlooks for this season to determine when the season is likely to end.



**Tip:** The term file is not the only way to estimate season-slowng or season-ending events. You may find other methods work better in your area. If so, document them so that others know what you have discovered.