Link to documents in this guide: http://www.fs.usda.gov/detail/r5/fire-aviation/management/?cid=stelprdb5372656 Look under the **R5 PAL Toolkit**

PAL Analysis Steps

Request weather data and station catalogs for stations from KCFAST at FAMWEB
https://fam.nwcg.gov/fam-web/ → KCFAST Access requires a FAMWEB password

Request weather data https://fam.nwcg.gov/fam-web/ → Wildland Fire Related Links →Fire and Weather Data

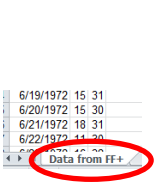
Open FireFamily Plus. Create a new FF+ database and import your data

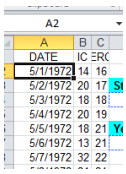
Quality check all your data within FF+

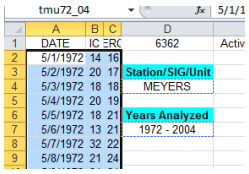
Create all of your SIGS in FF+ and make sure all of your stations are showing

Prepare your PAL tabulator Excel Sheet

- From the R5 PAL Toolkit, download **PAL Climatology Tabulator Matrix (year round)**
- Open the sheet **Data From FF+** (This is the only sheet we will be using. The other sheets are for tabulating the data within Excel)
- DO NOT delete any data from Activity Level column
    - Imported data will go into the DATE, IC, and ERC columns
    - Column D is a number count, showing how many weather entries were imported
- Click in cell A2
    - CTRL+SHIFT→RIGHT-ARROW + DOWN-ARROW
    - Hit **Delete**, answer **YES** (These steps should have deleted only the data from the 1st three columns)
    - Click on the name in column D under Station/SIG, hit **Delete**
    - Click on the Years under Years Analyzed , hit **Delete**
- Save this new sheet as your base sheet. Name it Blank PAL Tabulator or similar





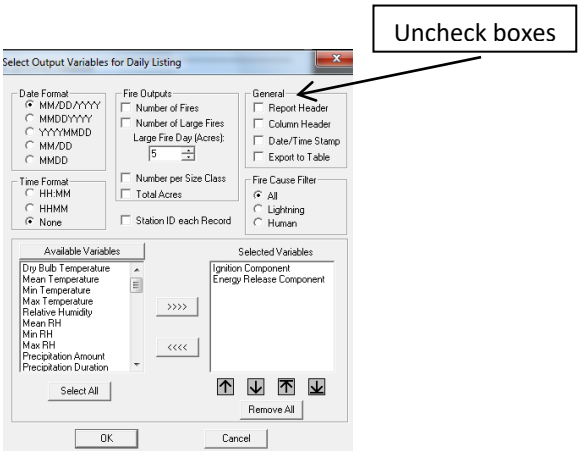


Back to FF+, set your FF+ Working Set to include: (this needs to be done for each SIG/Station)

- All years for data
- Analysis Period Month/Date Range
- Analysis Period Length to one day
- Fuel Models must be NFDRS Fuel Model G
- Set appropriate Green-Up date

Generate Daily Listing for Ignition Component (IC) and Energy release Component (ERC)

- Weather→Season Reports→Daily Listing
- Select Output Variables as shown below and then click OK to run

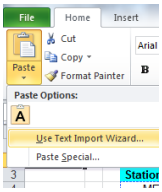


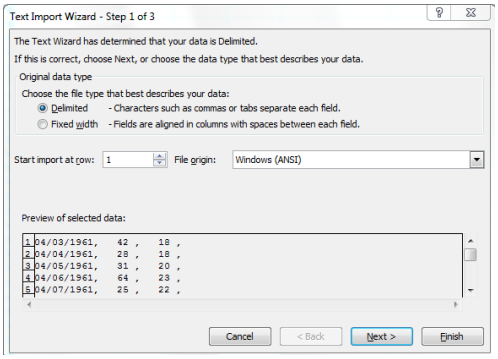
Ignition Component must show up before Energy Release Component in Selected Variables. When run you should get data in a separate window that looks similar to below.

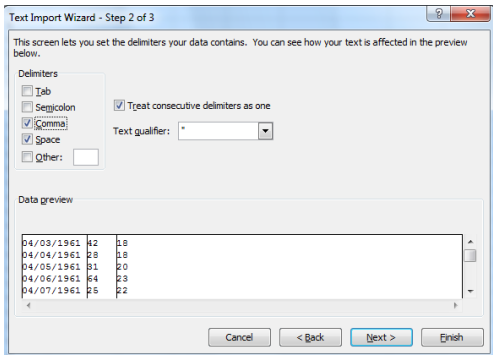
```
04/03/1961,  42 ,  18 ,
04/04/1961,  28 ,  18 ,
04/05/1961,  31 ,  20 ,
04/06/1961,  64 ,  23 ,
04/07/1961,  25 ,  22 ,
04/08/1961,  58 ,  26 ,
04/10/1961,  47 ,  27 ,
04/11/1961,  53 ,  28 ,
04/12/1961,   0 ,  19 ,
04/13/1961,   0 ,  23 ,
04/14/1961,  35 ,  28 ,
```

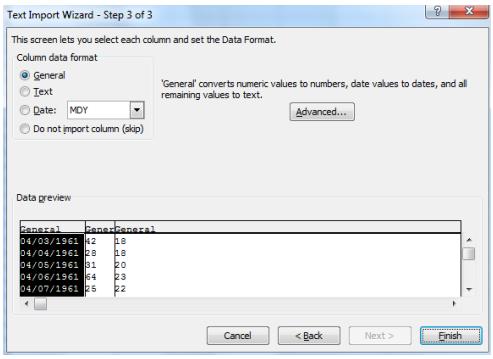
Save the Daily Listing for that station

- Within FF+, in the Daily Listing window, hit **CTRL+A** (to select all), **CTRL+C** (to copy)
- Go to your Blank Tabulator, click in cell **A2.**
- On the Home Tab of Excel, the drop down arrow under Paste will be **Use Text Import Wizard**, click it (see image below)
- Make sure your screen matches below, should be defaults, Click **Next**
- Click the comma box, should look like below
- Step 3 window, keep defaults and click **Finish**



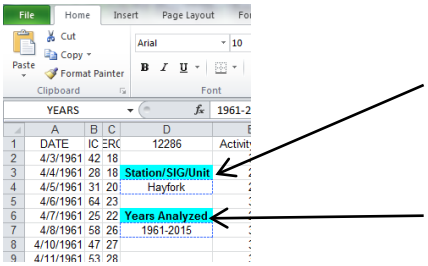






No data defining is necessary in Excel 2010

- Type your station name in the D column under **Station/SIG** and the year range of your data under **Years Analyzed.** Your tabulator should look similar to below



- Save this worksheet with a name identifying your data, i.e: **SHF Hayfork PAL**
- Repeat this process

If you did everything correctly, in Excel, the Climatology sheet (bottom of Excel window) and your PAL sheet should look similar to below

Month	A	B	C	D	Ev	E	Days Analyzed	
	Expected Days per Month at each PAL Value							
January	31.0	0.0	0.0	0.0	0.0	0.0	55	31
February	28.0	0.0	0.0	0.0	0.0	0.0	62	28
March	25.0	5.3	0.8	0.0	0.0	0.0	82	31
April	14.2	6.8	7.8	1.2	0.0	0.0	265	30
May	7.9	7.9	9.9	5.0	0.2	0.0	702	31
June	3.6	6.1	12.1	6.8	1.5	0.0	1053	30
July	0.3	1.9	10.0	8.6	9.8	0.2	1074	31
August	1.3	1.8	7.5	9.3	11.0	0.1	1059	31
September	2.7	2.7	10.1	9.5	4.8	0.1	1020	30
October	6.3	6.2	13.3	4.7	0.5	0.0	751	31
November	18.4	7.7	3.5	0.3	0.0	0.0	179	30
December	31.0	0.0	0.0	0.0	0.0	0.0	59	31
							6361	

Month	A	B	C	D	Ev	E		
	Percent of Days per Month at each PAL Value							
January	100.0	0.0	0.0	0.0	0.0	0.0	55	100
February	100.0	0.0	0.0	0.0	0.0	0.0	62	100
March	80.5	17.1	2.4	0.0	0.0	0.0	82	100
April	47.2	22.6	26.0	4.2	0.0	0.0	265	100
May	25.5	25.6	31.9	16.2	0.7	0.0	702	100
June	11.9	20.2	40.2	22.5	5.1	0.1	1053	100
July	1.0	6.2	32.4	27.8	31.8	0.7	1074	100
August	4.2	5.8	24.2	29.9	35.5	0.5	1059	100
September	8.9	9.1	33.7	31.7	16.1	0.5	1020	100
October	20.2	19.8	43.0	15.3	1.6	0.0	751	100
November	61.5	25.7	11.7	1.1	0.0	0.0	179	100
December	100.0	0.0	0.0	0.0	0.0	0.0	59	100
							6361	

The Climatology worksheet displays the results of the calculations based on the data imported. There are two sections:
Expected Days per Month at each PAL Level
Percent of Days per Month at each PAL Level.

The **Days Analyzed** column is a count of the days of each month that were used in the calculations. This gives you an idea of the sampling of days for each month.

The **Data Check** column (gray) is an easy visual check that the "Define" process was done correctly. The number should equal the days in that particular month if there were no errors.

The **Data Check** for the Percent of Days section will should show 100