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

PAL Analysis Steps

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

Request weather data <u>https://fam.nwcg.gov/fam-web/</u> \rightarrow Wildland Fire Related Links \rightarrow 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
 - o 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

		-			tmu72_04	1	- T (C) .	Jx 5/1/1
	A2				А	BC	D	
	A	BC		1	DATE	IC ERO	6362	Activ
	DATE	IC ERC		2	5/1/1972	14 16		
	5/1/1972	2 14 16		3	5/2/1972	20 17	Station/SIG/U	Init
	5/2/1972	2 20 17 S	1	4	5/3/1972	18 18	MEYERS	
6/19/19/2 15 31	5/3/1972	2 18 18		5	5/4/1972	20 19		
6/20/1972 15 30	5/4/1972	2 20 19		6	5/5/1972	18 21	Years Analyz	ed
6/21/19/2 18 31	5/5/1972	2 18 21 <mark>Y</mark>		7	5/6/1972	13 21	1972 - 2004	
6/22/1972 11 20	5/6/1972	2 13 21		8	5/7/1972	32 22		
Data from FF+	5/7/1972	2 32 22		9	5/8/1972	21 24		

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

			Uncheck boxes
Select Output Variables	for Daily Listing	×	
Date Format MM/DD/YYYY C MMDDYYYY C MM/DD C MM/DD C MM/DD Time Format C HH:MM C HH:MM C HHMM None	Fire Dutputs Number of Fires Number of Large Fires Large Fires Large Fire Day (Acres): 5 1 Number per Size Class Total Acres Station ID each Record	General Report Header Column Header Date/Time Stamp Export to Table Fire Cause Filter C Lightning C Lightning	
Available Variable Dry Bulb Temperature Men Temperature Max Temperature Relative Humidity Mean RH Min RH Max RH Precipitation Amount Precipitation Duration	es Ignito	Selected Variables n Component y Release Component	
Select All	1	Remove All	
0)	Car	icel	

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,

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

	Text Import Wizard - Step 1 of 3	Text Import Wizard - Step 2 of 3
	The Text Wizard has determined that your data is Delmited. If this correct, droose Next, or choose the data type that best describes your data. Original data type Choose the file type that best describes your data:	This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below. Delimites Delimites Dolemites Dolemi
File Home Insert Home Insert Arial Copy Copy B Paste Options: B Lyse Text Import Wizard Paste Special 3 Station	Preview of selected data: 1 B4/02/1561, 28 , 18 , 2 B4/04/1561, 28 , 18 , 2 B4/04/1561, 31 , 20 , 2 B4/04/1561, 64 , 23 , 1 D4/04/1561, 64 , 23 , 1 D4/04/1561, 64 , 23 , 1 D4/04/1561, 28 , 22 , 4 Cancel < Back Dext > Ench	Data greview D4/03/1961 k2 18 D4/03/1961 k3 18 D4/03/1961 k4 28 04/03/1961 k4 28 05/0361 k4 28 05/0361 k4 28 05/0361 k4 28 05/0361 k4

Text Import Wizard - Step 3 of 3	? ×
This screen lets you select each co Column data format © general © Text © Date: MDY ▼ © Do not import column (skip)	um and set the Data Format. 'General' converts numeric values to numbers, date values to dates, and all remaining values to text. <u>Advanced</u>
Data greview	
04/03/1961 42 18 04/04/1961 28 18 04/05/1961 31 20 04/05/1961 64 23 04/07/1961 25 22	
	Cancel <back next=""> Finish</back>

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

	A B	С	D	E	F	G	H	1 I	J	K
6		А	В	С	D	////Ev////	E	Days		
7	Month	th Expected Days per Month at each PAL Value					Analyzed			
8	January	31.0	0.0	0.0	0.0	0.0	0.0	55		
9	February	28.0	0.0	0.0	0.0	0.0	0.0	62		
10	March	25.0	5.3	0.8	0.0	0.0	0.0	82		
11	April	14.2	6.8	7.8	1.2	0.0	0.0	265	30	
12	May	7.9	7.9	9.9	5.0	0.2	0.0	702	31	
13	June	3.6	6.1	12.1	6.8	1.5	0.0	1053	30	
14	July	0.3	1.9	10.0	8.6	9.8	0.2	1074	31	
15	August	1.3	1.8	7.5	9.3	11.0	0.1	1059	31	
16	September	2.7	2.7	10.1	9.5	4.8	0.1	1020	30	
17	October	6.3	6.2	13.3	4.7	0.5	0.0	751	31	
18	November	18.4	7.7	3.5	0.3	0.0	0.0	179	30	
19	December	31.0	0.0	0.0	0.0	0.0	0.0	59	31	
20								6361		
21		Α	В	С	D	////Ev////	E			
22	Month	Per	cent of Da	vs per Mo	nth at eac	h PAL Valu	e			
23	January	100.0	0.0	0.0	0.0	0.0	0.0	55	100	
24	February	100.0	0.0	0.0	0.0	0.0	0.0	62	100	
25	March	80.5	17.1	2.4	0.0	0.0	0.0	82	100	
26	April	47.2	22.6	26.0	4.2	0.0	0.0	265	100	
27	May	25.5	25.6	31.9	16.2	0.7	0.0	702	100	
28	June	11.9	20.2	40.2	22.5	5.1	0.1	1053	100	
29	July	1.0	6.2	32.4	27.8	31.8	0.7	1074	100	
30	August	4.2	5.8	24.2	29.9	35.5	0.5	1059	100	
31	September	8.9	9.1	33.7	31.7	16.1	0.5	1020	100	
32	October	20.2	19.8	43.0	15.3	1.6	0.0	751	100	
33	November	61.5	25.7	11.7	1.1	0.0	0.0	179	100	
34	December	100.0	0.0	0.0	0.0	0.0	0.0	59	100	
35								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