

## FFP Tech Tip: Event Locator

The Event Locator is a tool for searching for events or combinations of events based on weather values and/or calculated indices. It is useful for searching for rare occurrences, and is also useful for checking for bad or erroneous data.

First set the period length. -- Period length is the length of consecutive days needed to match the criteria in the query table. The *Event Locator* Period Length is independent from the *Analysis Period Length* of the Working Set. **However**, the Data Years and Annual Filter in the Working Set do limit the data used by the Event Locator.

Next, fill in the 1<sup>st</sup> row of the query table. You may enter up to three rows. Each row establishes one condition on one FireFamily Plus analysis variable. Click in the field area to get drop-down list for each field's options. Evaluation operators are equal to (=), less than or equal to (<=), greater than or equal to (>=), less than (<), and greater than (>).

If the Period Length is 1 day, the category has no effect. If the Period Length is greater than 1 day, the event category is defined as:

- Sum The sum of the individual days meets the operator requirements.
- Avg The average of the individual days meets the operator requirements.
- Min The minimum of the daily values meets the operator requirements.
- Max The maximum of the daily values meets the operator requirements.
- Daily Each daily value meets the operator requirements.

Operator: (rows 2 and 3 only) -- Select the appropriate operator for constructing the query. You must select either **AND** or **OR** to combine the conditions.

Operator	Variable	Category	Operator	Value	Value Type
	Precipitation Amount	Sum	>=	2.00	Value
AND	Energy Release Component	Avg	<=	80.00	Percentile

**Tip:** The Value Type defines if the “value” is a “fixed” value or the value of a variable at a fixed percentile level. **Caution:** Percentile values are dependent on the current working set definition (years, annual filter, fuel model, etc.)

The above example looks for a 5-day total of 2.00 or more inches of rain and a 5-day average ERC below the 80<sup>th</sup> percentile. For this working set, the 80<sup>th</sup> percentile is 18. There were 9 occurrences of these events.

```
Event Definition:  
Sum(Precipitation Amount) >= 2.00  
AND Avg(Energy Release Component) <= 80.00 Percentile (18.00)
```

5-Day Periods

DATE	Rain	ERC
05/31/1999	2.40	7.60
09/27/2000	2.49	7.00
10/09/2001	2.50	5.00
05/26/2004	2.03	0.00
07/15/2004	2.01	17.60
08/21/2004	2.09	4.20
09/10/2004	2.52	3.80
10/29/2005	2.23	0.20
11/02/2006	2.64	1.20

```
9 hits out of 4657  
2391 rejects for no/missing observations
```

```
FF+4.0 11/06/2008-14:37
```