

# How to Generate a Single-point Analysis at a Daily Frequency for a Given Date Range



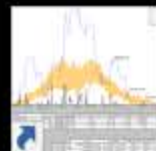
**US Army Corps  
of Engineers®**



Antecedent Precipitation Tool  
Version 2.0

Developed by:  
U.S. Army Corps of Engineers and  
U.S. Army Engineer Research and  
Development Center



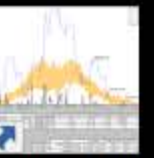
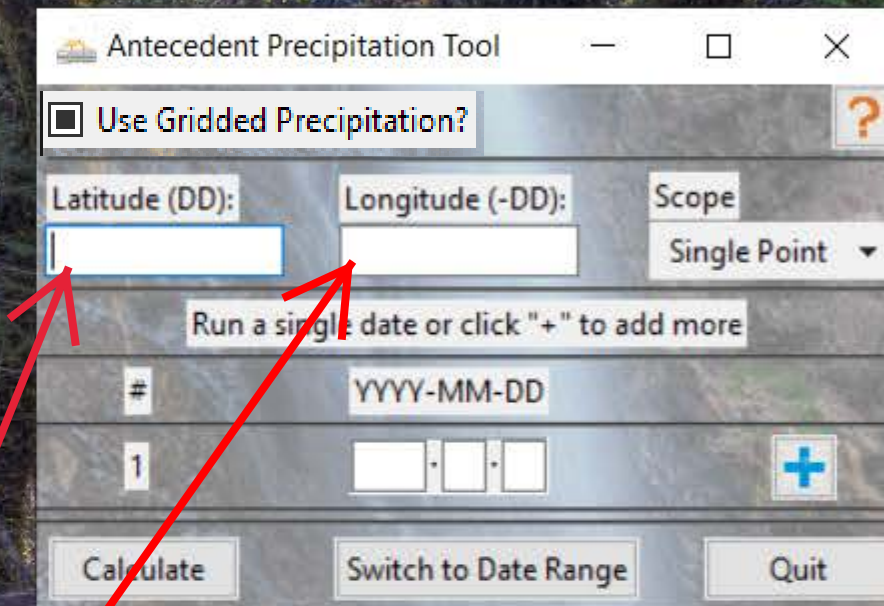
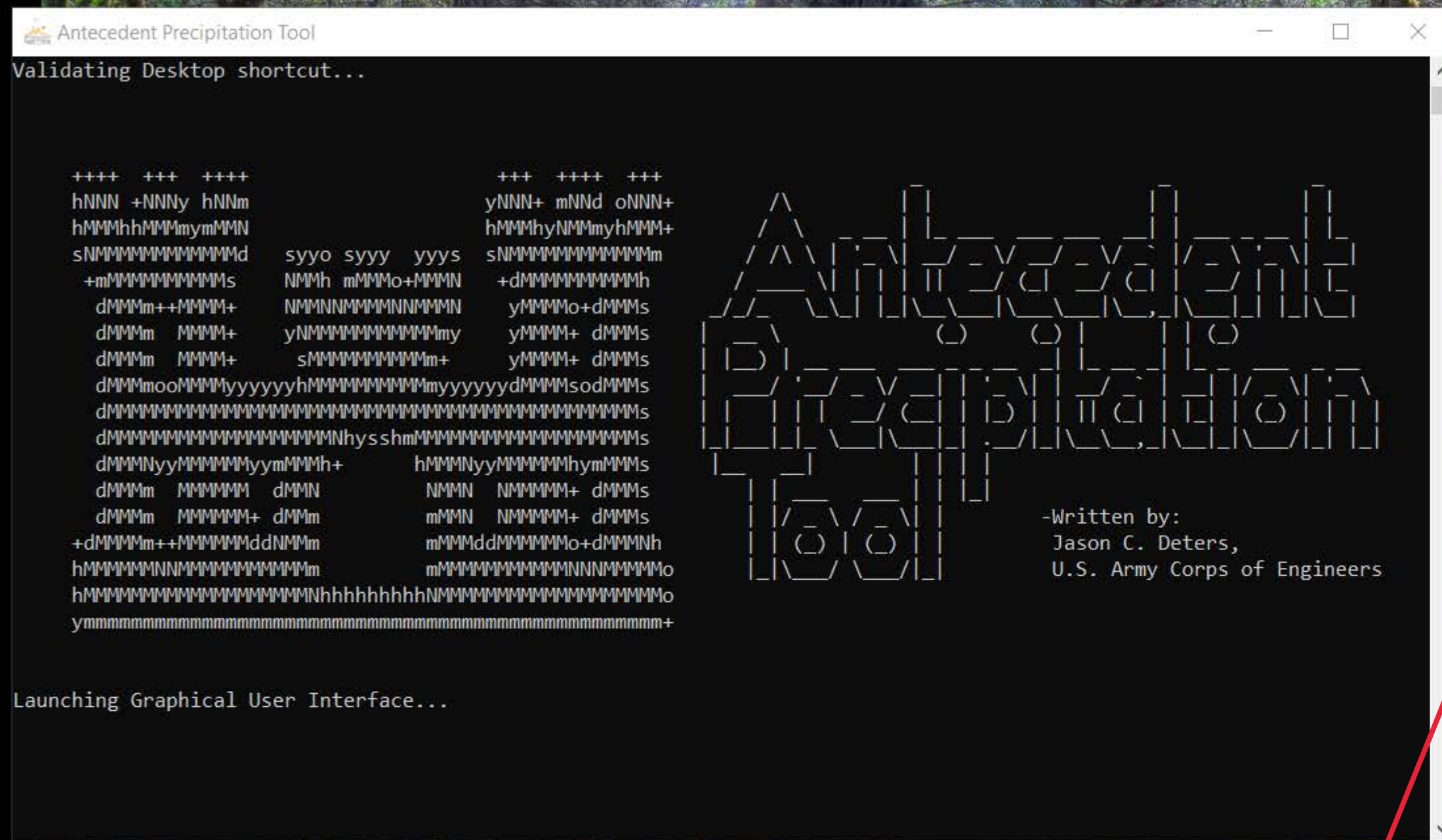


Antecedent  
Precipitation  
Tool



Launch  
the APT

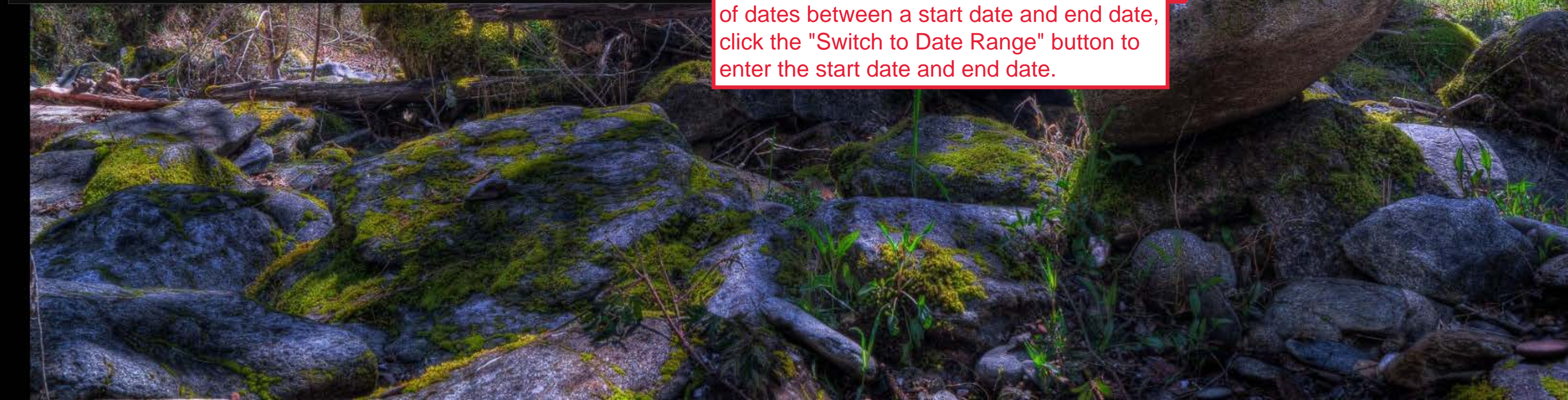
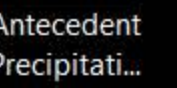


Antecedent  
Precipitati...

Enter the Latitude and Longitude of the location to be analyzed in Decimal Degree format (DD.dddddd)

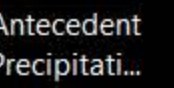
**NOTE:** Longitudes in the U.S. are negative, so your entry should start with a minus "-" symbol.





If you would like to run the APT for a range of dates between a start date and end date, click the "Switch to Date Range" button to enter the start date and end date.

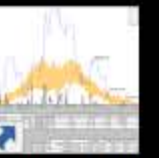




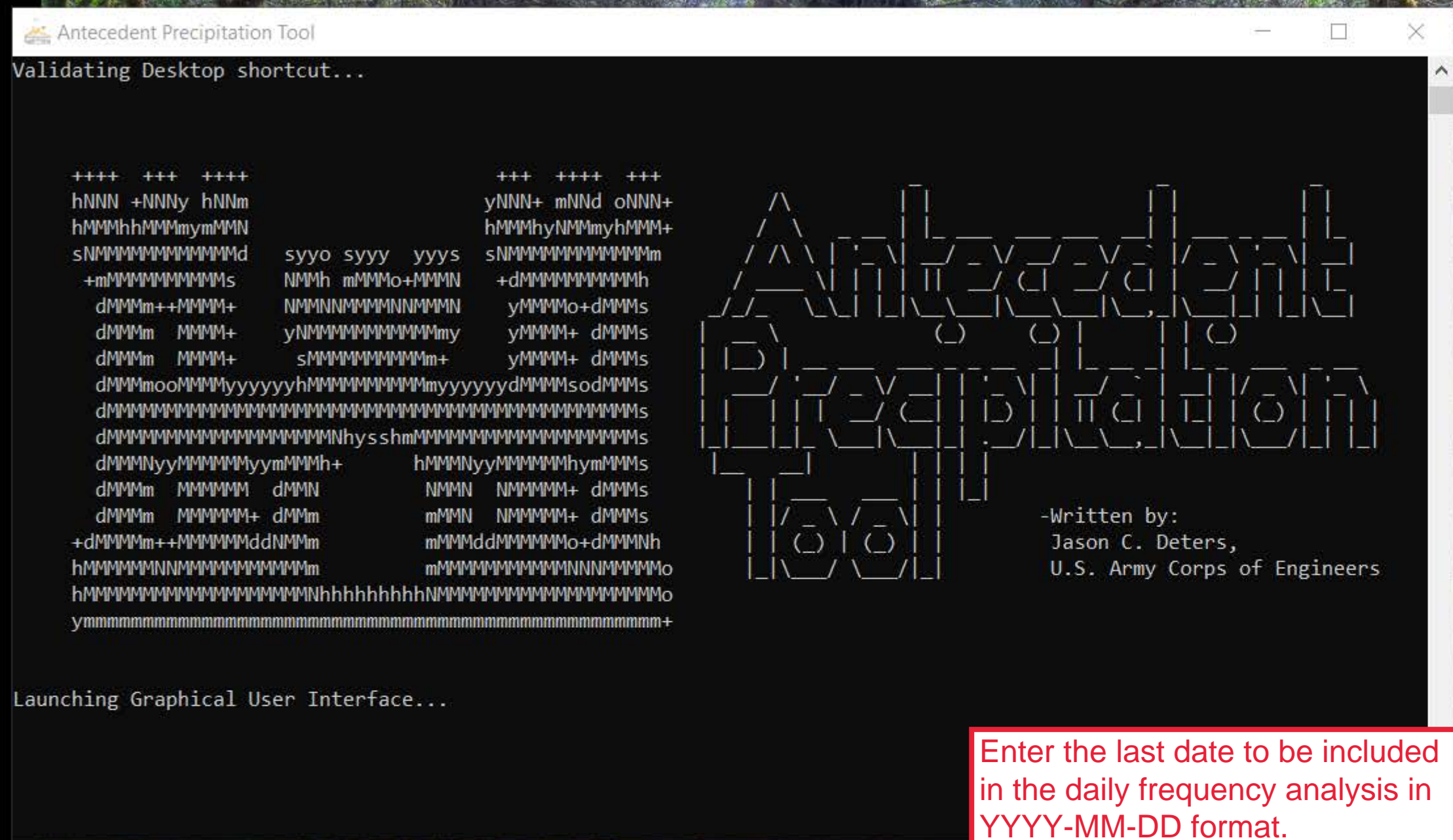
Launching Graphical User Interface...

Enter the first date to be included in the daily frequency analysis in YYYY-MM-DD format.





## Antecedent precipitation Tool



Antecedent Precipitation T...

☒ Use Gridded Precipitation?

Latitude (DD): 38.5 Longitude (-DD): -121.5 Scope: Single Point

Get daily results between a Start Date and End Date

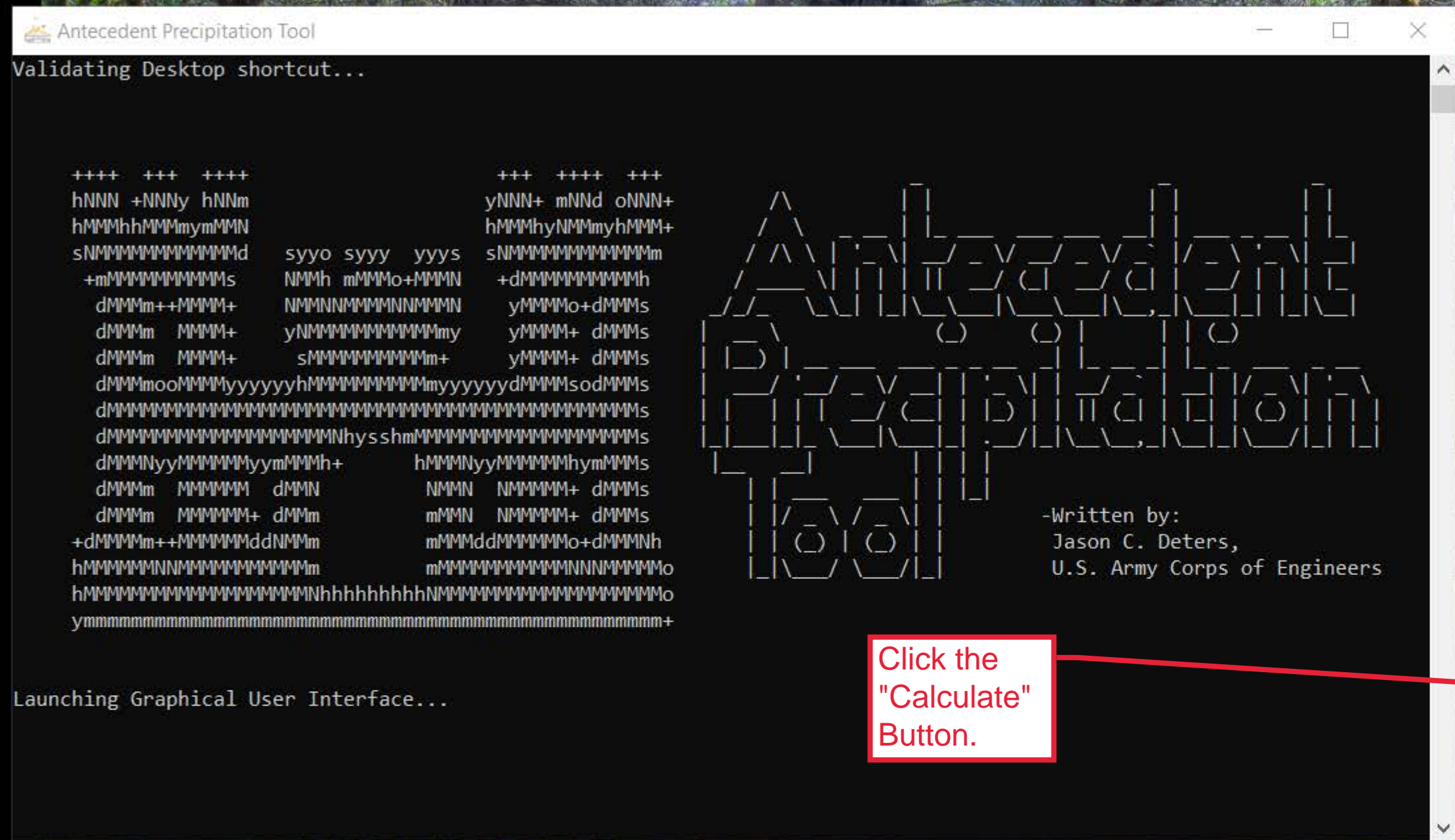
Start Date (YYYY-MM-DD): 2015 · 10 · 01

End Date (YYYY-MM-DD): · ·

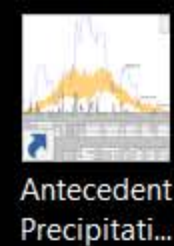
Calculate Switch to CSV Input Quit

Enter the last date to be included  
in the daily frequency analysis in  
YYYY-MM-DD format.





Click the  
"Calculate"  
Button.





Antecedent Precipitation Tool

May	-75	-64	11	Dry Season
Jun	-129	-45	84	Dry Season
Jul	-153	-14	139	Dry Season
Aug	-139	-3	136	Dry Season
Sep	-96	-1	96	Dry Season
Oct	-42	0	43	Dry Season
Nov	31	30	0	Wet Season
Dec	58	58	0	Wet Season

<---Selected Month

#----- GRAPH & TABLE GENERATION -----#  
Constructing graph, plotting data, and configuring tables...  
Generating figure with graph and tables...  
Saving C:\Users\L2RCSJ9D\Desktop\Antecedent Precipitation Tool\Outputs\v1\_0\_3\38.5, -121.5\2016-09-30.pdf  
Closing figure...  
  
Opening Batch Results CSV in new process...  
Opening finalPDF in new process...  
Attempting to delete temporary files...  
  
All tasks took 14 minutes and 22 seconds to complete  
  
Ready for new input.

Antecedent Precipitation T...

☐ Use Gridded Precipitation?

Latitude (DD): 38.5Longitude (-DD): -121.5Scope: Single Point

Get daily results between a Start Date and End Date

Start Date (YYYY-MM-DD): 2015 · 10 · 01End Date (YYYY-MM-DD): 2016 · 9 · 30

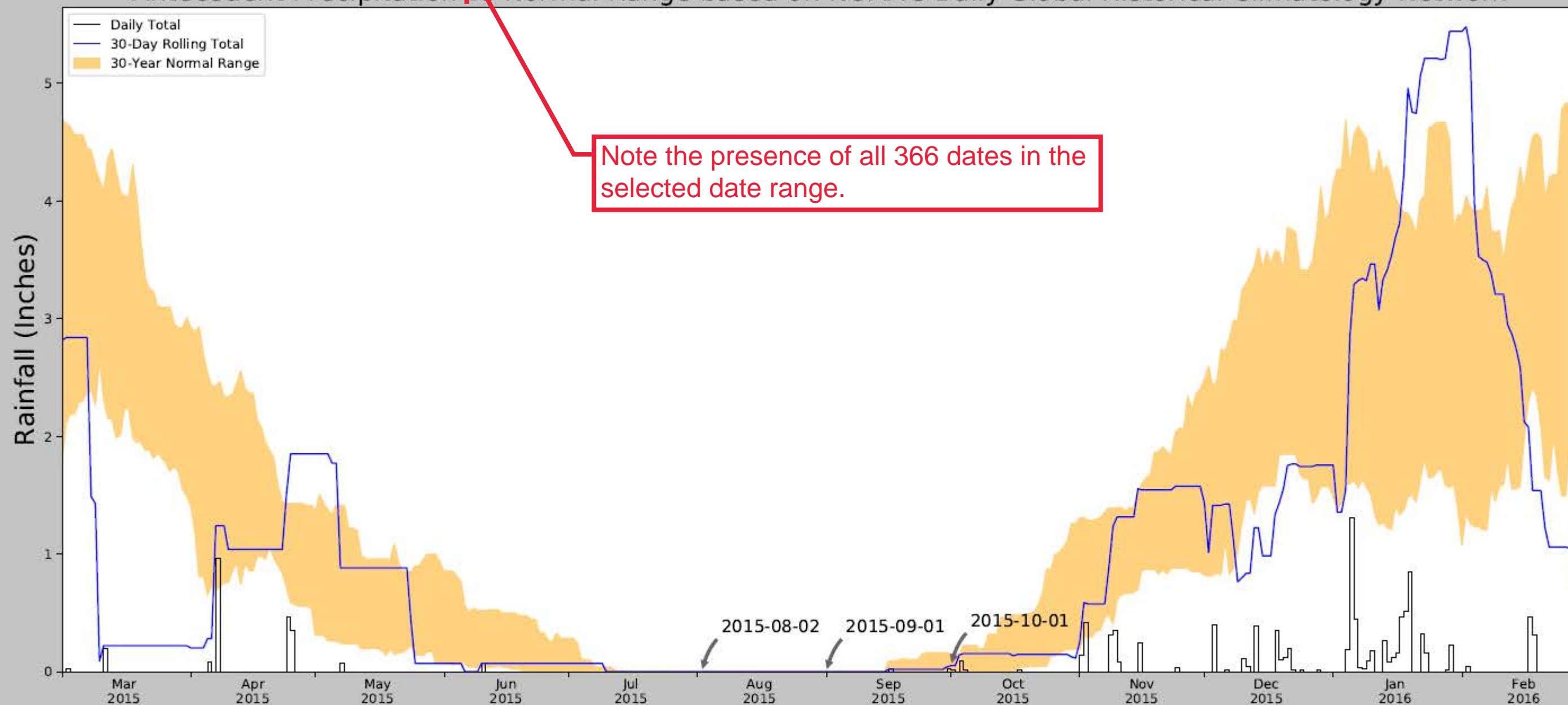
CalculateSwitch to CSV InputQuit

This walkthrough skips right to the outputs. For more information about what happens between the "Calculate" button and the outputs, see "How to generate a single-point analysis for a given date" in the **Help Menu**





# Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	38.5, -121.5
Observation Date	2015-10-01
Elevation (ft)	7.14
Drought Index (PDSI)	Severe drought
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2015-10-01	0.0	0.144882	0.051181	Normal	2	3	6
2015-09-01	0.0	0.0	0.0	Normal	2	2	4
2015-08-02	0.0	0.0	0.0	Normal	2	1	2
Result							Normal Conditions - 12

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
SACRAMENTO EXECUTIVE AP	38.5069, -121.495	15.092	0.548	7.952	0.251	11344	90
SACRAMENTO 5 ESE	38.5556, -121.4169	38.058	5.91	30.918	2.842	8	0





## The selected Start Date

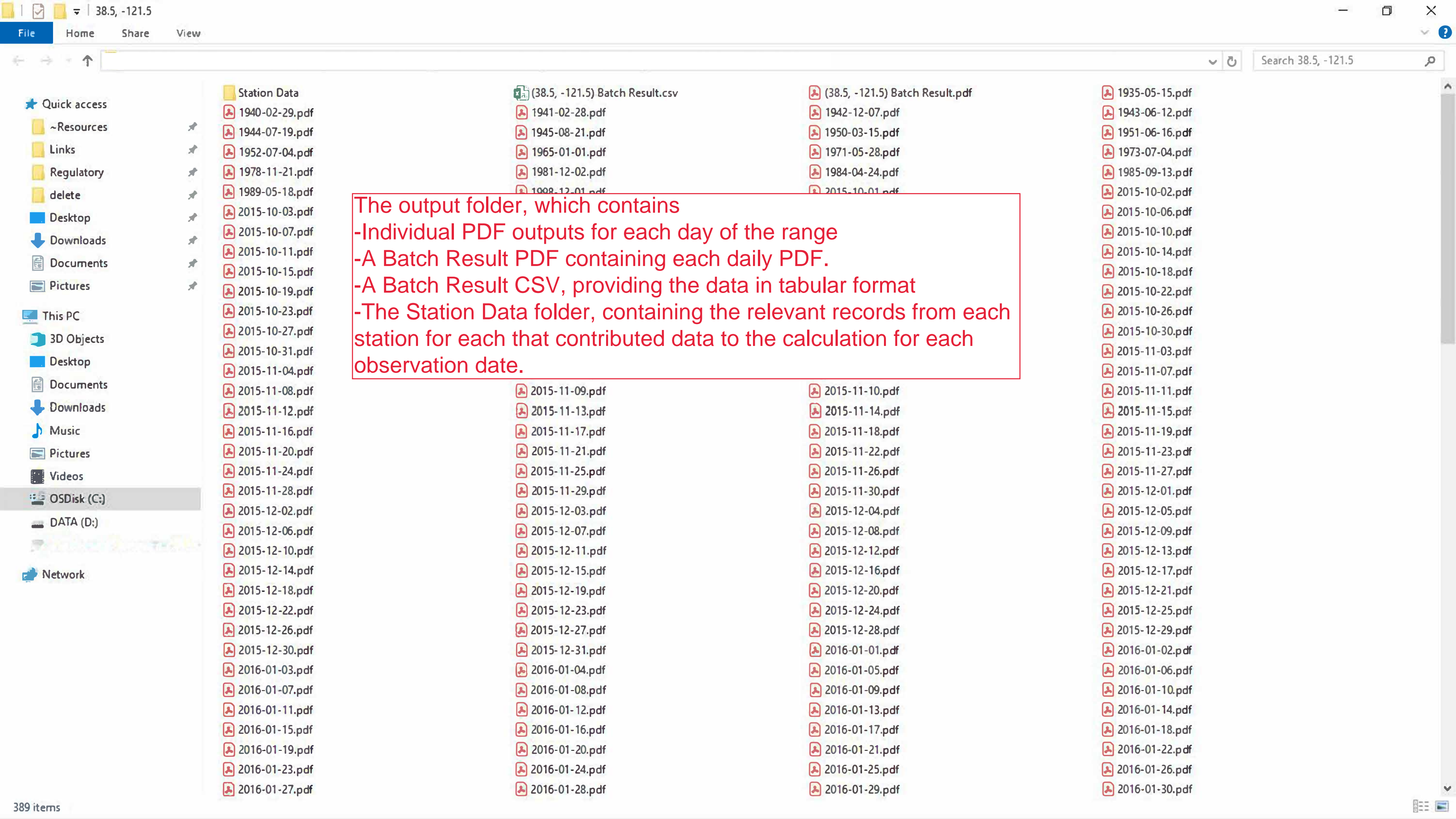




	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
334	38.5	-121.5	8/28/2016	-0.8	Incipient drought	Dry Season	12	Normal Conditions												
335	38.5	-121.5	8/29/2016	-0.8	Incipient drought	Dry Season	12	Normal Conditions												
336	38.5	-121.5	8/30/2016	-0.8	Incipient drought	Dry Season	12	Normal Conditions												
337	38.5	-121.5	8/31/2016	-0.8	Incipient drought	Dry Season	12	Normal Conditions												
338	38.5	-121.5	9/1/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
339	38.5	-121.5	9/2/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
340	38.5	-121.5	9/3/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
341	38.5	-121.5	9/4/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
342	38.5	-121.5	9/5/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
343	38.5	-121.5	9/6/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
344	38.5	-121.5	9/7/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
345	38.5	-121.5	9/8/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
346	38.5	-121.5	9/9/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
347	38.5	-121.5	9/10/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
348	38.5	-121.5	9/11/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
349	38.5	-121.5	9/12/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
350	38.5	-121.5	9/13/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
351	38.5	-121.5	9/14/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
352	38.5	-121.5	9/15/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
353	38.5	-121.5	9/16/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
354	38.5	-121.5	9/17/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
355	38.5	-121.5	9/18/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
356	38.5	-121.5	9/19/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
357	38.5	-121.5	9/20/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
358	38.5	-121.5	9/21/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
359	38.5	-121.5	9/22/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
360	38.5	-121.5	9/23/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
361	38.5	-121.5	9/24/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
362	38.5	-121.5	9/25/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
363	38.5	-121.5	9/26/2016	-1.19	Mild drought	Dry Season	12	Normal Conditions												
364	38.5	-121.5	9/27/2016	-1.1																

-1.19	Mild drought	Dry Season	12	Normal Co
-1.19	Mild drought	Dry Season	12	Normal Co
-1.19	Mild drought	Dry Season	12	Normal Co





The output folder, which contains

- Individual PDF outputs for each day of the range
- A Batch Result PDF containing each daily PDF.
- A Batch Result CSV, providing the data in tabular format
- The Station Data folder, containing the relevant records from each station for each that contributed data to the calculation for each observation date.