**VegET notes:**

* All the main VegET scripts and stuff is located under D:\Stornext\fewspsnfs2\WaterSmart\Users\Stefanie\operational\US\_operational\VegET
* The base script that is copied and edited for each project is named: VegET\_batch\_continous.py
* NOTE: The latest data is currently kept in VegET\_2015 folder.
* The script creates a log file where all the data locations, files used, etc are documented.
* Static input parameters for the script are under D:\Stornext\fewspsnfs2\WaterSmart\Users\Stefanie\operational\US\_operational\VegET\misc\_Data:
  + Water Holding Capacity (WHC/whc3\_1mwgs250m.tif - US/Canada extent)
  + Interception (intercept1.tif - US extent)
* Daily input parameters are:
  + NDVI: So far we used 2 NDVI datasets for VegET calculations:
    - D:\Stornext\fewspsnfs2\WaterSmart\Data\NDVI\US\_NDVI\V006\_250m\Daily\_filled - that data you helped with for Klamath basin
    - D:\Stornext\fewspsnfs2\WaterSmart\Data\NDVI\US\_NDVI\ndviF

This is a CONUS 1km daily median ndvi data, filled. The problem is that I

am not sure anymore what the source is. I believe its from

AVHRR/eMODIS and I created that in 2014, so probably median of 10

years 2003-2012/2013.

* + PET: D:\Stornext\fewspsnfs2\WaterSmart\Data\ReferenceET\US\_Gridmet
  + Rainfall:
    - D:\Stornext\fewspsnfs2\WaterSmart\Data\Precipitation\US\_PPT\NexRAD

For that dataset we have data up to the current date, Claudia runs a script that downloads the data and saves it under ...NexRAD\zippedfiles. Here they have to be processed (unzipped,etc)

* + - D:\Stornext\fewspsnfs2\WaterSmart\Data\Precipitation\US\_PPT\Gridmet\_daily
* Script setup:
  + The script will process a time series for the years given in var start\_year (line 31) until defined in the while loop (line 105)
  + VegET requires to for best results to run 1 “prime” year before the actually first year needed to balance the soil water bucket.
  + Depending on the project the Initial Soil water estimate (SW0 - line 89) can change , mostly its assumed half of the soils water holding capacity (from raster).
  + In case the script needs to be restarted in the middle of processing, say 3 years into the process, change variable swflist (line 103 - right before the while loop) from swflist = [] to swflist = [swfDir +os.sep+ 'swfYY365.tif'] (YY365 = day of the last full year processed).
  + In the while loop the script will calculate:
    - Effective rainfall (effppt)
    - Interception (intcep)
    - Runoff (Rf)
    - ET (etasw)
    - Final Soil water (SWf)
  + This statement -> if jjdate == 'YY001' (line 153) needs to be updated to the first year processed by the script. This is the condition for the first day setting the bucket to half of the water holding capacity, else use the final soil water amount for the input for the next day.
  + The SWf grid is the input for the next day’s calculation, it becomes Initial Soil water (SWi).
  + ET is accumulated on the fly and saves monthly and annual ET rasters.