READ ME

Outline of each step

1. First wave of Data
   1. Site\_weather\_Dep netcdf files format for use (all variables are in induvial data frames)
      1. Process\_NETCDF\_Data\_For\_Use.R
         1. ## This script process NETCDF data output from CMAQ bidi
         2. ## Format:
         3. ## Set Up lists of variables and File names
         4. ## Function to pull them from NETCDF (Pull\_Var)
         5. ## Function to convert Var to data frame (Mat\_to\_Data\_Frame)
         6. ## Loop to apply Pull\_Var and use same Loop to apply Mat\_to\_Data\_Frame \*applys to all variables
         7. # previously applied to Pull\_Var because a list of variables was created in the Pull\_Var loop
         8. ## CSV FILES WILL BE FOUND IN WORKING DIRECTORY
      2. Process\_Individual\_CSV\_Var\_Data\_Over\_Watershed.R
         1. ## This script takes the watersheds and aggragates the variables across each and then writes a CSV file for each variable that includes the
         2. # new number, date, and watershed id
   2. Nutrient\_data, csv file format for use
      1. Process\_CSV\_Nutrient\_Data.R - made a key in this file to deal with the lat and long col row thing that Ellen explained in an email once upon a time
2. Merge data
   1. Hydrology, excel sheet converted to separate csv files and formatted in r for use (all stations are in one data frame)
3. Regression model
   1. Load\_Dataframe
   2. GLS\_With\_Function
      1. Outline what this is..
   3. CV\_Custom
      1. This is a cool code, what it does is split the regression model up in to n sample groups, and regresses leaving each group out once. Then it predicts the left out group and plots the predicted vs measured values.
         1. Special note, if n is a factor of total sample size comment out the remainder portion, if it is not make sure remainder is included