Metadata File
download DailyClimateData.txt and save
#read DailyClimateData.txt in read_csv to dataFrame
#define and plot functions
  ReadData (filename)
  Check01_RemoveNoDataValues(DataDF,ReplacedValuesDF)
  Check02_GrossErros(DataDF,ReplacedValuesDF)
  Check03_TmaxTminSwapped(DataDF,ReplacedValuesDF)
  Check04_TmaxTminRange (DataDF,ReplacedValuesDF)

#build and format plots for each variable before and after data checks
#import and save plot graphs to png files
  savefig ('Precipitation.png')
  savefig ('Max Temp.png')
  savefig ('Min Temp.png')
  savefig ('Windspeed.png')
#show and close the plots

Output files

Raw data.....

	Precip	Max Temp	Min Temp	Wind Speed
count	731.000000	731.000000	731.000000	731.000000
mean	0.288098	14.167227	0.548413	2.904172
std	53.773216	54.738379	53.477046	1.597814
min	-999.000000	-999.000000	-999.000000	-2.500000
25%	0.000000	6.735000	-4.080000	2.045000
50%	0.000000	18.560000	3.610000	2.910000
75%	2.237500	26.195000	11.875000	3.600000
max	279.000000	194.800000	26.100000	39.900000

Missing values removed.....

	Precip	Max Temp	Min Temp	Wind Speed
count	729.000000	729.000000	729.000000	731.000000
mean	3.029630	16.946835	3.290658	2.904172
std	12.191541	13.293172	10.740052	1.597814
min	-3.475000	-10.080000	-82.600000	-2.500000
25%	0.000000	6.850000	-4.030000	2.045000
50%	0.000000	18.580000	3.680000	2.910000

	75%	2.275000	26.200000	11.900000	3.600000
	max	279.000000	194.800000	26.100000	39.900000

Check for gross errors complete.....

	Precip	Max Temp	Min Temp	Wind Speed
count	714.000000	715.000000	727.000000	729.000000
mean	2.070588	16.329263	3.512641	2.860837
std	4.291815	11.311690	9.879578	0.798721
min	0.000000	-10.080000	-18.630000	1.500000
25%	0.000000	6.680000	-3.935000	2.050000
50%	0.000000	18.310000	3.680000	2.910000
75%	1.950000	25.880000	11.910000	3.600000
max	24.050000	34.960000	26.100000	4.280000

Check for swapped temperatures complete.....

	Precip	Max Temp	Min Temp	Wind Speed
count	714.000000	715.000000	727.000000	729.000000
mean	2.070588	16.379790	3.462948	2.860837
std	4.291815	11.278356	9.852212	0.798721
min	0.000000	-10.080000	-18.630000	1.500000
25%	0.000000	6.715000	-3.935000	2.050000
50%	0.000000	18.360000	3.610000	2.910000
75%	1.950000	25.930000	11.875000	3.600000
max	24.050000	34.960000	23.900000	4.280000

All processing finished.....

	Precip	Max Temp	Min Temp	Wind Speed
count	714.000000	710.000000	722.000000	729.000000
mean	2.070588	16.296930	3.515904	2.860837
std	4.291815	11.267967	9.852835	0.798721
min	0.000000	-10.080000	-18.630000	1.500000
25%	0.000000	6.670000	-3.922500	2.050000
50%	0.000000	18.185000	3.680000	2.910000
75%	1.950000	25.822500	11.915000	3.600000
max	24.050000	34.960000	23.900000	4.280000

Final changed values counts.....

	Precip	Max Temp	Min Temp	Wind Speed
1. No Data	2.0	2.0	2.0	0.0
2. Gross Error	15.0	14.0	2.0	2.0
3. Swapped	0.0	4.0	4.0	0.0
4. Range Fail	0.0	5.0	5.0	0.0