

Plotting CO2 and Temperature Time Series

Sequence of Events:

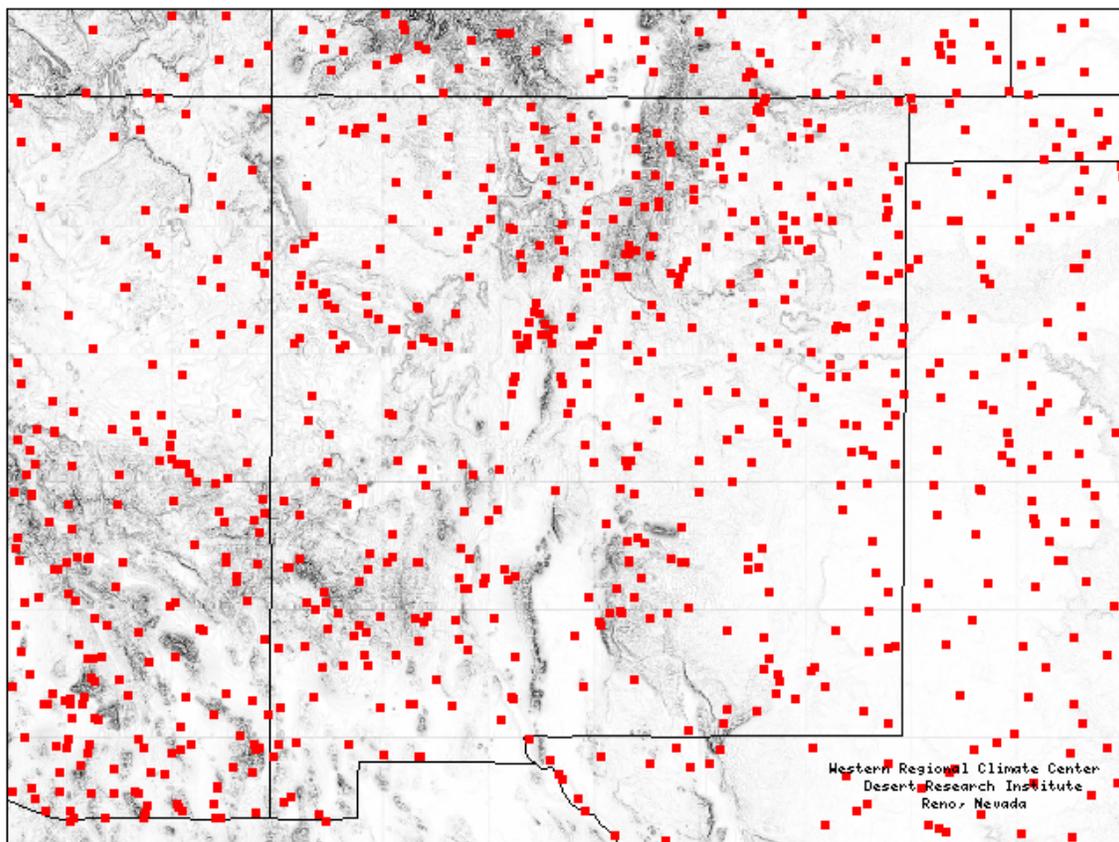
Find a long term station in New Mexico from this site:

http://cdiac.ornl.gov/epubs/ndp/ushcn/ushcn_map_interface.html

Click on New Mexico from the drop-down menu; the list of stations appears.

Choose a station, then go to the Western Regional Climate Center map for New Mexico at this location: : <http://www.wrcc.dri.edu/summary/Climsmnm.html>

This map should appear.



Western Regional Climate Center, wrcc@dri.edu

Mouse over the map until you locate the station you have chosen. Left click to select the correct station; a summary with the name of the station appears.

Open a new Excel Spread Sheet

Paste the name of the station in the A1 cell of the first two sheets of the spreadsheet

Save the spreadsheet with the name of the station in Climate Data.

In the station listing on the left , choose the Monthly Temperature Listing – Average tab

Copy the average temperatures January to December and Annual and paste into Sheet 2 of the spreadsheet. Column A will be the year column, Column B will be January's data, Column C will be the qualifier of January's data and so forth until Column Z is the annual column.

In Column Z, Insert a Sheet Column, so that Column Z is now blank.

Copy the date series from Column into Column Z.

The next step involves editing out from consideration those years which do not have a representative number of months in the annual average.

I eliminate and blank out all years having one month or more data missing.

There may be other ways of selecting or deselecting months but this is my method.

Highlight a year-average temperature series (Columns Z-AA) and insert them to form a time series trial graph using <Insert-Scatter-Straight Lines and Markers>; quality control the plot elements until you are sure that you have a good time series.

Copy that pair into Sheet 1 beginning with cells E3 F3 and paste those columns there.

From the CO2 spreadsheet containing the CO2 time series, copy the time series of YEAR, CO2 beginning with the beginning year of the temperature time series and paste it into Sheet 1. At the end of this step you will have 4 columns Year, CO2, Year, Temperature.

Manipulate the columns so that you have Year, Temperature, and CO2 in three successive columns, year first since it is the independent variable.

Label the Columns Year, Temp F, CO2.

Highlight the three columns, <Insert-Scatter-Straight lines and Markers>

The data plot. Use Design and Layout tabs to insert: Chart Title (Location), Axis Titles, Legend and Gridlines.

Add Trendline for Temperature.

Cimarron NM, 4SW

