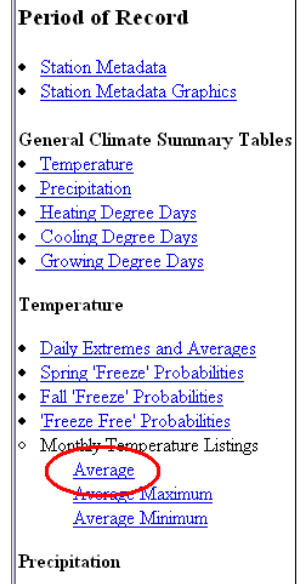


Milestone Outcomes: To collect temperature data and perform preliminary analysis.

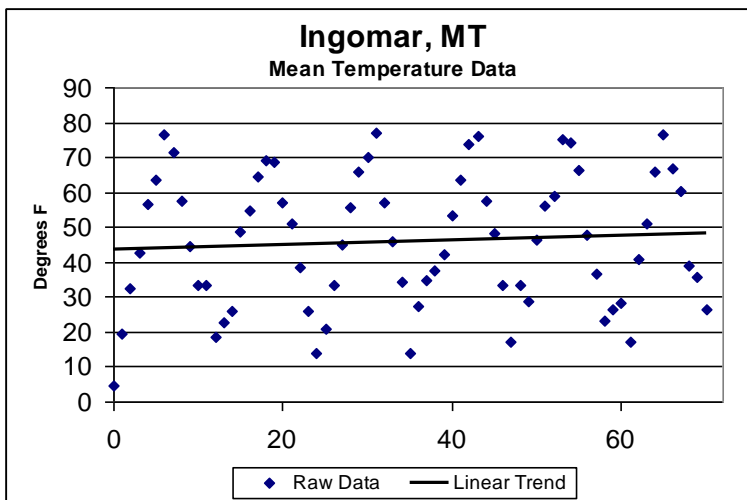
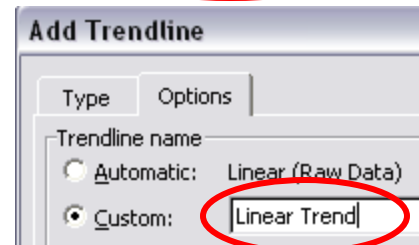
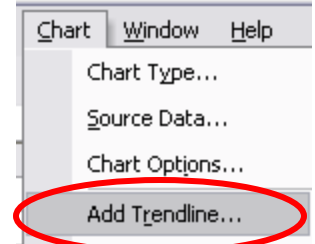
1. Collect temperature data.

- Go to <http://www.hprcc.unl.edu/data/historical/> select a state using the box in the upper-left, and then click the "Select State" button.
- On the next page you will be presented with a map. Click one of the red dots to select a station (you may need to right-click to open).
- In the left frame, scroll down and click Average under *Monthly Temperature* in the **Period of Record** heading (see screenshot).
- Pick a row in each decade for the last 6 decades (1950s, 1960s, 1970s, 1980s, 1990s, and 2000s) that seems to be a good average representation of the data of temperatures (no extremes). Note: if the station you chose doesn't have data that far back or is missing a significant amount of data, go back and choose a different station.
- In Excel, make column A be a list of values from 0 to 71. Then, in chronological order, type in the temperature data from the website into Excel all in column B. (So cell B1 will be January's average temperature for some year in the 1950s, B2 will be Feb's average temp in that year, etc., B12 will be Jan's avg temp for some year in the 1960s, and so on.)



2. Get a plot of the data.

- Create an XY-Scatter plot of the data. As you might have guessed, the data is sinusoidal with a linear trend. We will assume due to global warming that this trend is increasing.
- To find out for sure, let's have Excel add in the trend line. Click on the chart and choose **Add Trendline** from the Chart menu at the top. Note: you may have to click the menu title twice to see all of the hidden options.
- Leave the type as Linear, but under the Options tab, change the name of the trend line to "Linear Trend" by typing that into the Custom box in the Trendline name frame.
- Customize the graph using fonts, colors, etc. Be sure to title it appropriately with the station name and state.



Customize your chart with different fonts, colors, etc.

3. Save and upload.

- Save the Excel worksheet as "Deliverable4" and upload your file to your ePortfolio. Type in a learning outcome reflection in the box provided. Note: remember to use <http://eportfolio.cascadia.edu/> for the website.