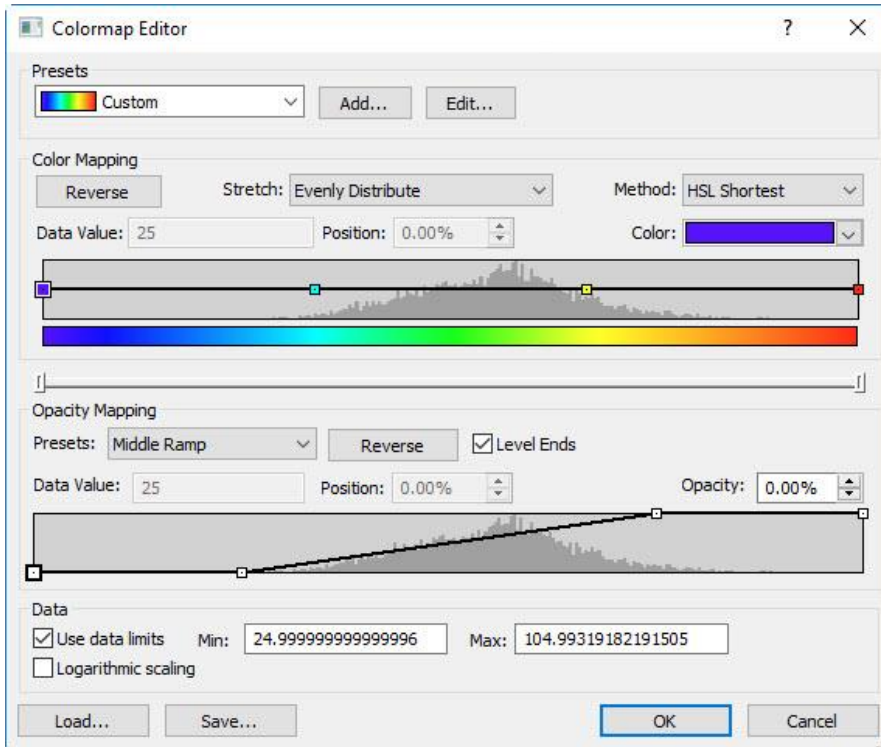# What's New in Grapher?

There are many exciting new features in Grapher! We focused on increasing usability, improving workflows to increase time savings, and including the most commonly requested new features. The top new features are listed below. A more complete list of the new features can be found in the online help.

See how to get the latest version here!

1. New Colormap Editor

Utilize more customization over the display of your data with the new, more flexible, more powerful Colormap Editor.

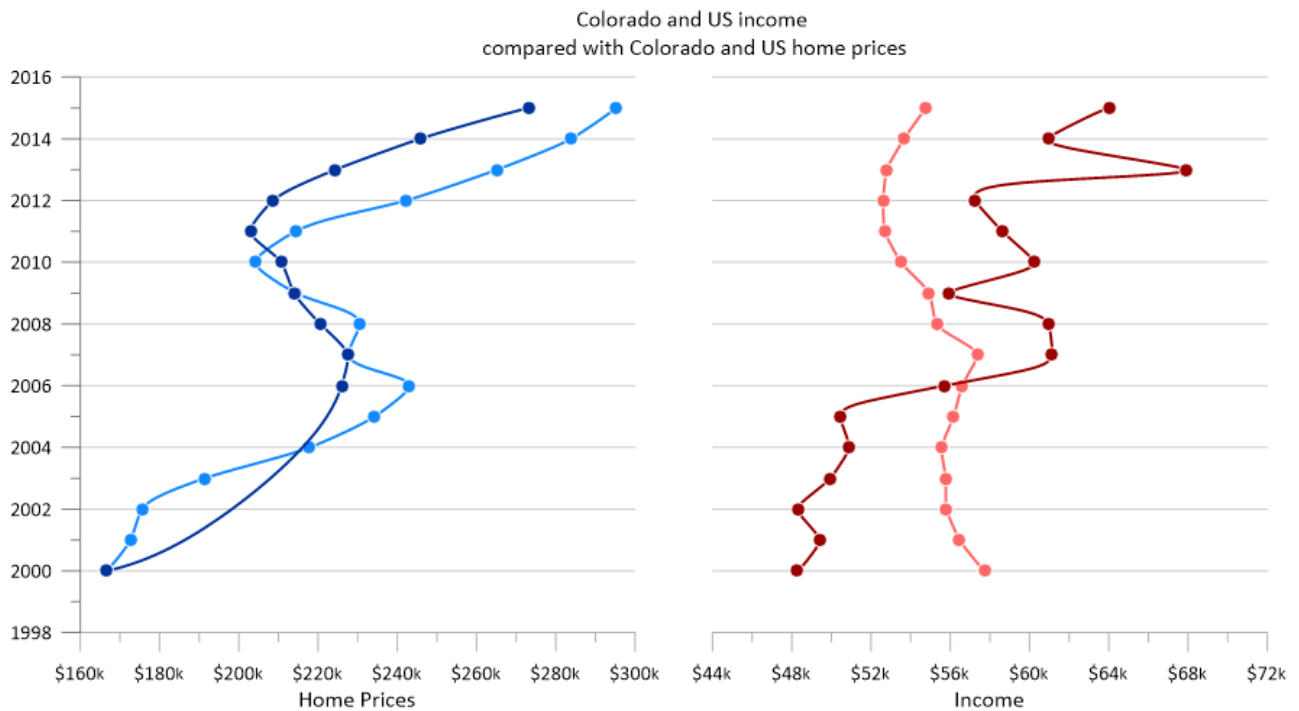- Add, remove, rename and rearrange presets in the Preset drop down menu
- Separate color mapping and opacity mapping allows more control over how to best represent your data. Easily set the fill to be gradually transparent or opaque, or insert or delete opacity nodes to get the transparency settings you need.
- A histogram behind both the colormap and opacity map shows the spread of values in your data, so you can easily see where you need more colors or different opacity settings to represent the data.
- Change the colormap stretch to *Evenly distribute* (equal spacing between nodes) or *Equalize* (i.e. equal area stretch, where nodes are placed such that the same amount of data is between each node pair)
- Change the colormap method to change how the color gradation is interpreted between nodes
- Scale colormap values linearly or logarithmically to emphasize small changes in the colors

The new Colormap Editor offers much greater control over the colormap and opacity map.

2. Display grid lines across multiple axes

Draw correlations between data sets more accurately and easily than ever before with the ability to share grid lines across multiple axes. Simply check the *Share grid lines* checkbox in the Property Manager after turning on grid lines to share them with all other intersecting axes on the same graph!

Colorado and US income
compared with Colorado and US home prices

Y axis grid lines shared across multiple X axes can help with correlating data in side-by-side plots.

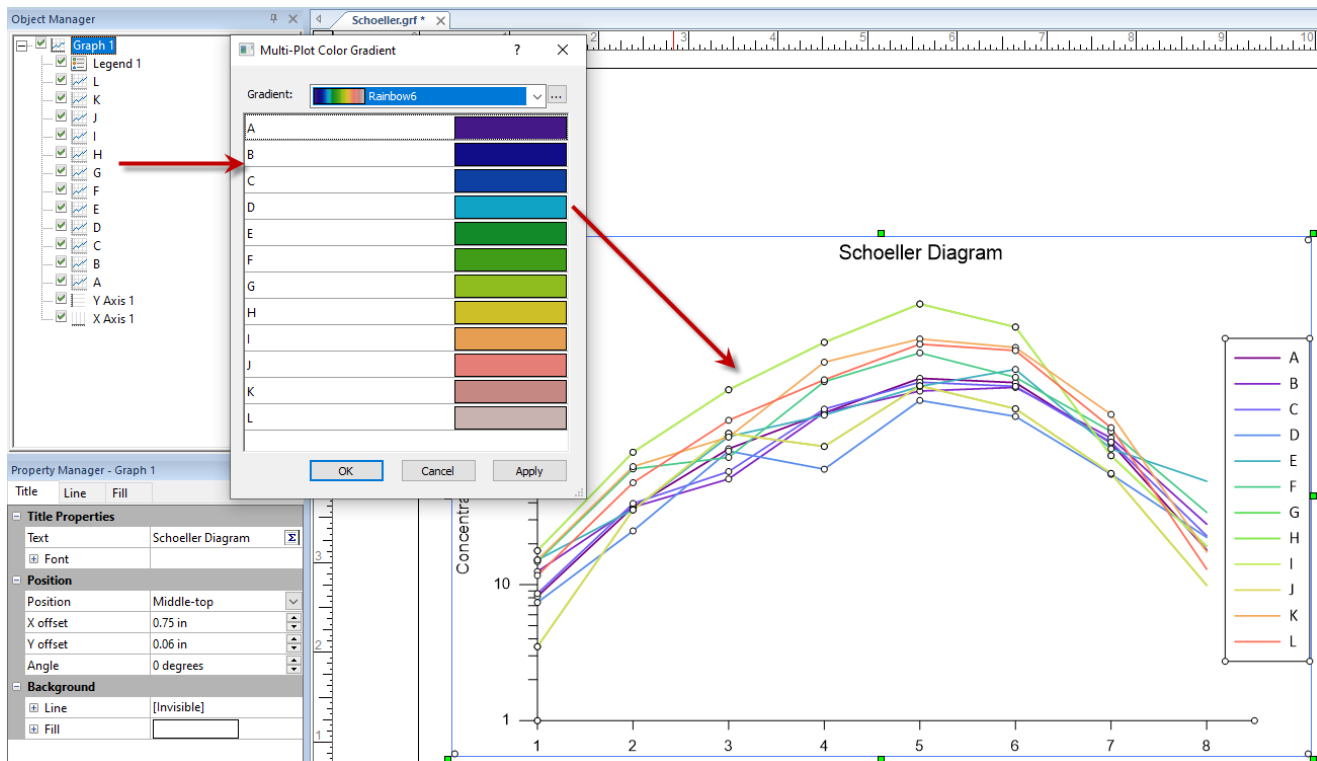## 3. Link axis position to position of another axis

Previous versions of Grapher added powerful axis linking options, but up until now, the position linking was done with a static offset in page units. That resulted in the need to change this value if the linked axis was resized. No more! With this latest release, Grapher has added the ability to dynamically link the position of one axis to the top, bottom, left, or right of the linked axis, in addition to the custom option that still allows for setting a specific distance in page units.

Link the position of one axis to the position of another so you can dynamically change the size and placement of your graph with ease.

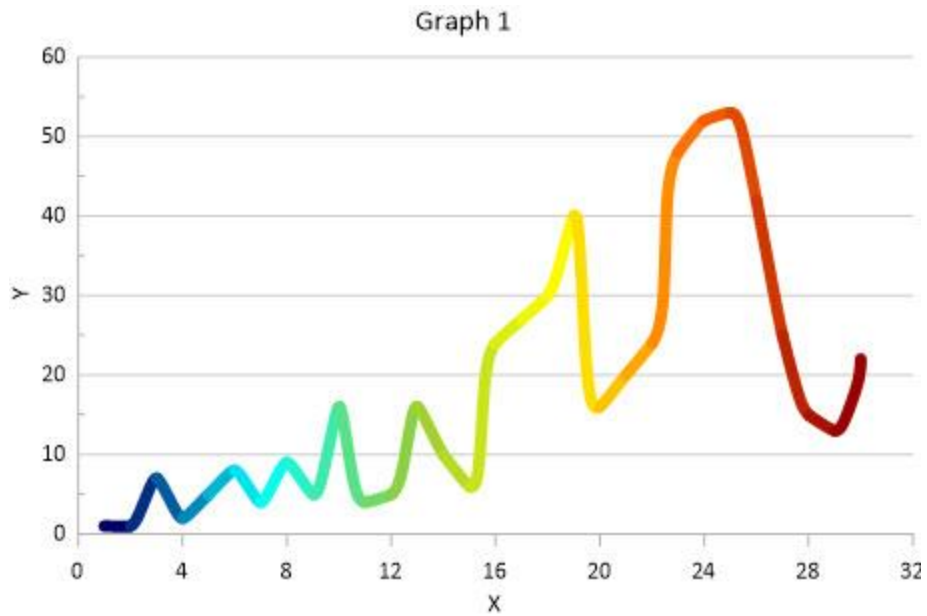## 4. Assign gradient to multiple plots

Save time and energy by mass-editing plots to assign a color gradient, thereby allowing for immediate differentiation of different plots with minimal effort. Just select the graph and click Graph Tools | Plot Tools | Change Colors to use this handy new tool!

Apply a gradient to all applicable plots in a graph to easily distinguish one plot from the next.

5. Color a line plot from beginning to end based on a gradient colormap
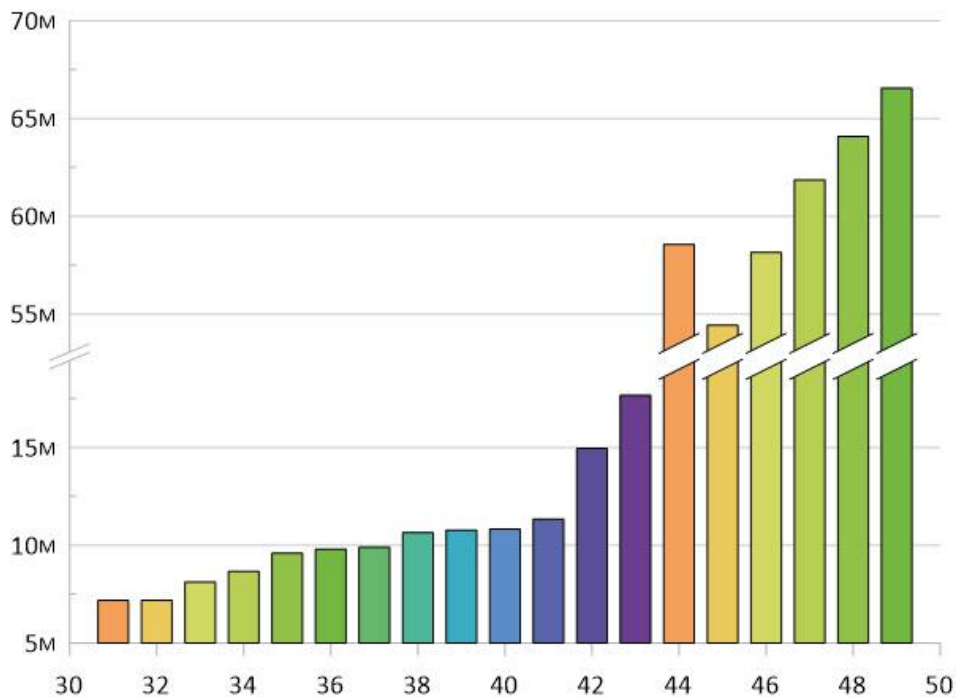
Display Cyclic Voltammetry curves with increased clarity, or just spice up any old line plots with a splash of color! We have added the ability to color the entire line plot line from start to end using a gradient tied to the data point order in the worksheet.

Display line plots with a gradient from start to end!
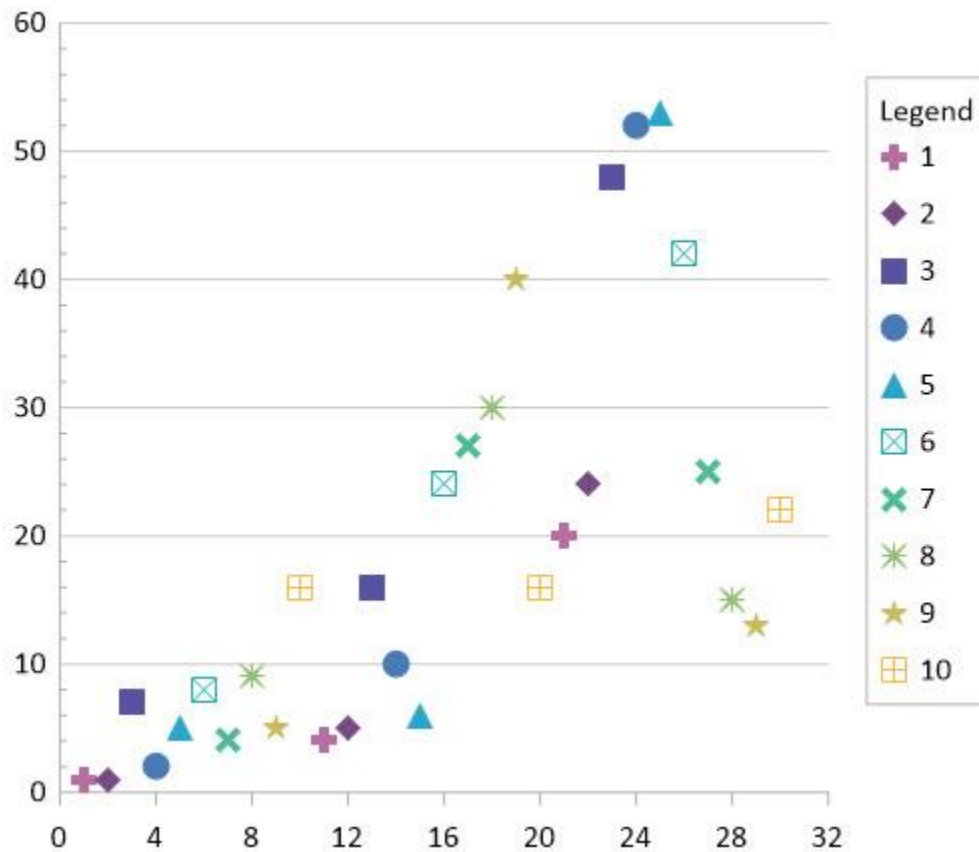
6. [Add Symbols to Bar Charts at Axes Breaks](#)

Customize how break axes display for bar charts. Add a grid line, empty space, the axis break symbol, or a user defined symbol to show where the break affects the plot.

Bar chart bars can be broken with the axis break symbol to show where the break affects the bars.
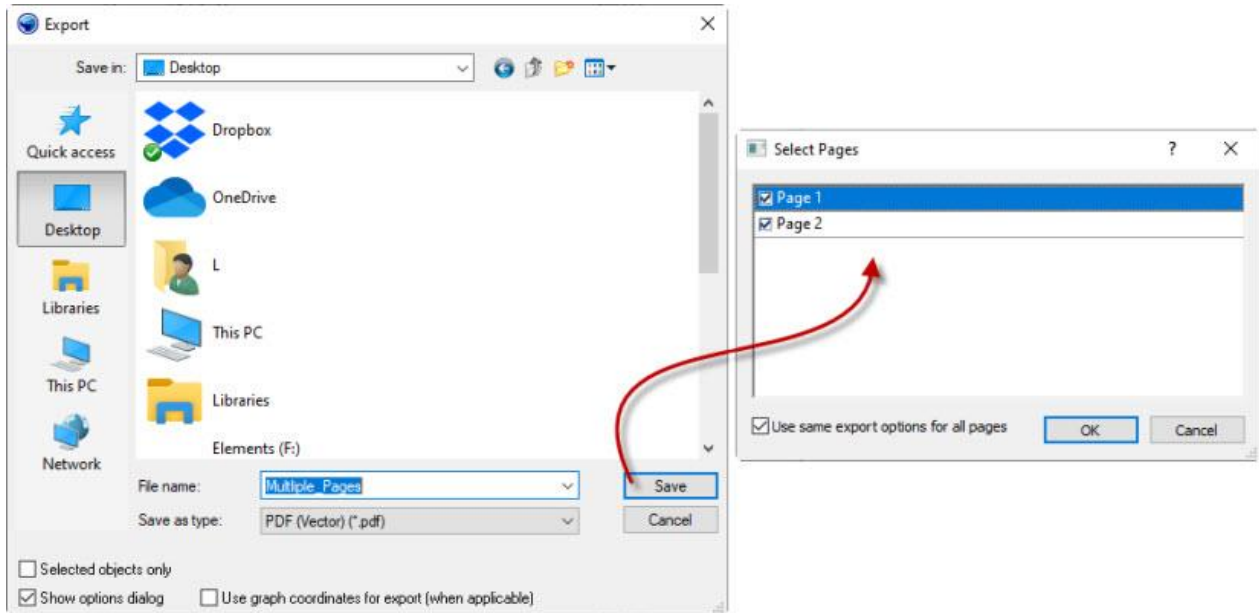
7. Legend for Color Tables and for Symbol Tables

Points in a scatter plot can quickly and easily be differentiated by applying a symbol table. Similarly, colors in a bar chart or in certain other plot types can be differentiated by applying a color table. Now a legend can be added for these symbol tables and color tables to more easily convey what these symbols and colors represent. Once the legend has been created, you can rename any of the entries individually.

Add a legend to a symbol table or color table to convey what each symbol or color represents.

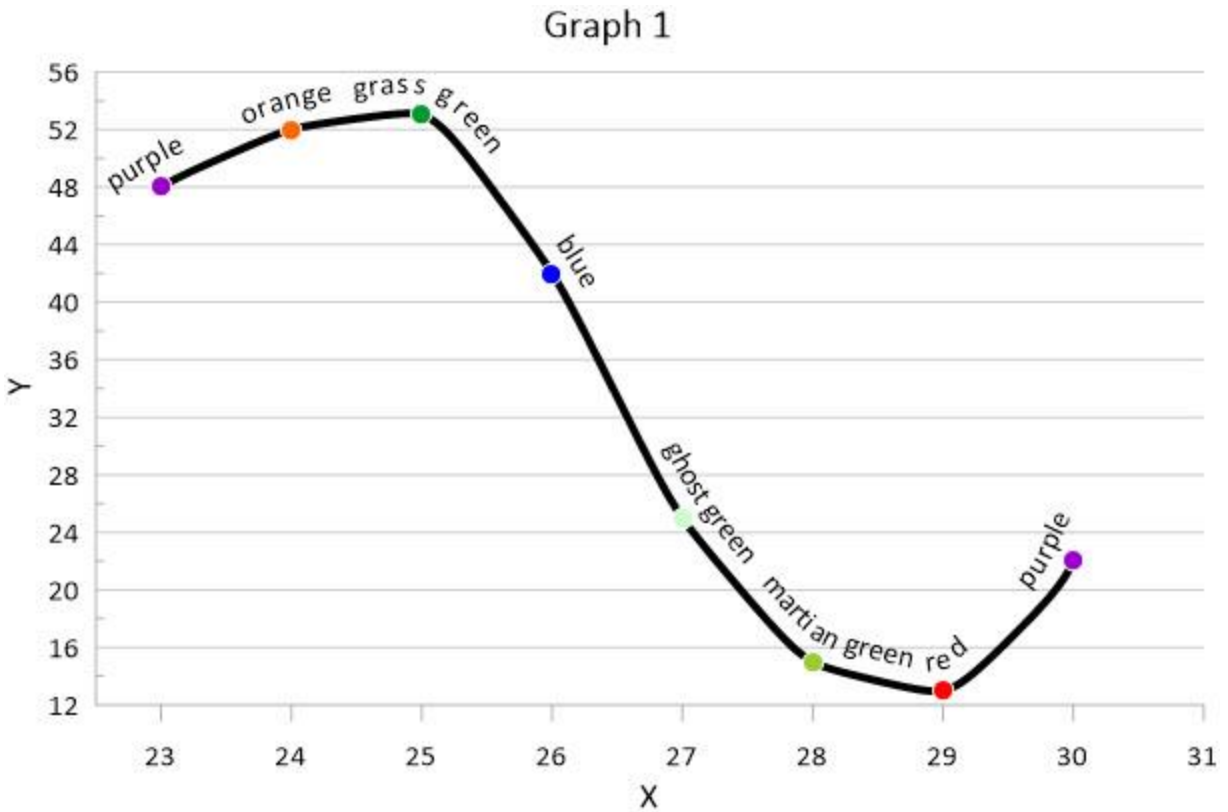8. Print and export multiple pages from a multi-page document

Export or print some or all of the pages from a multi-page plot document to their own output files, using the same or unique export options for each page. Simply click File | Export Multiple Pages or File | Print Multiple Pages and follow the prompts to save yourself immeasurable time!

Print or export multiple pages from a multi-page plot document.

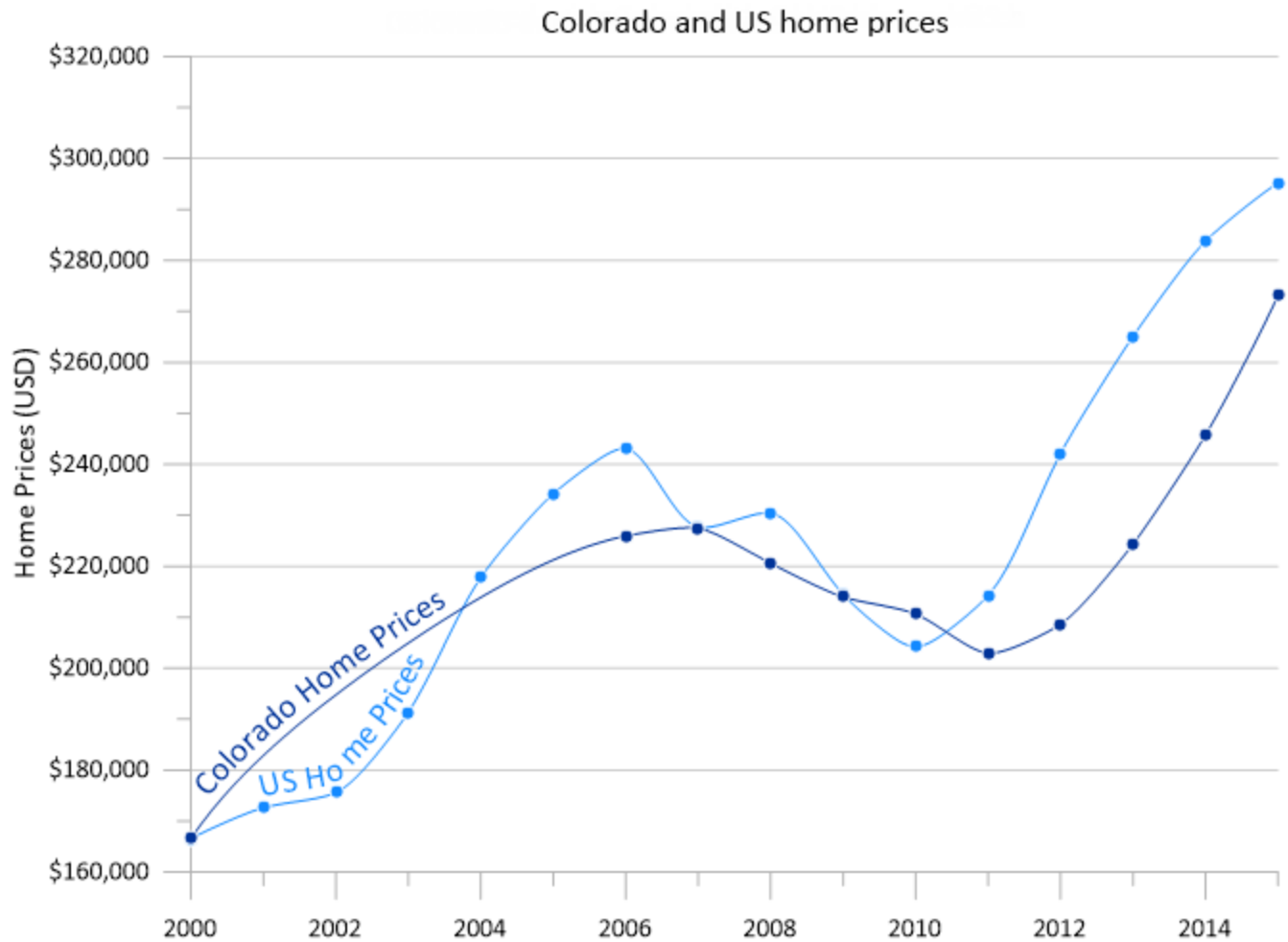## 9. Display line plot labels angled to the plot line

Tired of your line plot labels overlapping the line plot itself? Improve the aesthetic of your line plots by angling the line plot labels so they follow the line. All you have to do is check the *Label along line* checkbox in the Property Manager to set the label positions to follow the curve of the line plot. Additionally, offset the angled labels along the line with the new *Offset along line* option.

Graph 1

Angle line plot labels such that they follow the curve of the line.
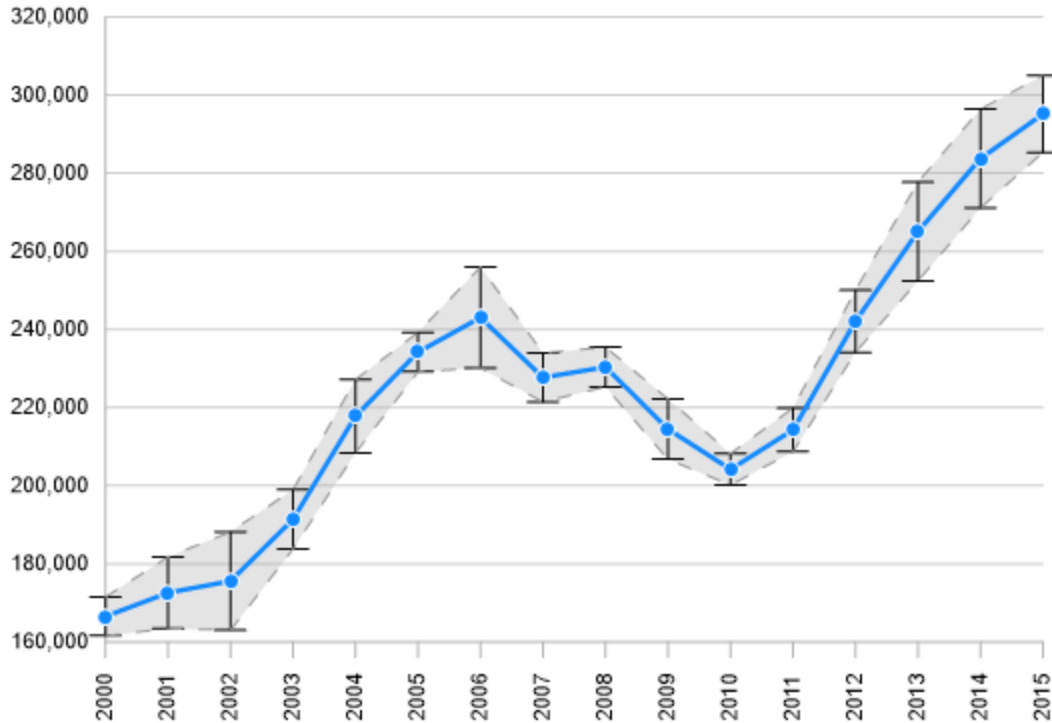
10. Display plot names on line plots

Add enhanced clarity to graphics with the new ability to label each plot line. Plot labels can each be fully customized through the new Title page in the Property Manager, and can be linked to the plot name to update automatically as the plot name is changed.

Colorado and US home prices

Add plot labels to distinguish between lines that are the same or similar in color.
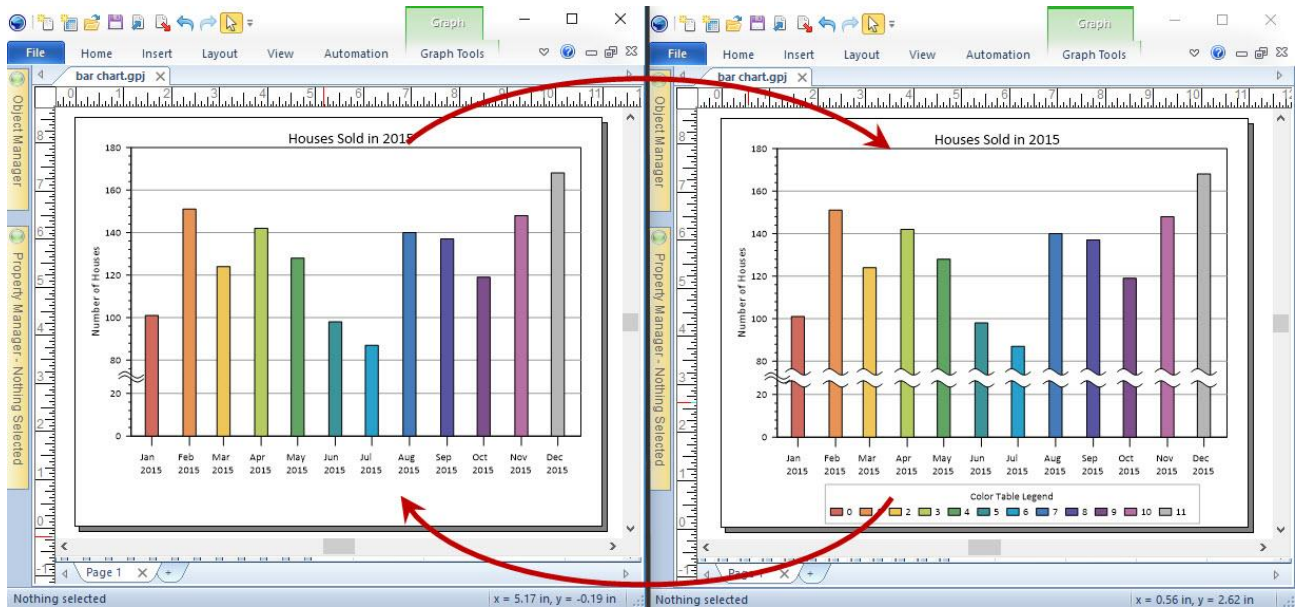
11. Fill between connected error bars

Accurately convey the limitations of data measurements by coloring in between the lines that connect error bars to create a highly-visible error envelope.

Fill between connected error bars to draw appropriate attention to areas where the data is less accurate.

12. Enhanced file sharing functionality

Beginning with Grapher Preview v16, we have serialized the file format, so all future versions will use the same file format. This will allow you to open a Grapher 17 or Grapher 18 file in Grapher 16 without having to save back to an older file, making it easier than ever to share files among coworkers with different versions.

Open future Grapher files in Grapher 16 without saving back.
New features will be excluded when opening in an older version.

Other features:

- *Scatter Plot Color Gradient: Add color scale*
- *Resize legends proportionally when dragging selection box handles*
- *Update auto axes limits when plot is clipped*
- *Error bars: Apply "Draw behind plot" to fill as well as line*
- *Automation commands for defining/changing a custom fit equation*
- *Enable files to be opened in multiple instances/versions at once*
- *File | Save: Save to file format version of open document*