

When Labels and Text Matter

INTRODUCTION

As readers of this column know, one of my constant mantras to my GIS and map making students is “never accept the defaults”, and I have written several columns to point out the “defaults” that we so often accept without much thought. Lettering on maps falls into that category; we tend to use the “default” font (Tahoma), maybe change the point size (default is 10 points), maybe adjust the style (italics, bold, etc.) and the more advanced students will put a 1- (default) or 2-point white (default) halo behind black letters and call it a day (or a map). ArcGIS Pro offers a lot more control over the lettering than most users realize. The following Tips and Tricks assume that you know how to engage with the Esri labeling engine in ArcGIS Pro to label features of interest. There are several documents available from Esri (<https://pro.arcgis.com/en/pro-app/latest/help/mapping/text/labeling-basics.htm>) and videos on YouTube (<https://www.youtube.com/watch?v=ca8SD6bBS8Y>) to help you become familiar with the label engine. So, here are a few ideas and tips for lettering and labeling on your next map. And, of course, many of these options are available in other GIS software packages.

TIP #1 — CHOOSING DIFFERENT FONTS

Although not an absolute rule (nothing ever is absolute), but cartographic convention is to label water bodies (rivers, lakes, the ocean) with a Times New Roman/italics font. Also, it is generally a good practice to limit the number of different fonts on a map to two, one serif and one sanserif, but it is acceptable to use multiple styles, i.e. bold, italics, smallcaps, etc. of those two fonts. For the illustrations below, I made a “Graphics Layer” and added the text “Gulf of Mexico” and “Tampa Bay” to my map in Times New Roman:Bold Italics in Apatite blue (I’ll discuss custom colors in next month’s column).

TIP #2 — CHOOSING FONT COLORS AND HALOS

Also, a “general” suggestion is to render the text label in a color of the same color family, but darker (not black) or lighter (not white) than the surrounding area being labeled (Figure 1). So, in the case of water, the text would be a lighter (or darker) blue than the surrounding water depending on how much contrast you prefer between the lettering and background.



Figure 1. Map of Tampa Bay, Florida area with labels for the Gulf of Mexico and Tampa Bay.

TIP #3

When adding a halo behind the lettering, in general, try different halo sizes (1 point is the default in ArcGIS Pro), colors (white is the default) and transparency levels (default is 0%) to determine which works best for your map. In Figure 2A, I labeled the counties with a 2-point light gray halo and a dark green (Tip #2) Verdana (remember Tahoma is the default font) bold font. In Figure 2A, the county names really stand out. In Figure 2B, I used the same halo and font but with a 50% transparency, to make the county names less prominent.

TIP #4 — CHOOSING A DIFFERENT LETTER SPACING (KERNING):

Letter spacing, technically called kerning, is a feature that most beginning map makers totally ignore, but adjusting the spacing between letters on labels and in legends, can make a world of difference in legibility. Letter spacing is set on the Label Class | Symbol | Formatting window (Figure 3). The default letter spacing is “0%”.

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Figure 2A. County labels stand out with a 2-point light gray halo surrounding the dark green lettering.



Figure 2B. County labels are less intrusive when the 2-point light gray halo is adjusted to 50% transparent.

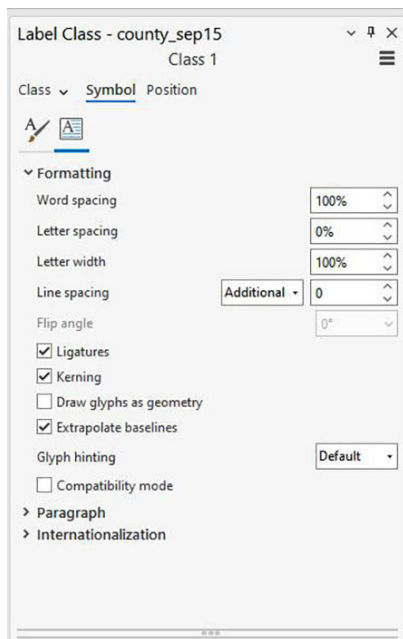


Figure 3. The Label Class | Symbol | Formatting window in ArcGIS Pro provides multiple letter customizations.



Figure 4. County labels are less intrusive when the 2-point light gray halo is adjusted to 50% transparent and more legible when the letter spacing is increased to 35%.

In Figure 4, I increased the letter spacing to 35% to make the county names more readable.

TIP #5

For curved lines (rivers) Esri provides the River Placement style (<https://pro.arcgis.com/en/pro-app/latest/help/mapping/text/label-using-the-river-placement-style-for-line-features.htm?rsource=https%3A%2F%2Flinks.esri.com%2FRiverLabels>).

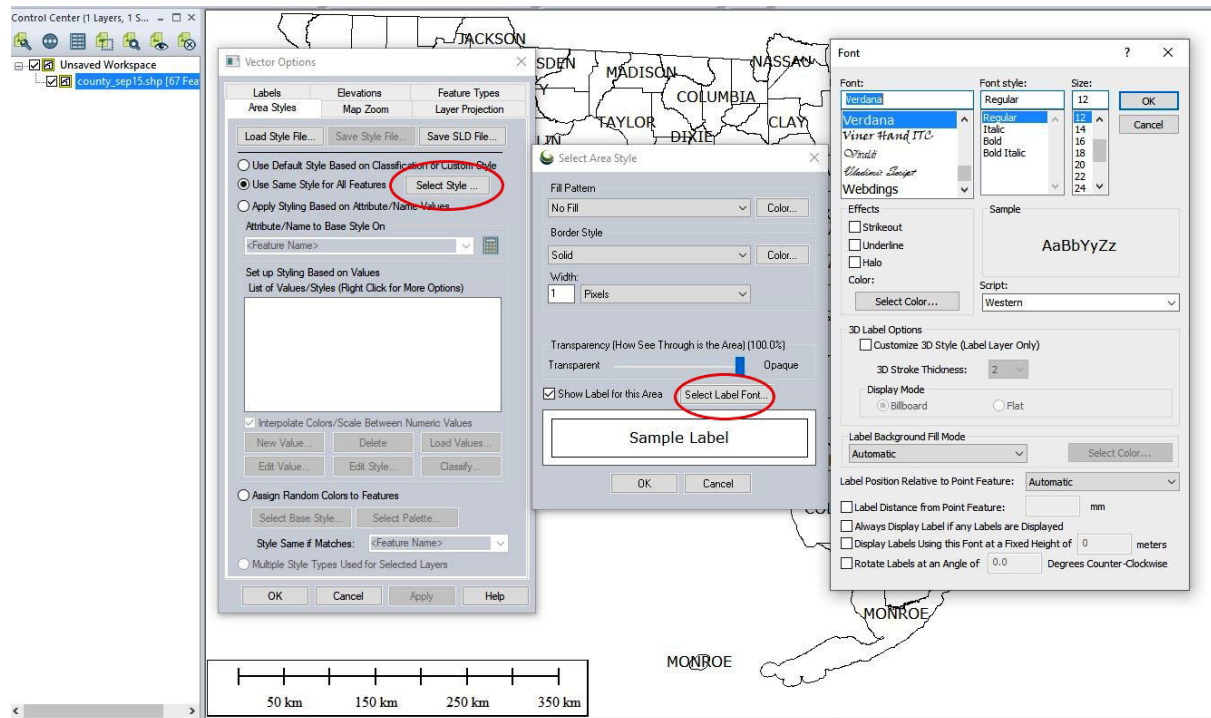


Figure 5. Global Mapper™ menu sequence to access text controls.

FOR GLOBAL MAPPER™ USERS

To get to many of these same features and controls over text labeling use the Options (right-click) on the layer, then the Select Style... Then Select Label Font... to access the controls as in Figure 5.

FOR QGIS USERS

Label text control is found on the Labels Tab on the Layer Properties menu (Figure 6). Note that to fully enable these features, a label field should be specified.

These are just a few of the of the multitude of labeling features that you can control on your maps. And remember, any/all of these tips also can be applied to your legend text.

TIP #6

Finally, (and this one is directly stolen from well-known Esri cartographers - John Nelson and Ken Field) avoid using the Comic Sans font unless you are making a map for little children.

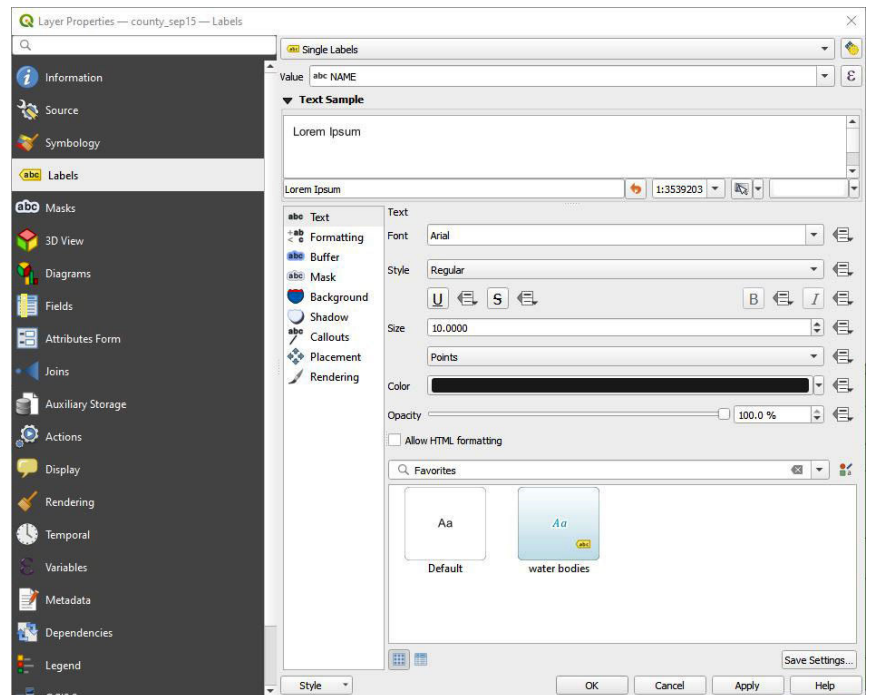


Figure 6. The Layer Properties | Labels tab from QGIS showing text labeling options.

Send your questions, comments, and tips to GISTT@ASPRS.org.

Al Karlin, Ph.D., CMS-L, GISP is a senior geospatial scientist with Dewberry's Geospatial and Technology Services group in Tampa, FL. Al works with all aspects of lidar, remote sensing, photogrammetry, and GIS-related projects. Al also teaches Map-making for the Social Sciences at the University of Tampa.