# Drape Labels over Terrain

The information content of your 3D displays can be augmented by the use of labels for the vector layers in the group. Text labels are rendered individually into the 3D perspective view and by default are draped over the terrain surface just like other vector elements such as 2D point and line symbols. Leader lines for polygon labels placed outside of their polygon are also rendered and draped on the terrain. 3D rendering is handled in the same way for label elements that are part of the vector object and for on-screen text labels that you generate for vector elements on-the-fly in the Display process from attributes in attached database records.
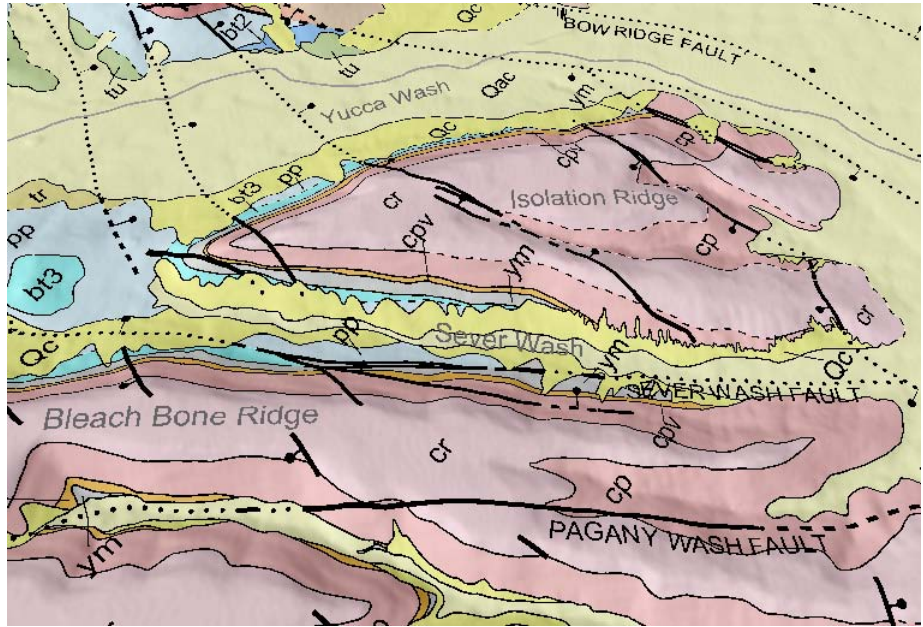
Further attention can be drawn to labels of either type by styling them within frames. Frame shape options include rectangle, rounded rectangle, ellipse, and circle shapes, and the frame can have a color fill with any percentage of partial transparency. Using a modest transparency level (25 to 50%) for the frame fill can enhance the 3D perspective effect of the label rendering without detracting from label readability.

This 3D rendering of geologic map data combines a shaded-relief raster layer with six vector layers. The layer with geologic map polygons includes polygon labels with the rock unit symbol, some of which are drawn outside their polygon with leader lines. The layer with faults (bold lines) includes line labels with the names of the faults. Another layer provides text labels for topographic features.
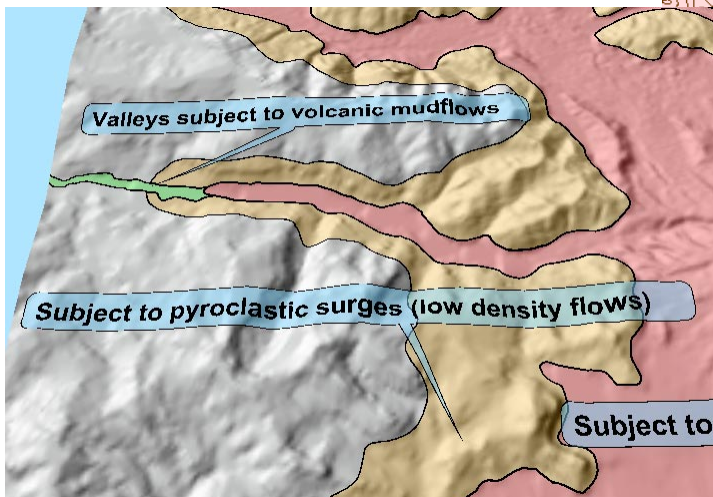
These polygon label elements with leader lines have been styled to display with frames shaped like a rounded rectangle. The frame fill color has been set to 50% transparency to enhance their 3D effect.
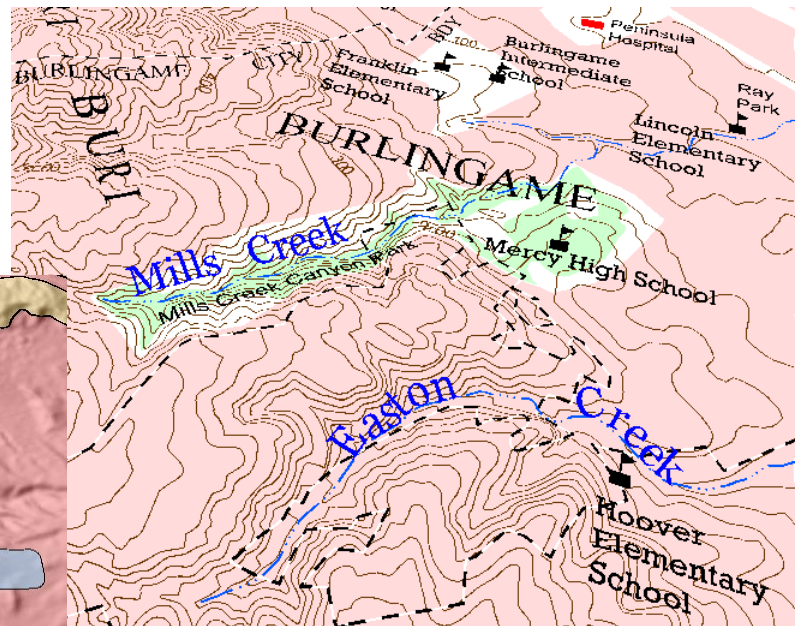
This 3D rendering of topographic map data includes nine vector layers draped over the terrain surface. Seven of the vector layers contain label elements, including polygon labels (such as the city name), line labels (blue labels with names of creeks), and point labels (such as the school names). The other two layers provide the color backgrounds for urbanized areas (pink) and vegetation (green) and so do not require labels.