Clipping Near/Far in 3D Views

wireframe view without clipping
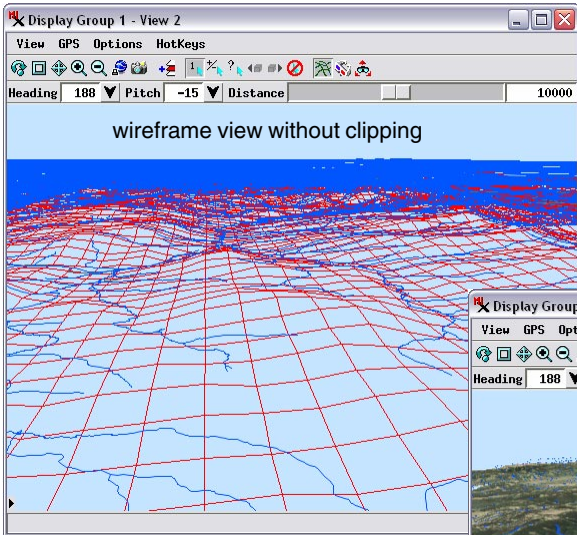
Use of large-area datasets (statewide, national, or global) and datasets with differing spatial extents in 3D perspective views introduces issues that are not apparent with more localized data. Elements in large-area vector overlays receding into the background of the view fuse together to form a solid color mass near the horizon. In addition to producing an unattractive result, significant time is required for rendering these background areas, which may add no useful information to the display.

solid view without clipping
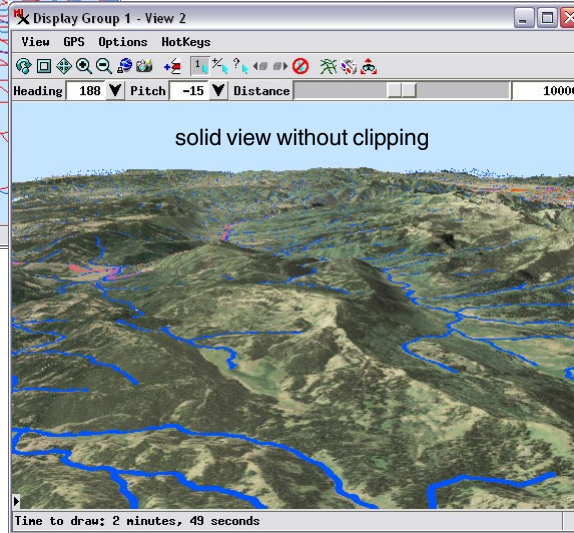
The Clipping Distance controls on the 3D View point Controls window allow you to restrict the area rendered to a specified range of distances from the viewing position (in meters). The Near Clipping Distance slider sets the minimum distance for the rendered area, while the Far Clipping Distance slider sets the maximum distance. Reducing the Far Clipping Distance can remedy issues with cluttered background areas, while increasing the Near Clipping Distance can remove foreground obstacles such as mountains or extruded polygons to reveal features behind them.
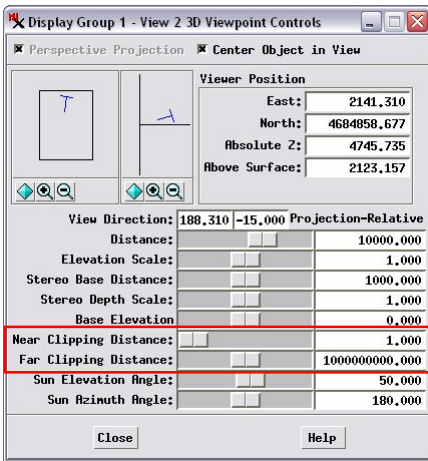
default clipping distance settings (above) and adjusted settings (below)

Wireframe display mode provides a quick way to view the results of adjusting the Clipping distances. As you move the Near Clipping Distance slider to the right, you will see the near end of the wireframe begin to disappear. As you move the Far Clipping Distance slider to the left, the farthest elements will disappear from the wireframe. As with the other controls in this window that operate over several orders of magnitude, once you reach the end of the slider, the numeric range is readjusted automatically. You can also edit the clipping distance values directly in the numeric fields to the right of the sliders.

wireframe view with near and far clipping

solid view with near and far clipping