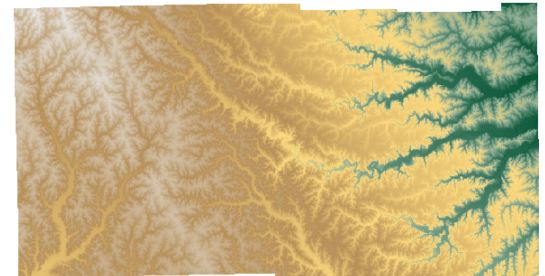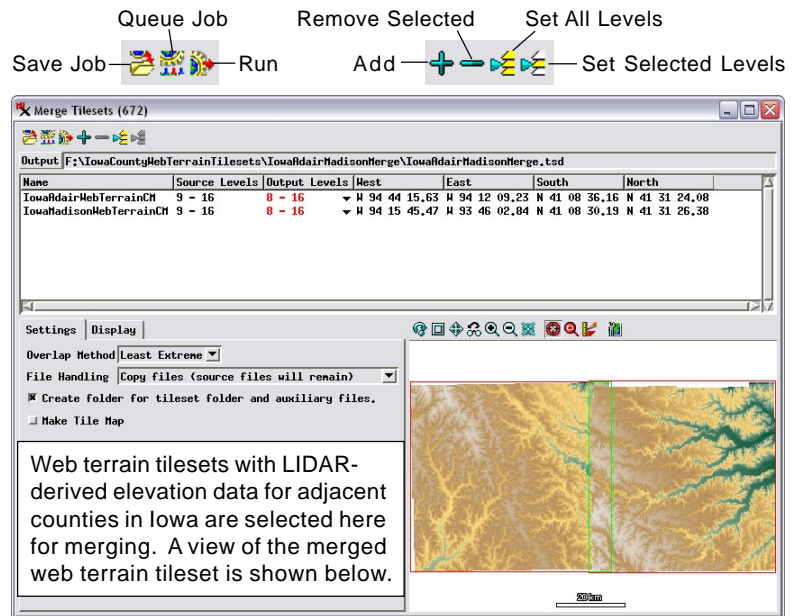# Merge and Subset Web Terrains

Web terrain tilesets contain elevation data in a tiled form that provides local or internet access to actual elevation values for areas of unlimited size (see the Technical Guide entitled *Tilesets: Web Terrain Structures*). TNTmips Pro provides processes to convert raster objects with elevation or other continuous surface data to web terrain tilesets (Export Web Terrain Tileset and Mosaic to Web Terrain Tileset; see the Technical Guide entitled *Tilesets: Create Web Terrain Structures*) and also processes that allow you to merge and to extract subsets from web terrain tilesets.

Merge Web Terrain Tilesets

You can use the Merge Web Terrain Tilesets process (Tileset / Terrain / Merge) to merge adjoining or overlapping web terrain tilesets. Use the Add icon button at the top of the Merge process window to select the input web terrain tilesets. Use the Output button to choose a destination and name the output merged tileset. You can open a pop-up dialog to set the minimum and maximum zoom levels to use for all of the inputs by pressing the Set All Levels icon button. You can set the zoom level range to use for an individual input tileset by highlighting the tileset in the list and pressing the Set Selected Level icon button (or simply left-click on the tileset's entry in the Output Levels field in the list). The Overlap Method menu on the Settings tabbed panel allows you to choose how output values are set in areas where the input tilesets overlap. The default setting is to use the Least Extreme value (other choices include First in List, Last in List, Minimum, and Maximum).

Subset Web Terrain Tilesets

You can extract subsets by area from web terrain tilesets using the Tileset Subset process (Tileset / Terrain / Subset). Each subset you extract is a self-contained web terrain tileset with the range of output zoom levels you select using the Minimum and Maximum Zoom Level menus. There is no limit to the size of the area you can extract from a tileset stored on your computer or local network. You can make subsets of limited size from tilesets that are publicly accessible on the Internet, such as those hosted at microimages.com (see the TecGuide entitled *Tilesets: Subset from Remote Sources*).

The Subset process for web terrain tilesets is similar to that for standard web tilesets (see the TechGuide entitled *Tilesets: Subset Structures*). You can select one or more input tilesets that can be overlapping, adjoining, or spatially separated. For local tilesets you can designate a *clipping area* individually for each input tileset to define the portion to extract and/or select a *Bounding Region* to apply to all of the output tileset extracts. You can set buffer distances for both clipping areas and the bounding region to automatically enlarge the designated area(s) to provide additional context. When you subset from remote web tilesets, a special drawing tool is activated to allow you designate the limited-size rectangle bounding your desired area (see the TechGuide entitled *Tilesets: Subset from Remote Sources*).

Subset process window set to extract a subset from the SRTM 90 meter global web terrain tileset hosted at microimages.com. You can extract limited-size subsets from on-line web terrain tilesets.

Web terrain tilesets with LIDAR-derived elevation data for adjacent counties in Iowa are selected here for merging. A view of the merged web terrain tileset is shown below.

If you want to produce a web terrain tileset from a large number of adjoining raster inputs, you can use the Export Web Terrain Tileset process to produce a tileset from each raster, then use the Merge Web Terrain Tilesets process to merge the individual tilesets. Because multiple tileset exports can be run simultaneously on your multicore computer using TNT Job Processing, this workflow can be significantly faster than mosaicking the source rasters directly to a single web terrain tileset.