

Estimating Design Values for Unmonitored Counties

- Design values for unmonitored counties were estimated using “nearest neighbor” interpolation. Interpolation works by using known data to estimate unknown values at nearby points. Nearest neighbor is one of the most basic forms of interpolation. It places a grid over the map and assigns a value to each grid node equal to the nearest known value. The shading (orange for values greater than 60 ppb) is based on the gridded interpolations and is not forced to conform to county boundaries. Other methods of interpolation, including kriging, were also tried. Nearest neighbor was the best at preserving the original (monitored) values. The projection of ozone levels greater than 60 ppb over most of the 48 contiguous states is supported by monitoring data collected in remote locations such as Yellowstone National Park.