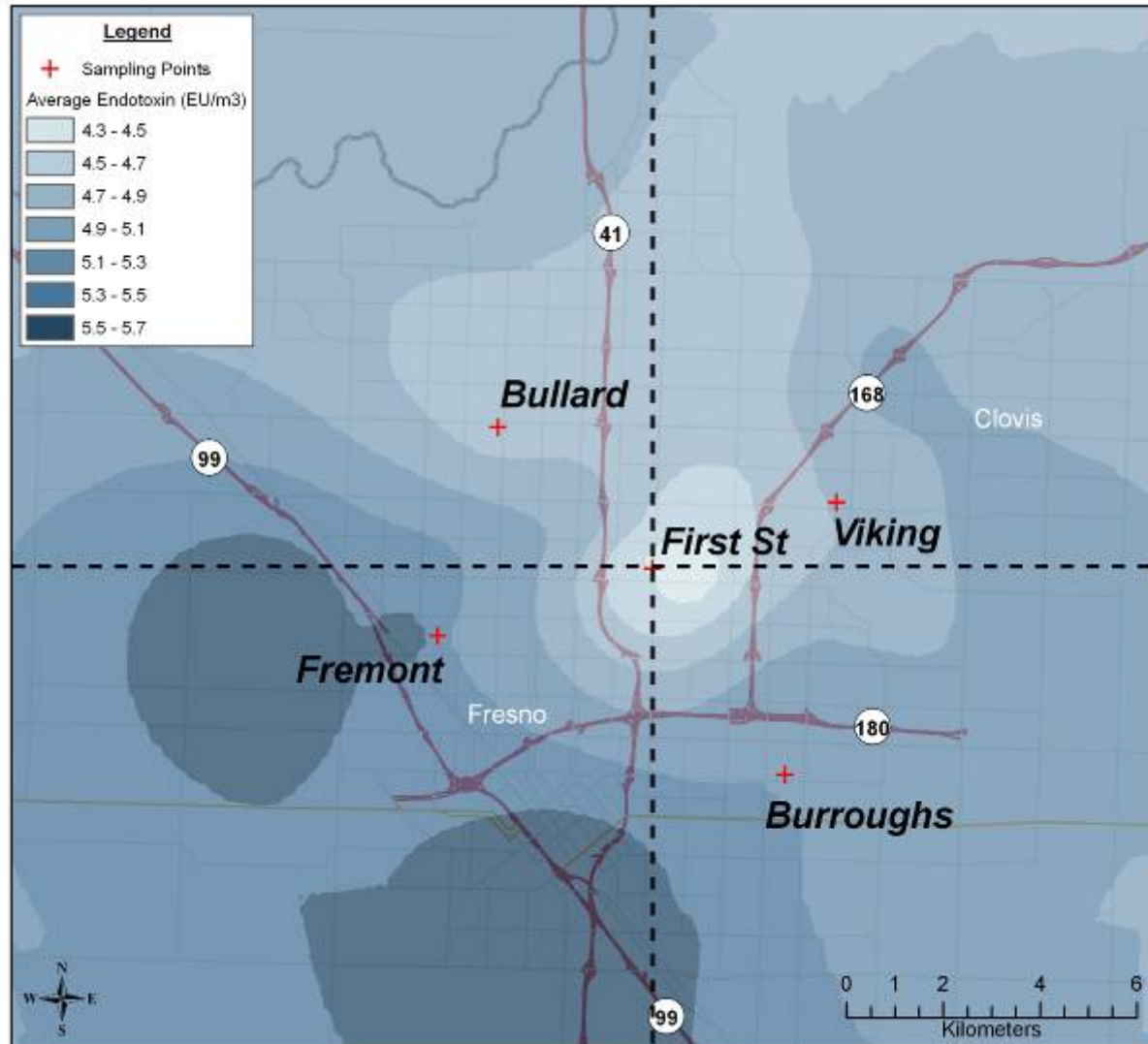
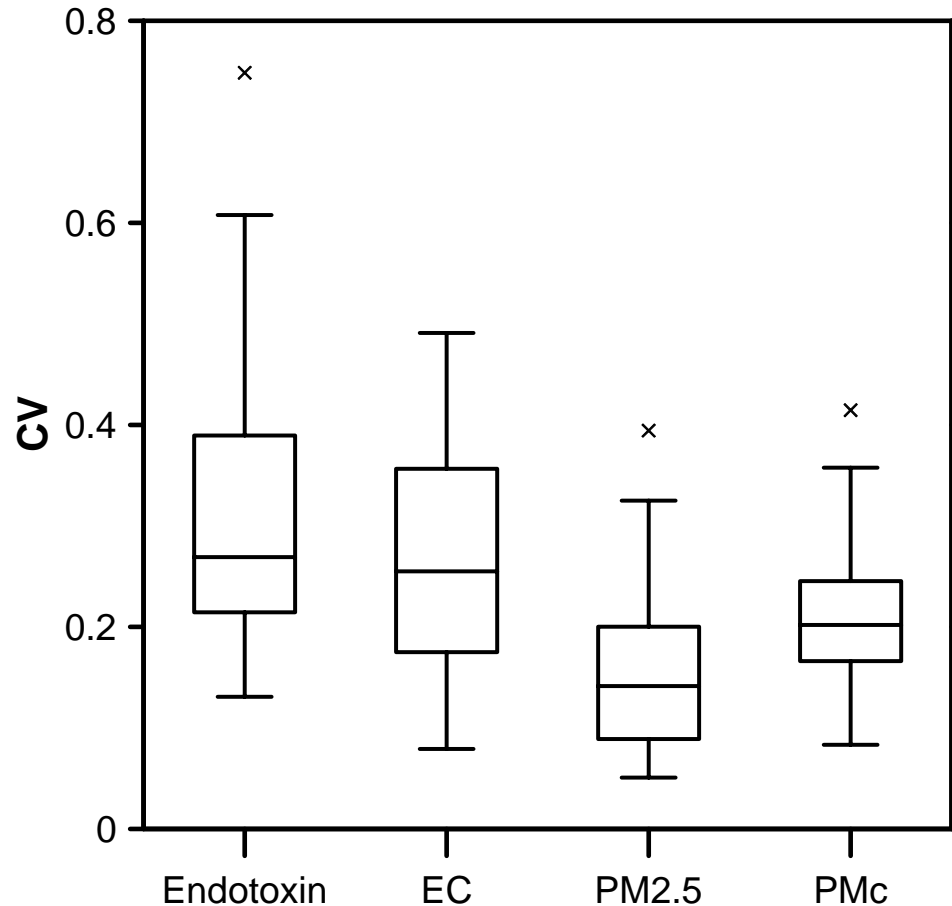


Endotoxin Spatial Pattern

Warm Season Average



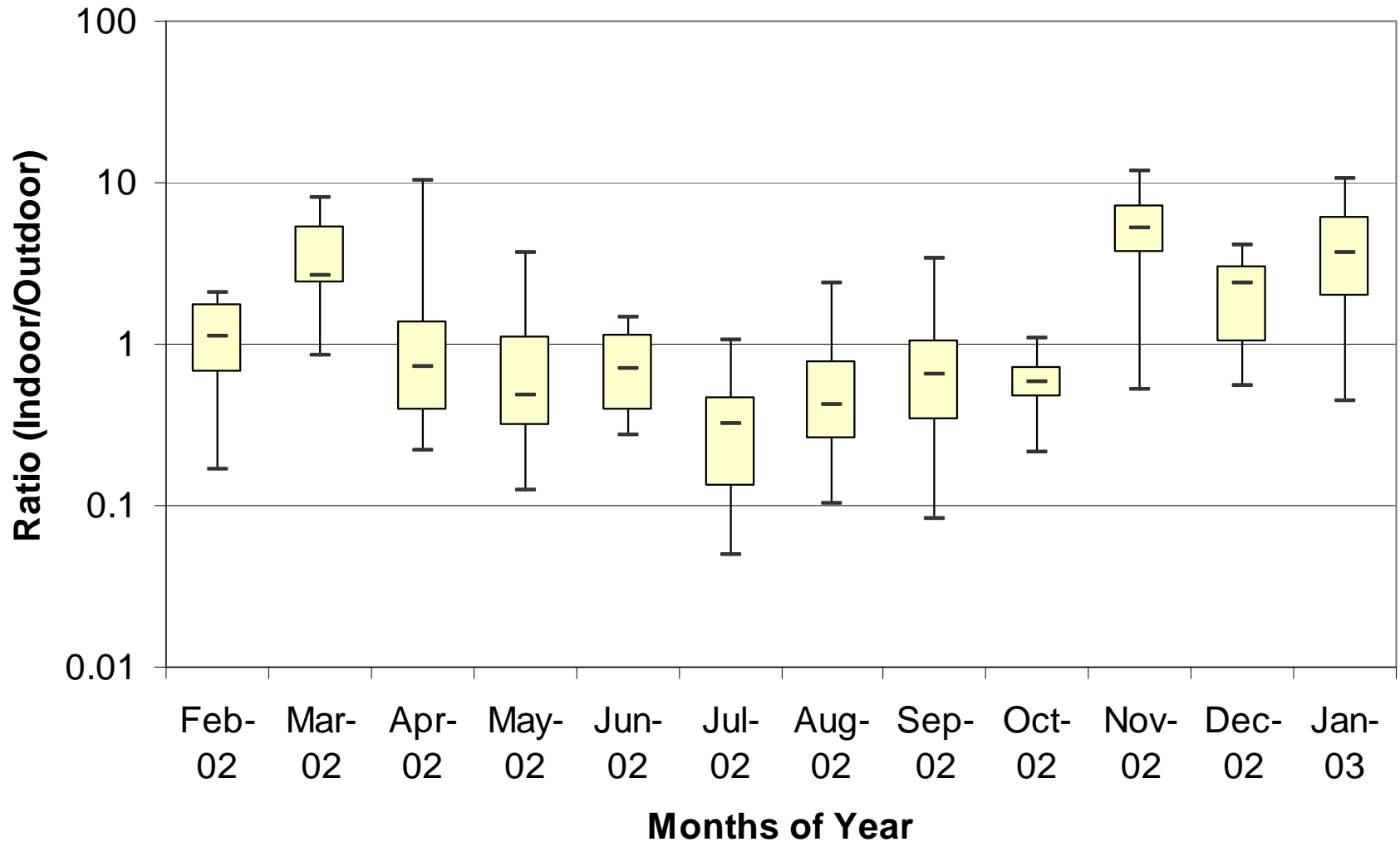
Daily Spatial Coefficients of Variation (CV) of Endotoxin and Other Pollutants



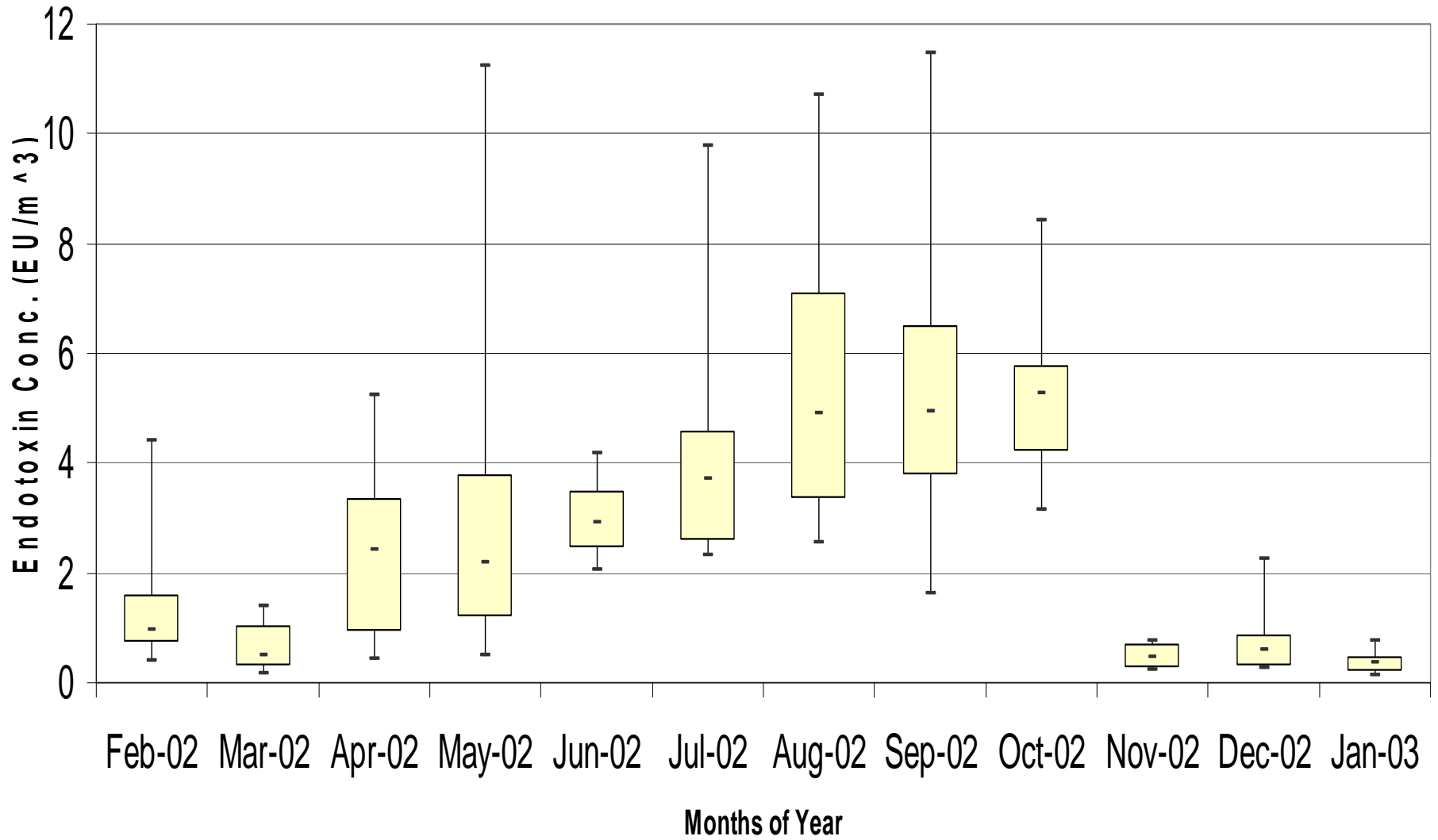
**Data show that
Endotoxin is
the most
spatially
heterogeneous
of the group**

Box-whisker plots of the daily spatial coefficients of variation (CV) for endotoxin, elemental carbon (EC), PM_c, and PM_{2.5} on the 22 dry season days 6 endotoxin measurement **locations**

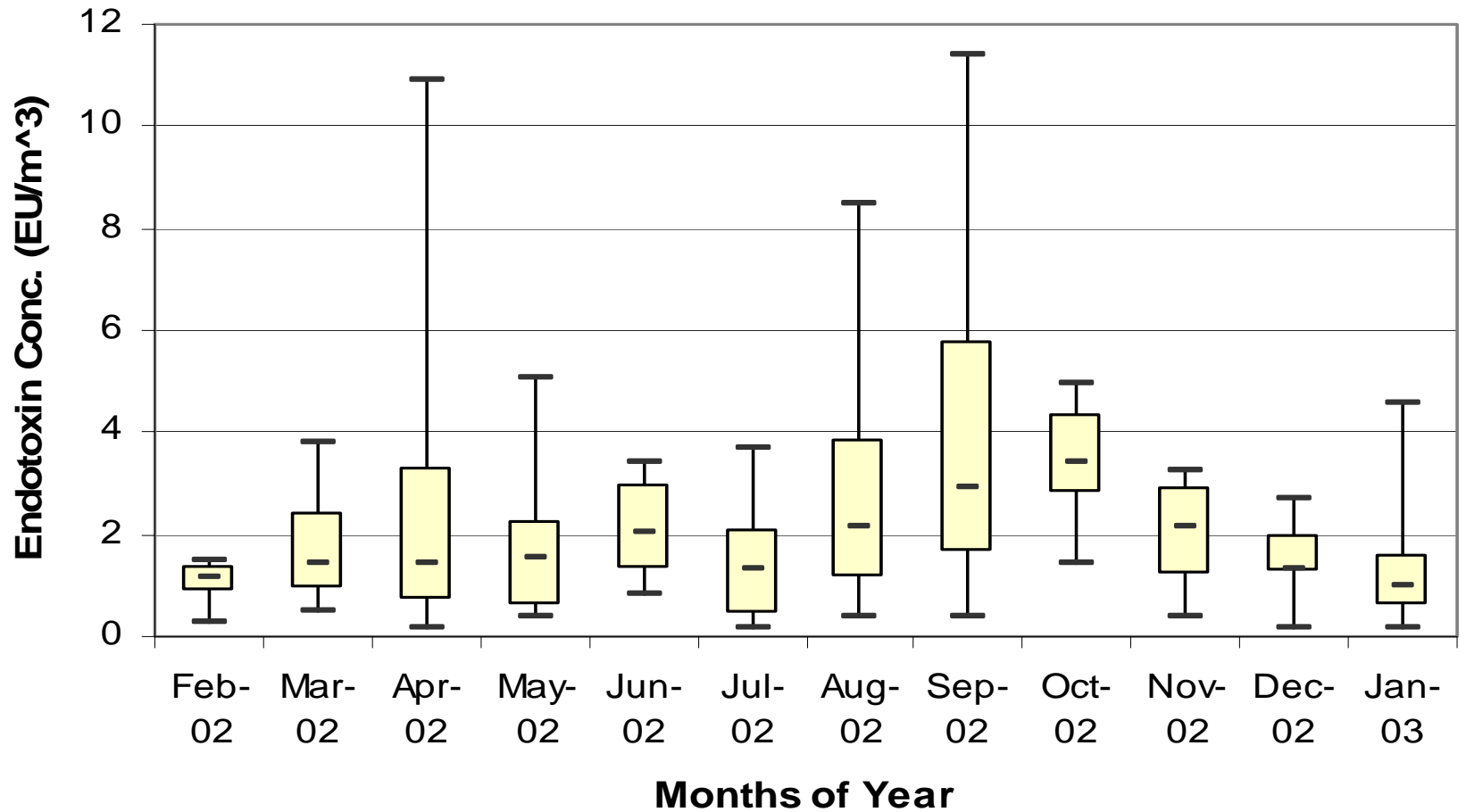
Distribution of Indoor/Outdoor Endotoxin Ratio from February 2002 to January 2003



Distribution of Outdoor Airborne Endotoxin from February 2002 to January 2003



Distribution of Indoor Airborne Endotoxin from February 2002 to January 2003



Conclusions - Endotoxin

- Like most air pollutants, daily ambient concentrations of endotoxin are influenced heavily by meteorology in addition to sources.
- In Fresno, which is surrounded on three sides by agricultural land, endotoxin has a spatial distribution that is associated with proximity to CAFOs, pastureland and cropland, and differs from $PM_{2.5}$ (a regional pollutant) and EC (marker of traffic in our study area) but is somewhat similar to PM_{10} with which it is moderately correlated.
- These data support the need to evaluate the spatial and temporal variability of endotoxin concentrations, rather than relying on a few measurements made at one location in studies in which health effects associated with PM and its components are being evaluated.