

ROCIS Stakeholder Meeting February 27, 2015

Mapping Air Quality: Insights from the Mobile Lab, the Breathemobile

Albert Presto, CMU Dept. of Mechanical Engineering
Center for Atmospheric Particle Studies



1936



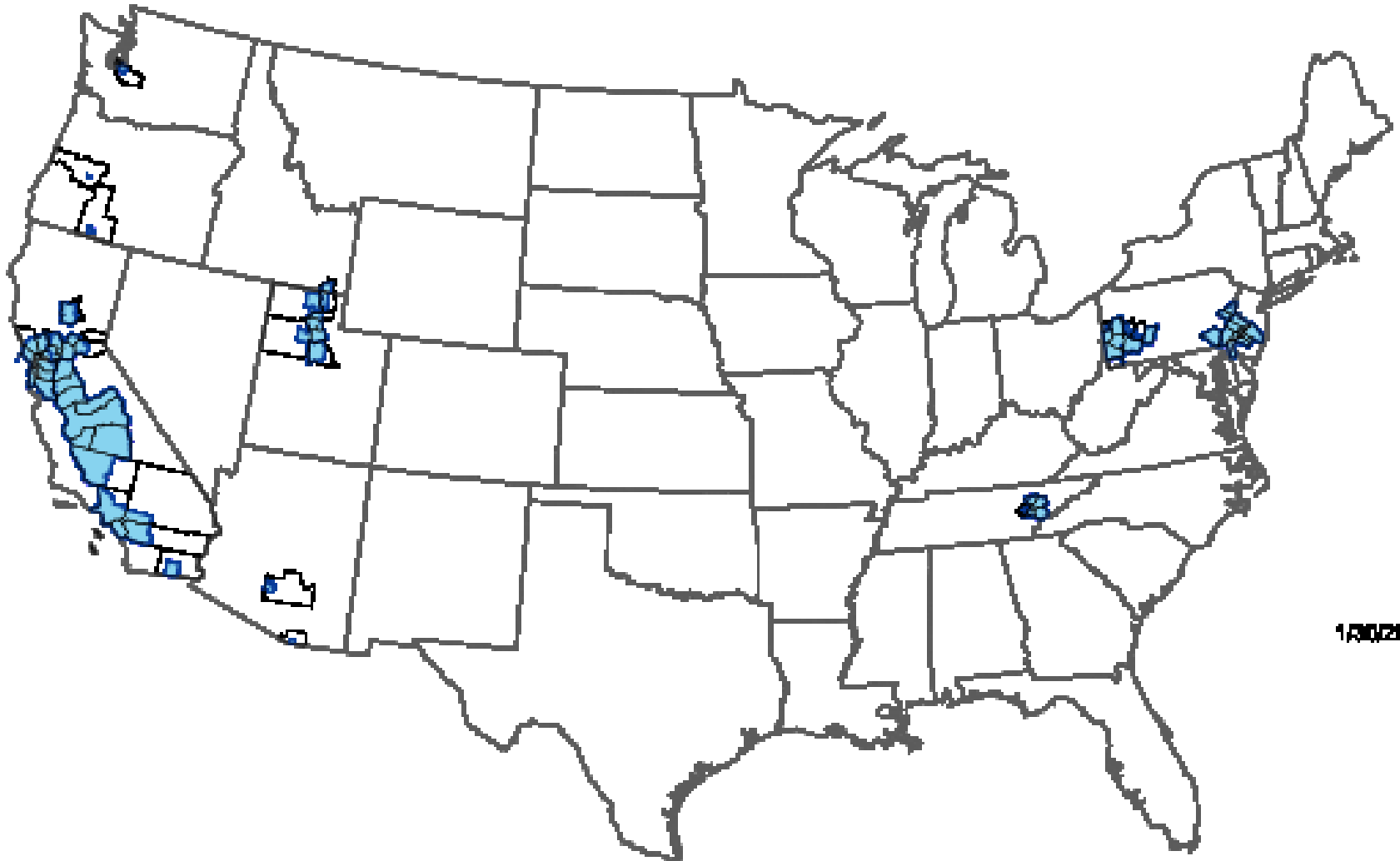
1964



2006

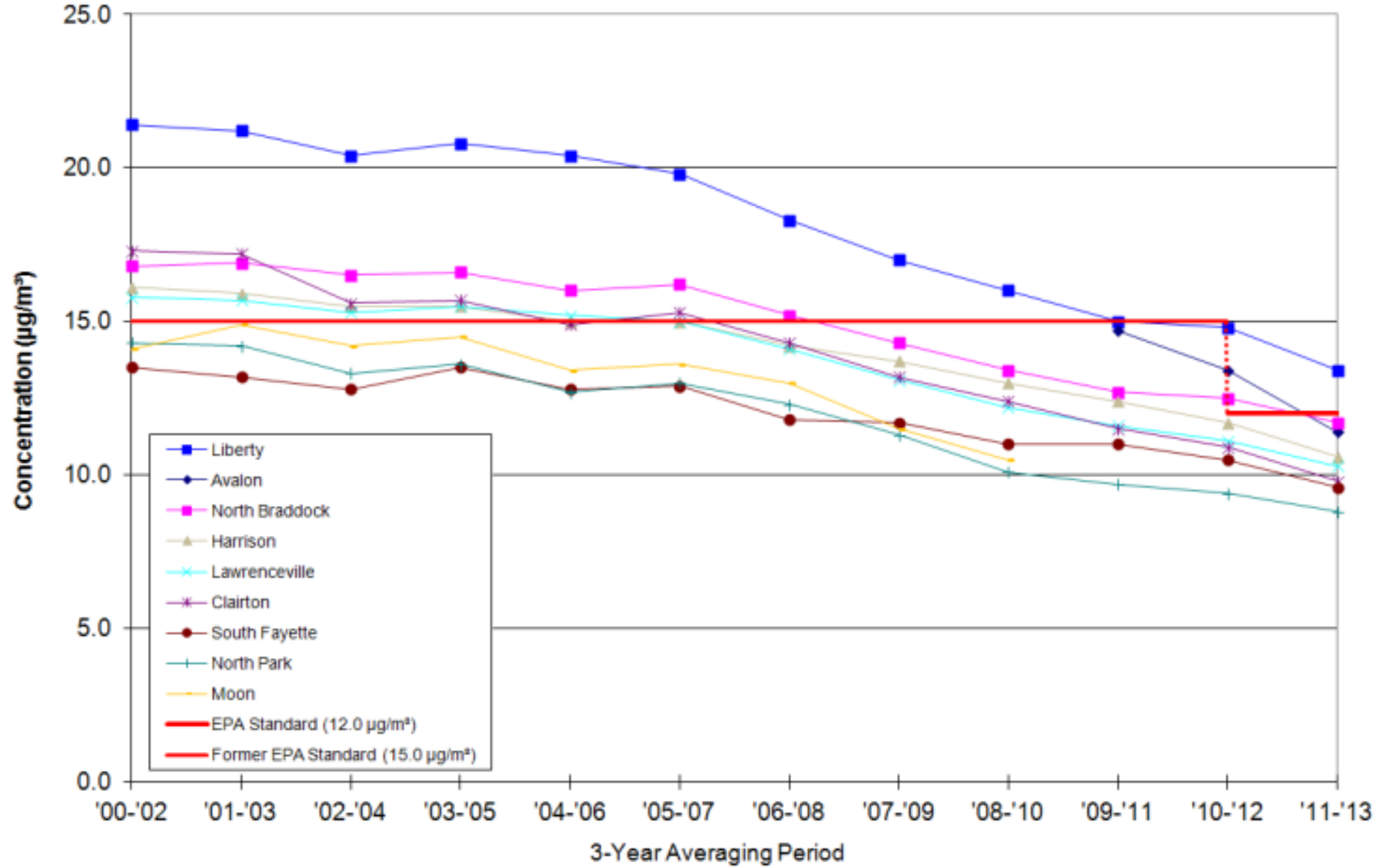


PM_{2.5} non-attainment

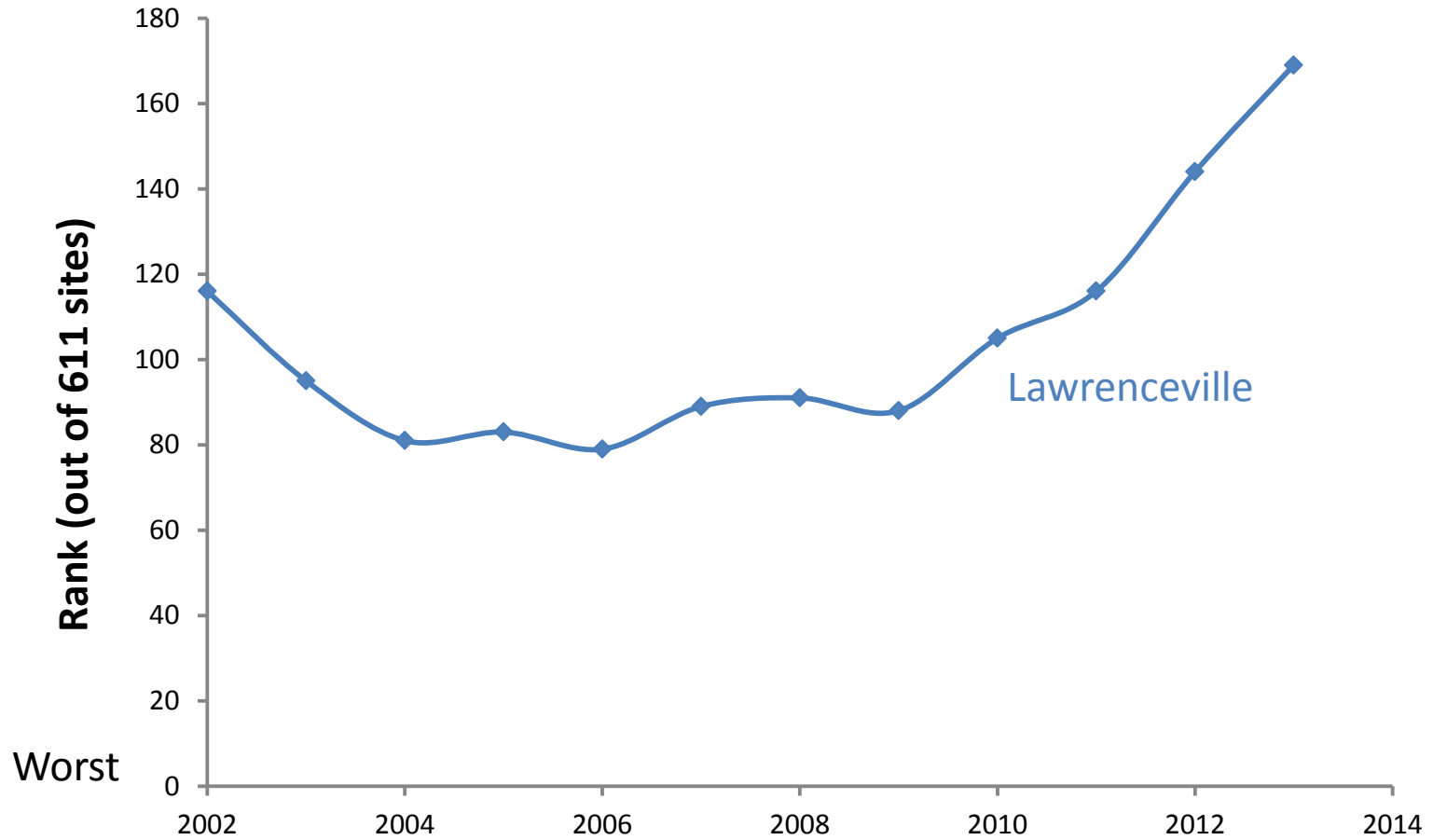


1/30/2010

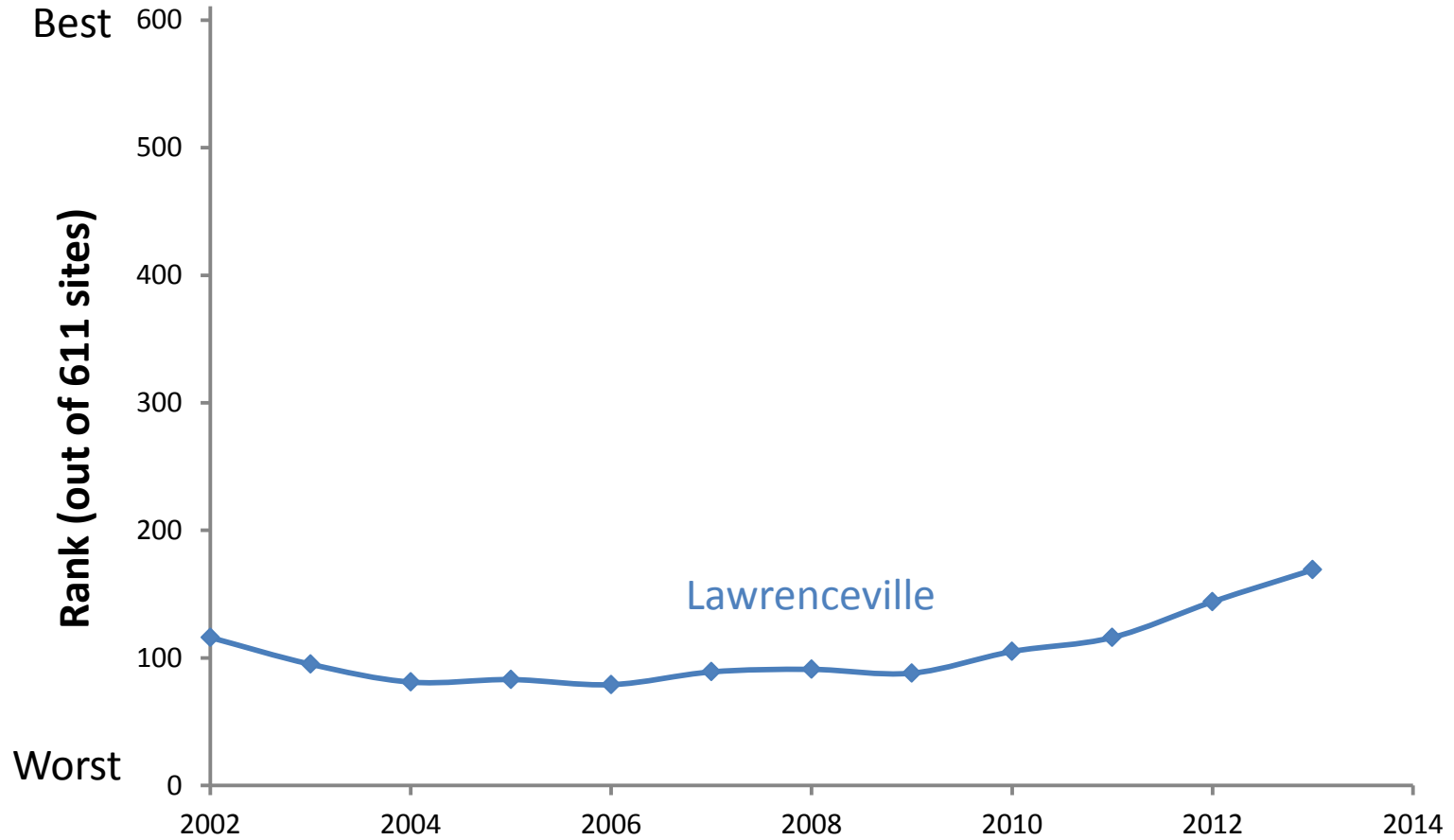
PM_{2.5} Annual Design Values by 3-Year Period, 2000 to 2013



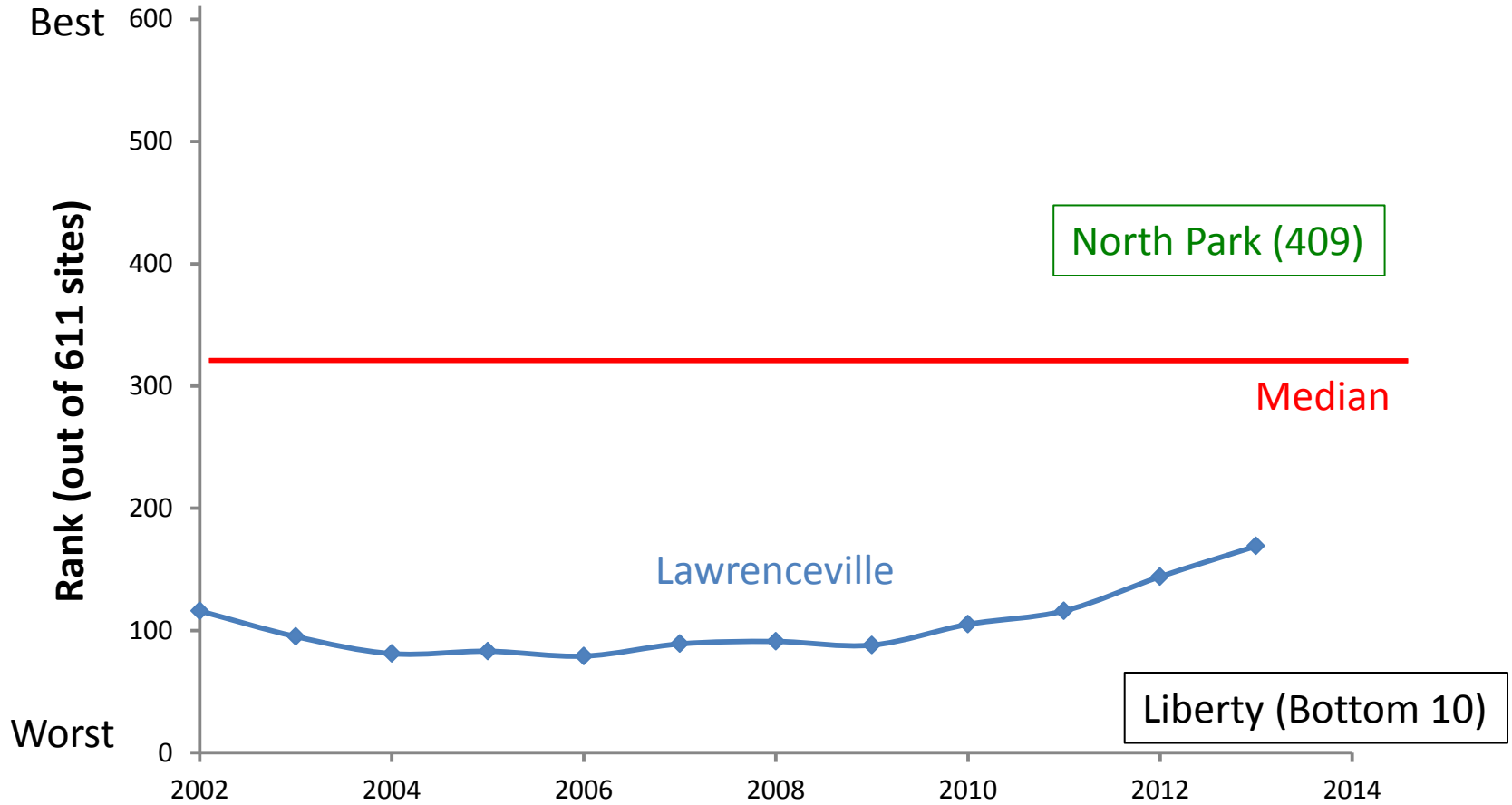
Recent performance



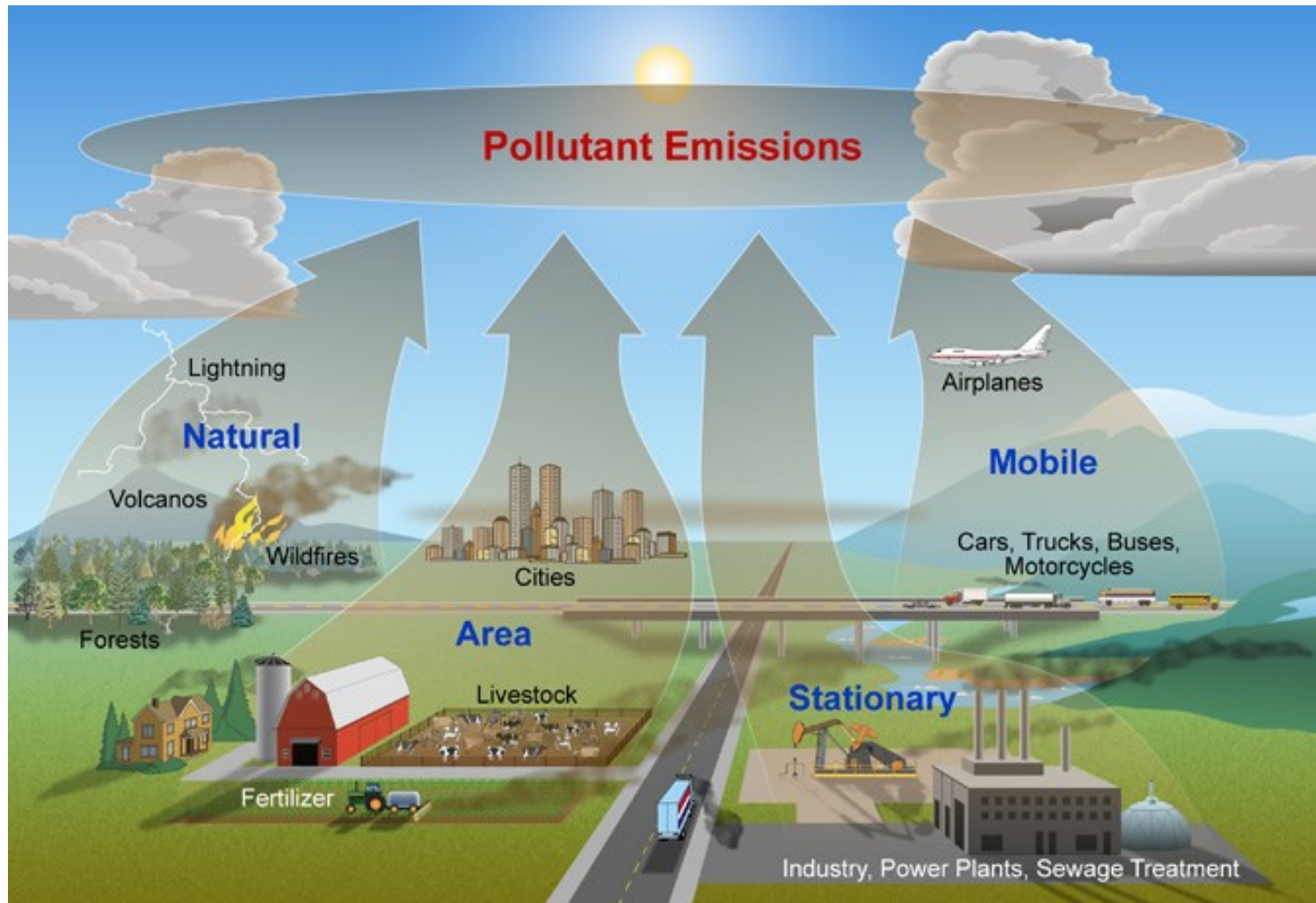
Recent performance



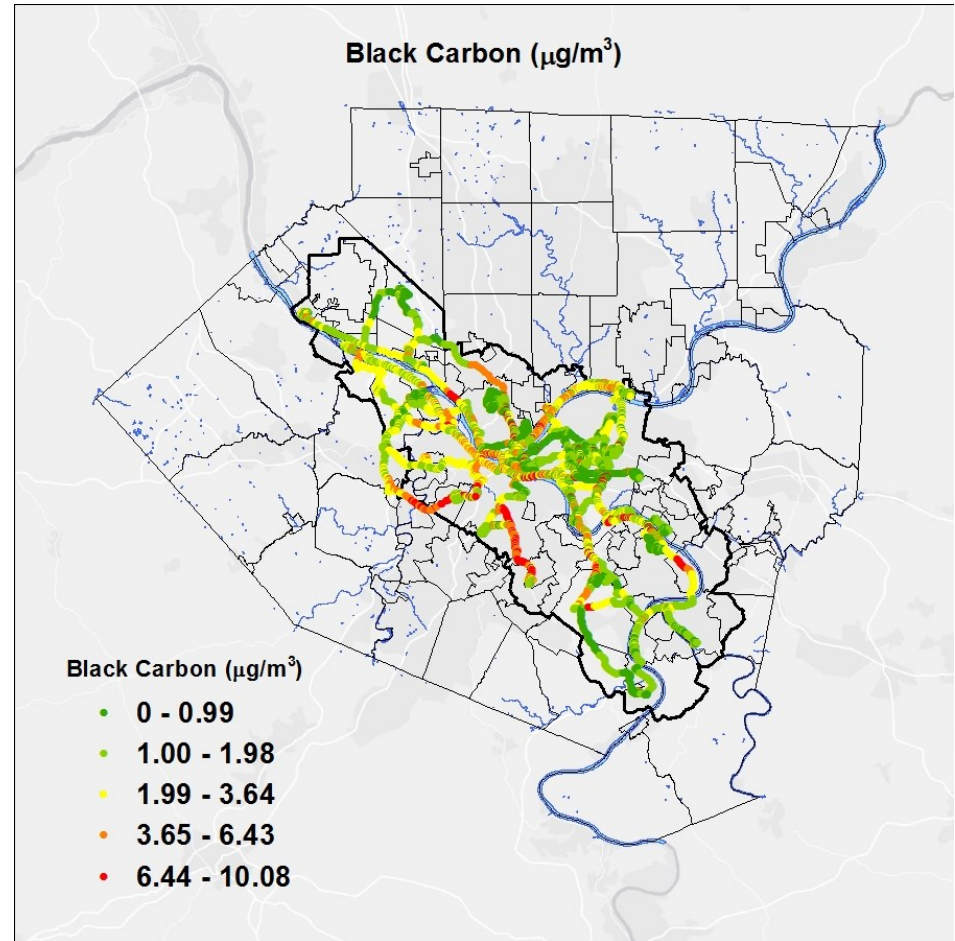
Recent performance



Sources of air pollution

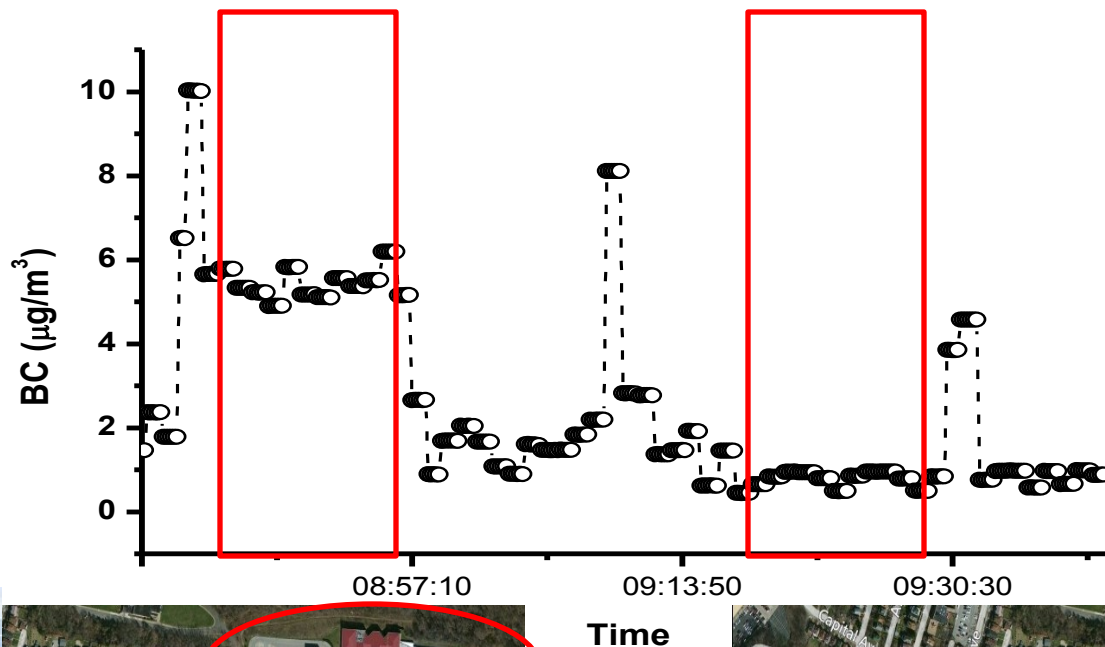


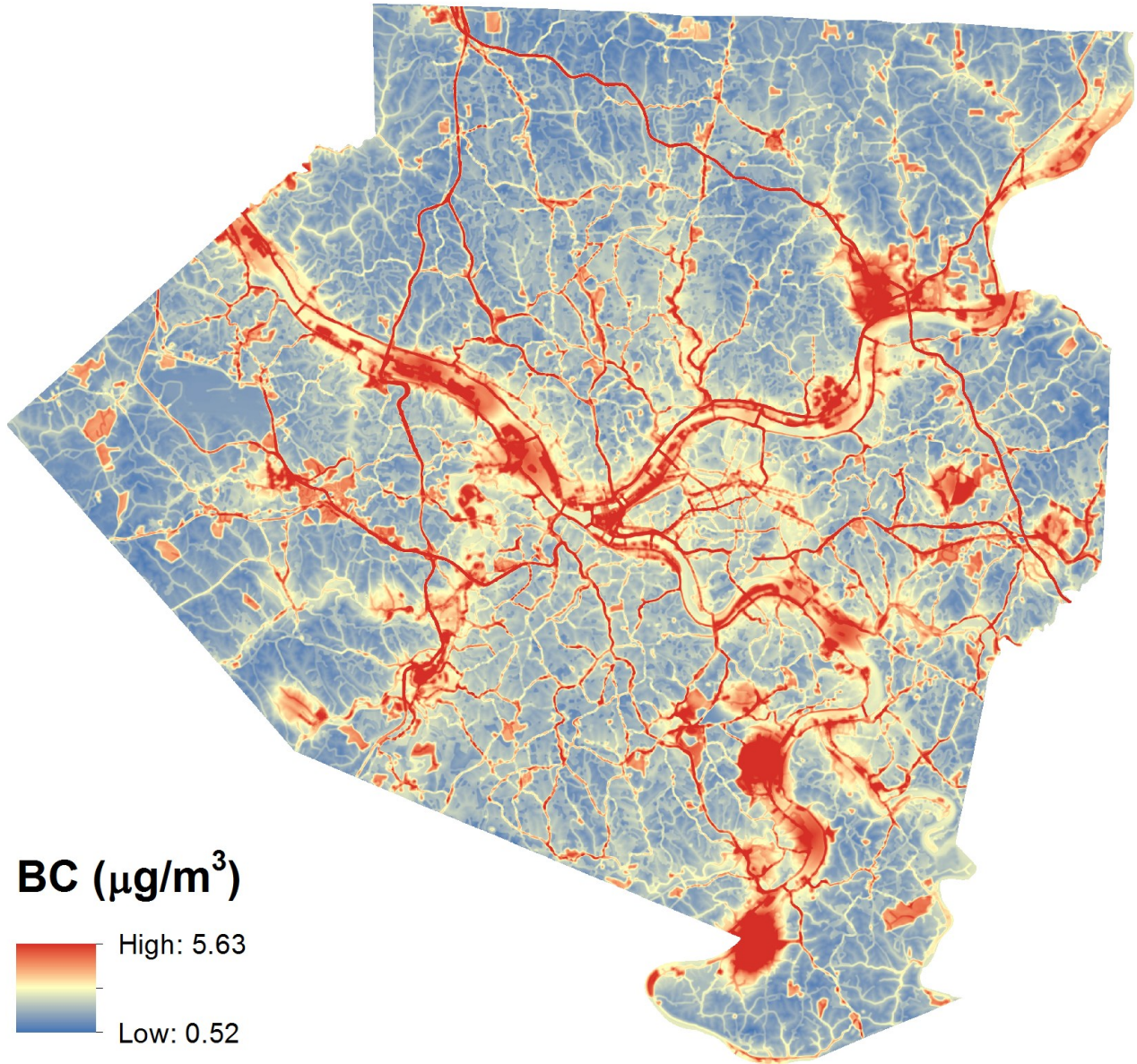
Mobile laboratory



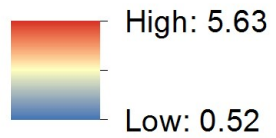
Typical data collected from on-road sampling.

South Brook Middle School: Buses





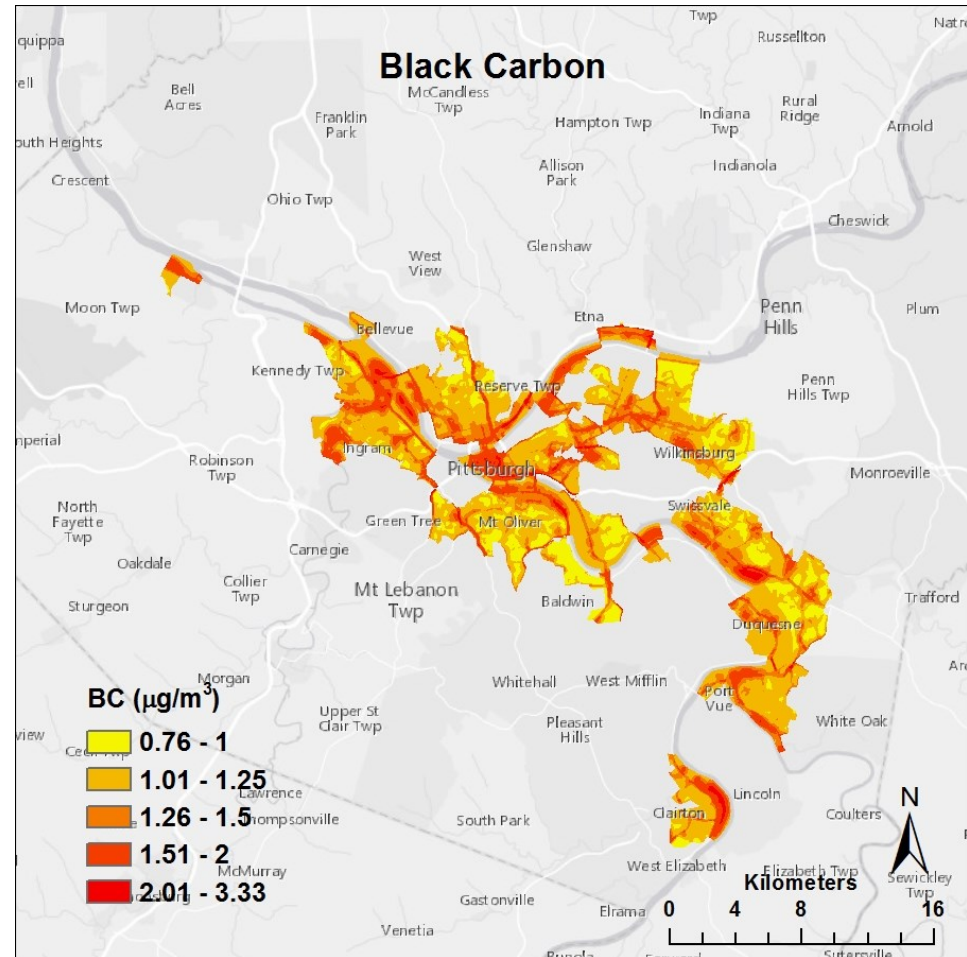
BC ($\mu\text{g}/\text{m}^3$)



ROCIS PM1_02-27-2015

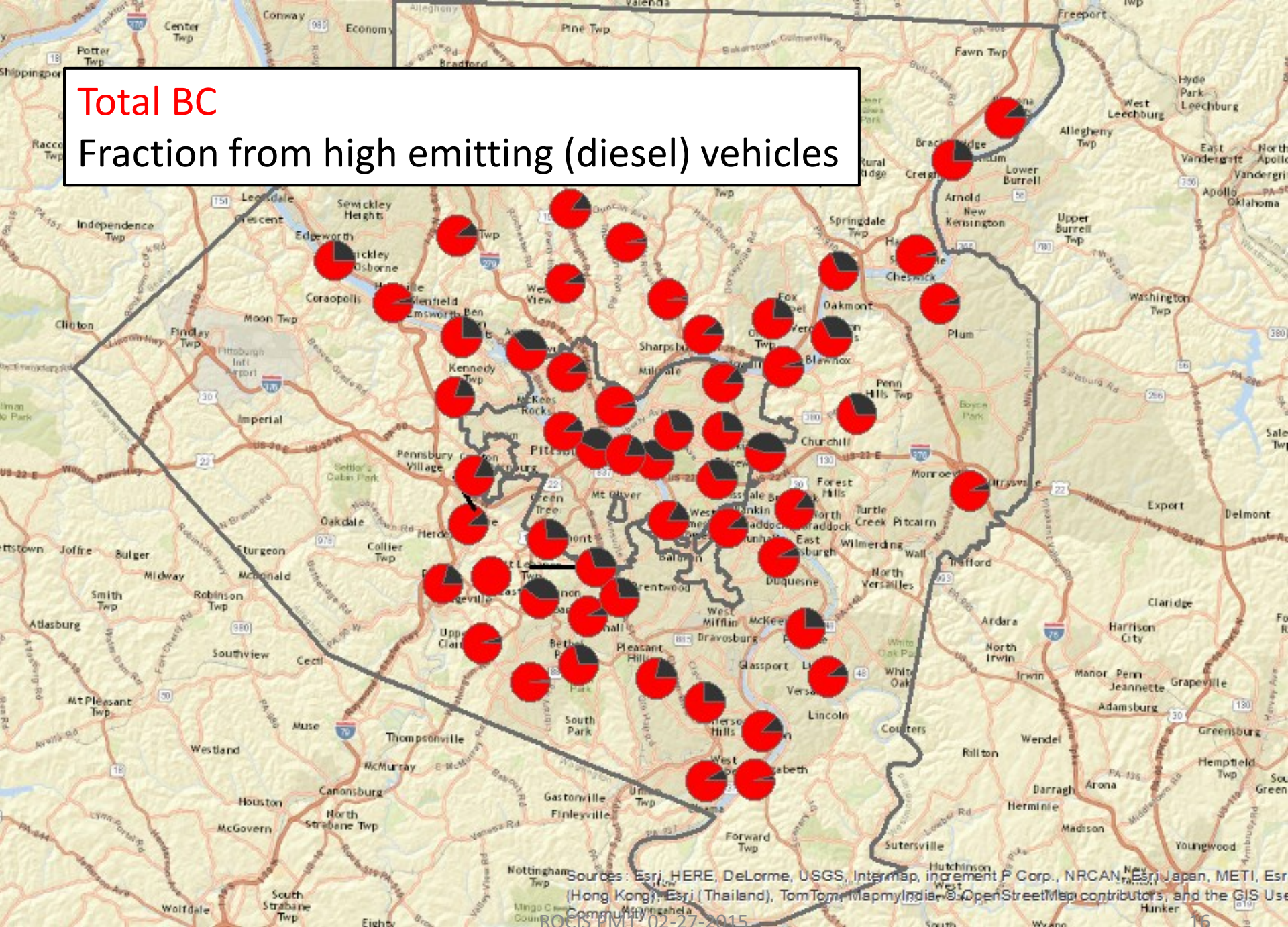


Environmental justice communities

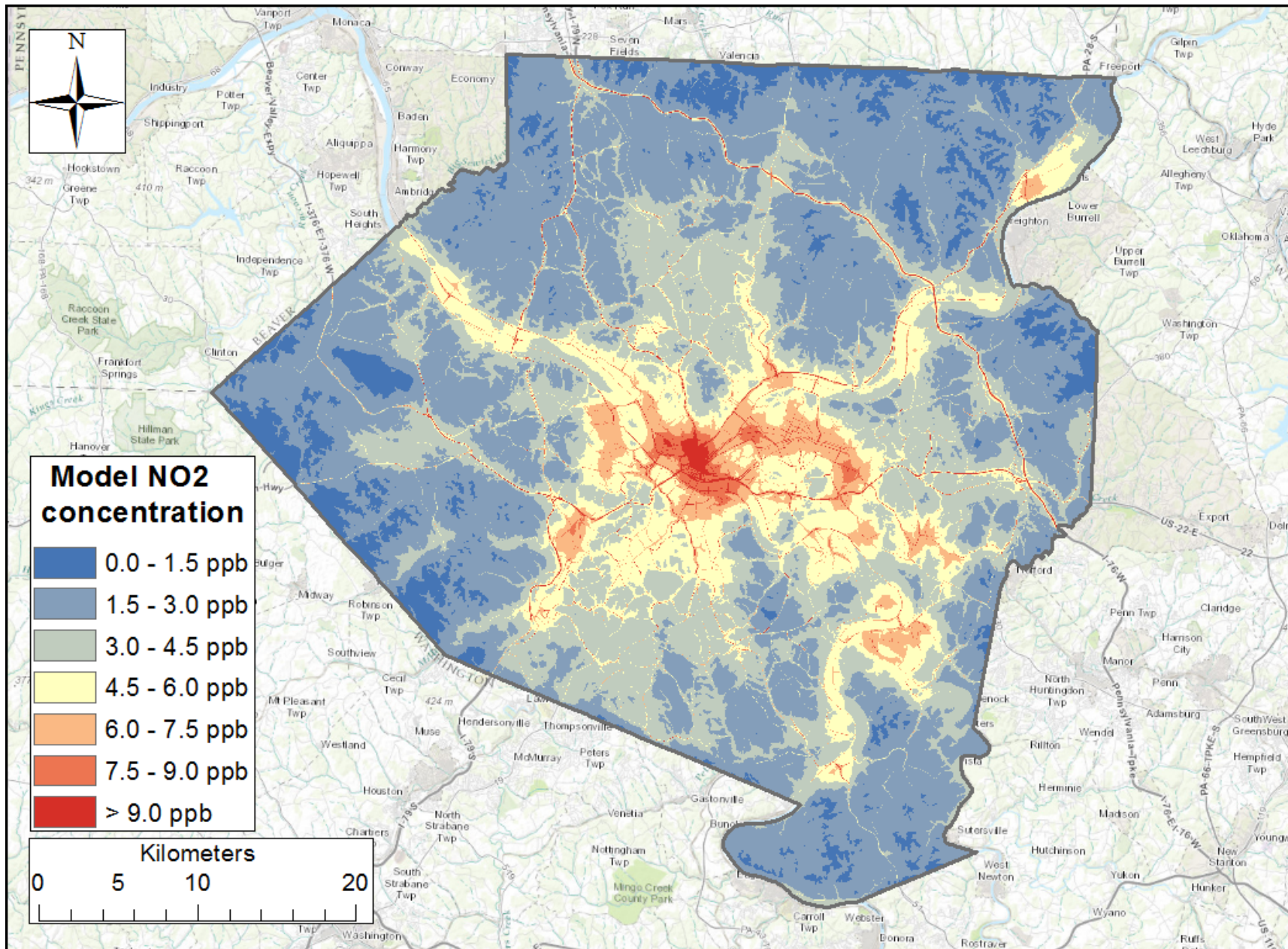


Total BC

Fraction from high emitting (diesel) vehicles



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri, Japan, METI, Esri (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community





Questions – Discussion

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Reducing Outdoor Contaminants in Indoor Spaces (ROCIS)*

