

Background

- To protect public health against the adverse effect of exposure to airborne particulate matter (PM), the EPA has promulgated national ambient air quality standards for $PM_{2.5}$ and PM_{10} and developed Federal Reference Methods for measuring these pollutant concentrations.
- Some Ag researchers (Buser et al.) have conducted their own research and developed the concept of “True” PM which contends that EPA’s $PM_{2.5}$ and PM_{10} FRM samplers “oversample” agricultural aerosols. Based on this perceived oversampling, these Ag industry researchers contend that these agricultural operations are being over-regulated by EPA.

Background (cont)

- Some from the agricultural industry conjecture that this oversampling is due to shifts in PM_{10} sampler cutpoints from 10 micrometers up to 35 micrometers in diameter. $PM_{2.5}$ cutpoints estimations higher than 5 micrometers have been reported.
- EPA considers these oversampling to be scientifically unfounded and remains confident that over-regulation of the agricultural industry does not occur due to PM oversampling.
- Since 2010, the Ag industry, EPA, and USDA have mutually agreed to investigate and discuss the technical issues involved in PM measurements of agricultural operations.

Approach

- **Faulkner et al. (TAMU): Resurrect TAMU's aerosol wind tunnels, develop effective operating protocols for their operation, and conduct independent wind tunnel evaluation of EPA's PM₁₀ inlet as a function of aerodynamic particle size and wind speed**
- **Vanderpool et al. (EPA): Document previous wind tunnel test results, review the "True" PM sampling approach, and conduct wind tunnel evaluation of the approach's LVTSP sampler**