Preliminary data collection and human health risk assessment of traffic-related contaminants in the Forth Worth Independent School District (FWISD)

Perceived and potential human health risks from atmospheric exposures to traffic-related contaminants will be examined in the Fort Worth Independent School District (FWISD). The investigations will use a balanced research and dissemination approach involving both environmental health researchers and community members. The ultimate goal of improving human health in the Fort Worth community will be achieved by reducing the burden of childhood asthma as it relates to exposures to traffic-related contaminants. This will be accomplished by increasing public awareness and knowledge as well as increasing protective behaviors to reduce the exposures that cause or contribute to overall asthma burden. Study sites focus on four school campuses through the FWISD. Campuses that have a primary care school-based clinic will be equipped with high volume air samplers and particulate monitoring devices. Preliminary data will be collected over sampling periods from as many of these campuses as possible. Toxicity bioassays will be run to evaluate the toxicity of the extracted samples. Human health risk assessments will be conducted using toxicity data collected from each sample. A previous proposal was submitted to the National Institutes of Health and was scored with this same research focus but did not receive funding. A crucial part of the resubmission of this proposal is the proposed preliminary data collection and assessments.