

Appendix IV-f. NARSTO and the Supersites

On July 18, 1997 the U.S. Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standards (NAAQS) for particulate matter (PM). New annual and 24-hour standards for PM_{2.5} were added while retaining the annual and revising the form of the 24-hour PM₁₀ standards.

The U.S. Congress, in response to public health concerns and recognizing the uncertainty associated with some key aspects of the science, provided support for a major PM research initiative. The National Research Council (NRC), at the request of the EPA Administrator, established an independent committee of experts to identify the major priorities for such an initiative. In 1998 the NRC Committee on Research Priorities for Airborne Particulate Matter produced the first in a series of four reports on PM research priorities, Research Priorities for Airborne Particulate Matter I: Immediate Priorities and a Long-Range Portfolio. In that report, the committee identified the areas of PM research that deserved the greatest emphasis and provided a conceptual design for a policy-relevant research program.

As part of this research initiative, EPA, NARSTO, and other interested stakeholders planned a program of detailed measurements of atmospheric particles and important co-pollutants. Measurements were made in areas representative of those where particles were expected to potentially create significant health risks. In July 1998, a workshop was held to begin planning the Supersite air quality measurement research program which was to be a comprehensive array of state-of-the-art measurements performed at a limited number of sites. The goal of the Workshop was to identify the key components and design parameters for a comprehensive measurement program to characterize ambient particulate matter and important co-pollutants in a way that optimizes information for multiple disciplines, including source apportionment; modeling; health and exposure study; and risk assessment. A full report on the workshop is available from: <http://www.esrl.noaa.gov/csd/pubs/>.

The supersite program was a huge success in the USA and in fact Canada and Mexico have had their own “supersites”. Great strides in instrument design, operation, and data management were made over the period of time these sites operated. Over 400 peer-reviewed journal articles and likely more than 1000 presentations resulted from the research conducted through EPA’s PM Supersites Program (Solomon and Hopke, 2008). Many of the data from these measurement programs are available from the NARSTO data archive located at: (<http://cdiac.esd.ornl.gov/programs/NARSTO/narsto.html>).

Solomon, P.A., Hopke, P.K. 2008. The U.S. Environmental Protection Agency’s Particulate Matter Supersites Program: An Integrated Synthesis of Scientific Findings and Policy- and Health-Relevant Insights. *J. Air & Waste Manage. Assoc.* **58**:S-1–S-2. DOI:10.3155/1047-3289.58.13.S-1.