



B A S M A A

Project: Development & Implementation of a Monitoring Program for Specific Emission Sources

Description: BASMAA's *Air Deposition Scoping Study* (September 1998) indicated that the air monitoring network and the data it generates did not help water quality agencies in identifying the relative magnitude of this pollutant transport pathway or possible control strategies. It appeared from the scoping study analyses that for more localized, near-ground sources (e.g., vehicles) and non-volatile pollutants (e.g., heavy metals, particulate matter) that there is a disconnect between the pollutant levels measured in standard air monitoring stations (i.e., deposition) and the amount of these substances emitted (i.e., emissions and dispersion). BASMAA's study included recommendations for cooperative efforts between water quality and air quality agencies, including new or additional sampling and analyses. Based on its study, BASMAA, in partnership with the San Francisco Estuary Project (SFEP), submitted a proposal to USEPA's Great Waters Program, which is part of the National Estuary Program (NEP). USEPA awarded an \$80,000 1-year grant to BASMAA and SFEP to develop and implement a monitoring program for specific emission sources to stormwater runoff.

After a Great Waters Program workshop in October 1998, BASMAA initiated a shared fact-finding exercise to determine the most critical and useful information needs related to air quality and urban runoff. Based on criteria and input from researchers and managers, the two pollutants that seemed to have the most critical and useful information needs related to air quality and urban runoff were:

- mercury in diesel exhaust
- copper in brake pad wear debris

For both pollutants, a single major source had been identified (i.e., ~80% +/- of the load to urban runoff in both cases), and yet the basis for these determinations was in question. The scope included:

- testing a representative sample of fuels and lubricating oils for mercury concentrations;
- sponsoring the annual Brake Pad Partnership Stakeholder meeting;
- conducting a literature review on the environmental fate and transport of copper in wear debris generated from use of vehicle brake pads and start a literature library of the relevant literature sources; and
- performing rigorous copper solubility / leaching tests of brake pad wear debris over environmentally-relevant time scales and for environmentally-relevant aqueous environments.

FY: 98/99

Development & Implementation of a Monitoring Program for Specific Emission Sources

Overseer: Monitoring Committee

Contracting

Agency: Association of Bay Area Governments (ABAG)

Contractors: Geoff Brosseau; USCS; Clemson University; TDC Environmental; Sustainable Conservation

Budget: \$80,000

Status: Done

Deliverable(s): Memo - Selection of study topic (March 1999); Work Plan (July 1999); Brake Pad Partnership Stakeholder Meeting (May 2001); Literature review - summary memorandum, list of references, literature library index, technical reference library (November 2002); *Progress Report for Disc Brake Wear Debris Characterization – Phase 3* (November 2003); Concentration of Mercury in Fuels in the San Francisco Bay Area report (December 2004)
