

MICHAEL C. McCARTHY

Senior Air Quality Analyst



Educational Background

Ph.D., Chemistry, University of California at Berkeley
B.S., Chemistry, Creighton University

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Professional Experience

Dr. McCarthy has been involved in a number of research areas at STI since joining the company in 2003. He is the author or co-author of 15 atmospheric science peer-reviewed journal articles on topics ranging from temporal variability in air toxics concentrations to stratospheric isotopic compositions of greenhouse gases. Dr. McCarthy has served as the lead analyst in a number of projects including U.S. Environmental Protection Agency (EPA) national air toxics data analysis projects that involved inspecting trends, risk distributions, and spatial variability of hazardous air pollutants (HAPs); a regional analysis of air toxics concentrations for the Southeast States Air Resources Managers (SESARM); and a network assessment for the EPA's Photochemical Assessment Monitoring Stations (PAMS) network. Dr. McCarthy assisted in the study design and data analysis for a near-roadway monitoring study focusing on mobile source air toxics at three schools for the Nevada Department of Transportation. Recently, he has assisted in smoke plume exposure work during southern California wildfires for the National Institute of Environmental Health.

Dr. McCarthy was the lead author for a large team that completed a strategic research plan for particulate matter for the Federal Highway Administration (FHWA). Dr. McCarthy has worked on analysis and validation of hydrocarbon precursors of ozone for California's San Joaquin Valley and for Phoenix, Arizona; air toxics concentrations for Phoenix, Arizona, and the Nez Perce tribe in Idaho; and speciated particulate matter for the San Joaquin Valley as part of the California Regional PM₁₀/PM_{2.5} Air Quality Study. He has also worked with the EPA to develop and write reports focusing on relationships among multiple air quality problems (e.g., ozone, PM, and toxics), quality assurance, and optimizing the PAMS monitoring network. In addition, Dr. McCarthy has worked on network assessments for Wyoming, the San Joaquin Valley, and Edmonton, Alberta, Canada.

Dr. McCarthy's corporate responsibilities include assisting STI's Quality Assurance Officer with the development and implementation of corporate-wide quality control and assurance initiatives and serving as an internal scientific reviewer for technical project design, analysis, and reporting.

Before joining STI, Dr. McCarthy was a Research Assistant for Dr. Kristie Boering at the University of California at Berkeley where he received his doctoral degree in Chemistry. During his research, Dr. McCarthy measured the stable isotopic compositions of CH₄, CO₂, and H₂ from stratospheric whole air samples to help constrain estimates of greenhouse gas emissions sources.

Dr. McCarthy is proficient in the use of many software tools including Digital Visual FORTRAN, SYSTAT, GIS, Grapher, SQL, Oracle, R, Interactive Data Language (IDL), S+ 2000, Origin, and MS Office programs. He has used the FORTRAN, C++, Visual Basic, and IDL programming languages.

Memberships

Air & Waste Management Association
American Geophysical Union