

ERIN K. POLLARD
Atmospheric Modeler



Educational Background

M.S., Geosciences, University of Nebraska
B.S., Soil and Atmospheric Sciences, University of Missouri

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Professional Experience

Mrs. Pollard joined STI's Emissions Assessment Group in 2006. Her primary responsibilities include emissions inventory development and improvement, data analysis, and modeling. Mrs. Pollard contributed to emissions inventory improvements by performing comparisons between ambient monitoring data and gridded emissions estimates in the San Joaquin Valley and the Upper Midwest and by assessing the methods used to develop area source emissions inventories for the Central Regional Air Planning Association (CENRAP). Mrs. Pollard also contributed to the development of an ammonia emissions inventory for the San Francisco Bay Area and emissions inputs for an ozone modeling study in the southwestern United States. For the latter project, she developed new source code to model the vertical distribution of wildfire emissions.

Mrs. Pollard has extensive experience applying GIS technology to air quality issues. She has used GIS tools to analyze and quality-assure emissions-related data and to develop spatial surrogates for the spatial allocation of county-level emissions estimates. Recently, Mrs. Pollard was the technical lead on the development of spatial surrogates for air toxics modeling in the San Francisco Bay Area and ozone modeling in central California, and she also developed spatial surrogates for the allocation of emissions from lawn and garden equipment in the Baltimore metropolitan area. Mrs. Pollard is an expert user of the Transport Emissions and Analysis Kit (TEAK), which combines air parcel trajectories computed by the Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) model with emission inventory information to evaluate potential emissions impacts on selected receptor locations. Recently, Mrs. Pollard modified TEAK to investigate the impact of wintertime wood smoke on PM_{2.5} concentrations in Sacramento, California, and also used the tool to evaluate the potential impacts of offshore ship emissions on Puerto Rico and the U.S. Virgin Islands. Mrs. Pollard is an experienced user of a range of software programs including the Microsoft Office suite, the Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE), the BlueSky Smoke Modeling Framework, SYSTAT, and the Volatile Organic Compound Data Validation and Analysis Software (VOCDat).

Before joining STI, as part of her master's research at the University of Nebraska, Mrs. Pollard investigated cumulus parameterization schemes in the Weather Research and Forecasting (WRF) model and how they represent idealized and real-time simulations of supercells. Through her research, Mrs. Pollard gained knowledge of a wide range of software programs and specific graphic languages such as NCL, Grads, and GEMPAK.

Memberships

American Meteorological Society
American Geophysical Union