

DIANNE S. MILLER

Project Manager/Meteorologist

Educational Background

M.S., Atmospheric Science, University of Illinois, Urbana-Champaign
B.S., Atmospheric Science, Cornell University

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Professional Experience

Ms. Miller joined STI as a Meteorologist in 2001. Her focuses include project management, developing air quality forecasting tools, air quality forecasting, database programming, and designing and teaching air quality training courses.

Since joining STI, Ms. Miller has developed objective forecasting tools based on regression and Classification and Regression Tree (CART) for several cities across the United States for both ozone and particulate matter. Ms. Miller has developed methods to acquire, process, validate, and organize data; design and populate a database; perform statistical analyses to develop tools; and test tools for accuracy. In addition, she has used her knowledge of SQL to manage and maintain a SQL database system that automatically operates forecast tools on a daily basis using NAM and GFS model data. Ms. Miller has also collected and analyzed historical meteorological and air quality data to develop conceptual models for forecasting, and used these models to aid in issuing daily air quality forecasts. She has presented the results of various tool development projects at conferences and workshops.

Ms. Miller used SQL and Oracle to help with the U.S. Environmental Protection Agency's AIRNow Oracle to SQL migration project. She helped convert hundreds of stored procedures from Oracle to SQL that support AIRNow operations, including data ingest processes, data processing and quality control, and website reporting. She designed, developed, and maintained over ten additional databases that support a wide range of air quality applications. In addition, she helps support the AIRNow Data Management Center (DMC) by performing data analysis tasks. In 2006 and 2007, she managed the development of AIRNow Gateway, which provides text files and web services to the AIRNow community and air quality researchers. Ms. Miller is also managing the AIRNow Mapper project, which uses GIS-based software to produce high-quality, accurate air quality maps.

Ms. Miller has co-developed and taught numerous training courses including the EPA's 2004 and 2005 National Air Quality Forecasting Conference courses on air quality forecasting; the EPA-sponsored 2003 Regional PM_{2.5} Air Quality Forecasting workshops; the 2006 World Meteorological Organization course on air quality forecasting; and the EPA-sponsored 2008 Air Quality Forecasting Workshop for Wintertime PM_{2.5} in the Pacific Northwest. In addition, she has developed and given training presentations for individual air quality agencies on developing and using air quality forecasting tools. Ms. Miller is also an adjunct professor of meteorology at the Santa Rosa Junior College.

Ms. Miller's computer skills include knowledge of FORTRAN, SQL, Oracle, SYSTAT, Microsoft Excel, Word, Access, and PowerPoint.

Memberships

American Meteorological Society