



Environmental Quality Management, Inc.

# Air Quality Dispersion Modeling

## Industry Leaders in Dispersion Modeling

Air quality dispersion modeling analyses using sophisticated computer workstations and EPA-approved dispersion modeling software have been performed by EQ personnel since 1977. Our air quality and meteorological specialists have used modeling to evaluate our clients' emissions and air pollution sources and to compare the impacts to applicable ambient standards, incremental impacts, hazardous contaminant levels, and risk-based thresholds.



## What is Dispersion Modeling?

Dispersion modeling is generally computerized mathematical simulation techniques to compute ambient concentrations of air pollutants from specific inputs. Numerical algorithms are used that describe atmospheric processes and the movement of pollutants through them.

## The Modeling Group's credentials include:

- ▶ State-of-the-art modeling capabilities
- ▶ 60 years of combined experience
- ▶ Professional Engineers (PE) and Process Specialists
- ▶ All work reviewed by a Certified Consulting Meteorologist (CCM)
- ▶ Certified training in the use of CALPUFF, AERMOD, ISC-PRIME, and ISC3
- ▶ Plantwide, area-wide and transportation-related, dispersion models

## What separates the Modeling Group at EQ from other consultants?

- ▶ Most of EQ's business is from repeat business or professional referrals.
- ▶ We have evaluated many different industries and sources in most types of geographical settings.
- ▶ We have extensive experience simulating atypical air pollution sources such as open-sided parking garages, lumber drying kilns, electrical arc furnaces, flares, rain caps, and horizontal vents.
- ▶ Under two State contracts (Idaho and Minnesota), we have performed a wide variety of modeling studies in addition to reviewing other consultant's air quality analyses.

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## Services include:

- ▶ Local, State, and Federal Modeling
- ▶ Meteorological Analysis & Monitoring
- ▶ Emission Inventory Development
- ▶ Long-Range Transport Modeling
- ▶ Air Toxics, HAPs, and Odor Modeling
- ▶ Design/Configuration of Point Sources and Fugitive Sources
- ▶ Environmental Management
- ▶ Environmental/Human Health Risk Assessments
- ▶ Air Permitting
- ▶ Ambient Air Monitoring

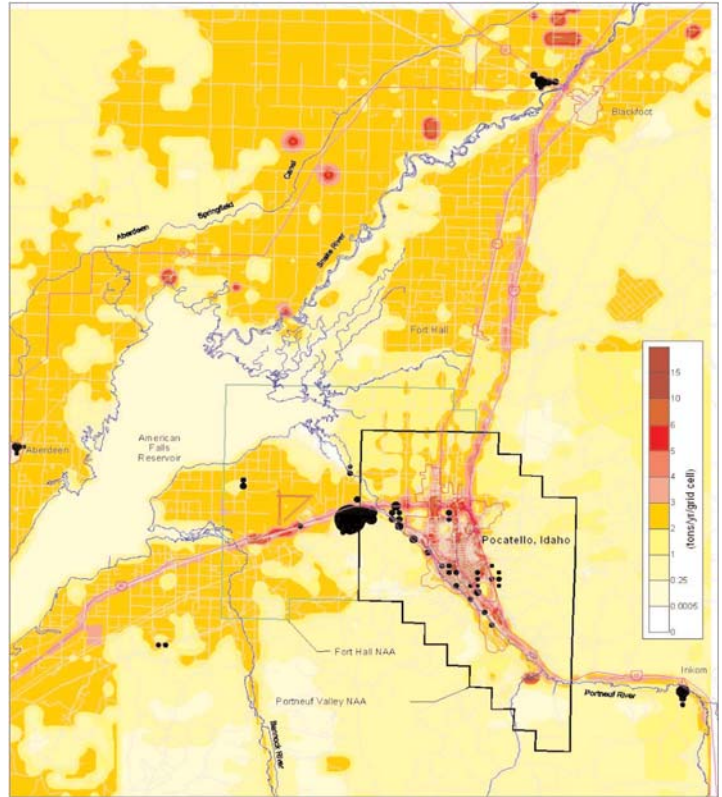
*Solving Problems... Creating Cost-Effective, Sustainable Solutions!*



- ▶ Not only do EQ's modelers perform permitting and analysis modeling, the Modeling Group also offers accredited coursework in dispersion modeling training for students, other consultants, and state officials.

## What is the Benefit of Using the Modeling Group at EQ?

- ▶ Regardless of your dispersion modeling need, the Modeling Group has probably already satisfied that need with one of our previous clients; this experience allows us to help you quickly and economically.
- ▶ EQ can help with environmental management, environmental risk, and air permitting, not just dispersion modeling.
- ▶ In particular, the Modeling Group has significant experience in the following areas: steel industry, energy generation, cement, lumber, pulp and paper, cosmetics, soap manufacturing, automobile manufacturing, jet-engine manufacturing, coal mining, remedial dredging, aluminum production, mobile sources, food industry, computer manufacturing, aerospace, and agriculture.
- ▶ EQ is familiar with the DOS form of EPA's models and uses other available software interfaces to provide efficient use of AERMOD, ISCPRIME, ISC3, and CALPUFF.
- ▶ Our emission inventory development is nationally recognized and used in SIP modeling development.
- ▶ EQ can address almost any air issue that may arise. Our support staff includes permit engineers, process engineers, chemists, contract specialists, former EPA staff, CAD operators, and programmers.



- ▶ EQ has integrated dispersion modeling with health risk techniques for multipathway assessments.
- ▶ We have experience with Class I area impact analysis, which involves AQRV, long-range dispersion modeling, and visibility analyses.
- ▶ EQ uses the latest software programs to generate graphic presentations of the modeling results.
- ▶ Our in-depth quality assurance and quality control measures help minimize mistakes.

## About EQ

EQ is a full-service environmental consulting, engineering, and remediation firm with offices throughout the U.S., and internationally. In addition to our corporate office in Cincinnati, EQ has offices in Chicago, Durham, Las Vegas, New Orleans, Pittsburgh, Roanoke, Sacramento, San Antonio, and Seattle.



## Environmental Quality Management, Inc.

1800 Carillon Boulevard  
Cincinnati, Ohio 45240  
513.825.7500  
www.eqm.com

## For additional information, please contact:

Jeff Slayback, Julie Wagner  
or Bob McCullough  
800.229.7495