



AIR & WASTE MANAGEMENT
ASSOCIATION

FINAL PROGRAM

Guideline on Air Quality Models: From Guidance to Practice

October 13-15, 2026 • Durham, NC

www.awma.org/aqmodels

Sponsored By:



FINAL PROGRAM

General Information

Conference Overview

Following the adoption of the November 2024 revisions to the Guideline on Air Quality Models (Appendix W to 40 CFR Part 51), members of the air quality modeling field will share their latest research, experience, and thoughts on the state of air quality modeling at this conference. The information discussed will provide ideas for future development and advancements in the air quality modeling field.

Location

Hilton Durham near Duke University
3800 Hillsborough Road
Durham, NC 27705
Phone: 919-383-8033

Registration and Refund Policy

Register online at www.awma.org/aqmodels. Conference check-in and badge pickup will be held in the Trinity Foyer at the Hilton Durham near Duke University during the following hours:

Tuesday, October 13	12:00 pm – 5:00 pm
Wednesday, October 14	7:00 am – 5:00 pm
Thursday, October 15	7:00 am – 3:30 pm

Cancellation and refund requests must be received in writing by September 15, 2026. After that date, no refunds will be issued for cancellations of any type, including no shows. All refunds will be subject to a \$100 USD administrative fee. Substitutions may be made at any time; payment for any difference is due at the time of substitution. This refund policy applies to all occurrences, including weather-related events and other natural disasters. In the unlikely occurrence of an event cancellation, the Association is not liable for any expenses incurred by the registrant other than the full refund of registration fee(s) paid.

A&WMA Meetings Policy

By registering for this meeting, attendees agree to abide by and accept the terms of the A&WMA Code of Conduct (available at www.awma.org/governance). Additionally, A&WMA conference attendees acknowledge that they may be photographed by A&WMA for promotional purposes while at events.

Program up to date at time of print.
Changes are reflected in the online version at
www.awma.org/aqmodelstechprogram.

Conference Committee

General Conference Chair:

Michael Hammer, Lakes Environmental Software

Planning Committee:

Abhishek Bhat, VoltaGrid

Ryan Cleary, ALL4 Inc.

Sergio Guerra, Colorado Department of Public Health and Environment

Mary Kaplan, AECOM

Ralph Morris, Ramboll

Anthony Schroeder, Trinity Consultants

Michelle Snyder, WSP

Christopher Warren, AECOM

Qi Zhang, Bay Area Air Quality Management District

Presenter Details

Presenters should send their final presentations to their Session Chairs prior to the conference. All presenters should also bring their presentation on a flash drive and make sure their presentation has been loaded to the conference laptop in the Trinity Ballroom the morning of their session. Presenters should report to their presentation room at least 15 minutes prior to their session and plan to stay for the entire session.

Conference Proceedings

Conference proceedings will include the secured PDF copies of the slides from presenters who have provided permission. The online proceedings will be posted a few weeks following the conference and attendees will be notified when the slides have been posted to a password-protected website.

Continuing Education Units

Conference attendees may be eligible for continuing education credits and can apply to receive a Certificate of Participation for the sessions attended. Please sign the CEU sign-in sheet available at the registration desk and order your certificate through the A&WMA Online Store. Members are eligible for free certificates. For more information, please contact Gloria Henning at +1-412-904-6021 or glhenning@awma.org.

Special Accommodations

The Air & Waste Management Association supports the Americans with Disabilities Act (ADA). Attendees requiring specific equipment, food, or services should contact Paige Parise at pparise@awma.org to make those needs known in advance. A&WMA will make every reasonable effort to accommodate them.

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www.cecinc.com



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Lakes Software is a global leader in advanced environmental modeling software and data products. Since 1995, we have been committed to delivering exceptional service and cost-effective IT solutions for industry and regulatory needs. Our products enhance productivity, reduce errors, and offer unique solutions in a regulatory-constrained environment. Our expertise includes: Air Dispersion Modeling; Emissions Inventory; Ambient Air Monitoring; Regulatory Compliance; Human Health Risk Assessment; Custom IT Solutions; Real-time Forecasting; AI and Neutral Net Forecasting; Meteorological Data Processing; and Training. We continuously explore new research areas to provide cutting-edge software solutions and data services to our users. **www.weblakes.com**

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Blue Sky Modeling (BSM) is a niche environmental consulting firm that specializes in air quality dispersion modeling. Every day we use air dispersion modeling as a tool to help our clients make more informed business decisions—from permitting today to planning for the future.

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For more than 50 years, Trinity Consultants has helped organizations navigate complex EHS regulations. With expertise in air quality, multimedia environmental management, permitting, and compliance, we deliver practical, science-based solutions while supporting clients through Water & Ecology, Built Environment, and Life Sciences practices to address a broad range of environmental and operational challenges. www.trinityconsultants.com



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Technical Program – Tuesday, October 13

12:00 pm – 5:00 pm
Conference Registration
Trinity Foyer

ALL SESSIONS WILL BE HELD IN THE TRINITY BALLROOM

Opening Keynote Plenary Session

1:00 pm – 1:20 pm

Introduction and Welcome

*Leah Blinn, Civil & Environmental Consultants, A&WMA
Immediate Past President; Michael Hammer, Lakes
Environmental Software, General Conference Chair*

1:20 pm – 3:00 pm

Regulatory Model Development Priorities

- Karen H. Wesson, Division Director, Air Quality Assessment Division, Office of State Air Partnerships (OSAP), U.S. Environmental Protection Agency (EPA)
- Tyler Fox, Branch Supervisor, Methods and Models Development Branch, EPA OSAP
- George Bridgers, Model Clearinghouse Director, Air Quality Modeling Branch (AQMB), EPA OSAP
- Clint Tillerson, Physical Scientist, AQMB, EPA OSAP
- James Thurman, Physical Scientist, AQMB, EPA OSAP
- Matthew Porter, Physical Scientist, AQMB, EPA OSAP
- Chris Misenis, Physical Scientist, AQMB, EPA OSAP

3:00 pm – 3:20 pm

Networking Break and Display Viewing

Trinity Foyer

3:20 pm – 5:00 pm

Q&A Forum

Nearly two years since the Guideline on Air Quality Models was last revised, the air modeling community has made use of new regulatory features while also looking to what the future holds. This forum will give attendees the opportunity to pose questions to the U.S. EPA's Air Quality Modeling Branch about current needs and future development in regulatory air modeling techniques and guidance.

5:00 pm – 6:00 pm

Networking Reception

Trinity Foyer

Technical Program – Wednesday, October 14

7:00 am – 5:00 pm
Conference Registration
Trinity Foyer

7:00 am – 8:00 am
Continental Breakfast
University 1 & 2

Session 1: Meteorological Data

Co-Chairs: Michael Hammer, Lakes
Environmental Software, and Mary Kaplan,
AECOM

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8:00 am – 8:20 am

MO-36

**Beyond the Nearest Airport: An Approach to Defensible
Met Data Representativeness for AERMOD**

Andrew Desrosiers, Ramboll

8:20 am – 8:40 am

MO-05

**A Technique to Blend Surface-Based Observations with
Prognostic Data for Dispersion Modeling**

*Christopher Warren, Joshua Molvar, Robert J. Paine, Jeffrey
Connors, AECOM, Chelmsford, MA*

8:40 am – 9:00 am

MO-26

**Evaluating 1-km Prognostic Meteorological Data for
Regulatory Modeling in Colorado's Complex Terrain**

*I-Ting Ku, Gustavo C. Cuchiara, Jenny Turk, Cate Youatt, Andrew
White, Miriam Hacker, Patrick McKean, Colorado Department
of Public Health & Environment Air Pollution Control Division,
Denver, CO*

9:00 am – 9:20 am

MO-44

**Alternative Prognostic Data: Leveraging NOAA's High-
Resolution Operational Models for Use in AERMOD**

*Brian Holland, Zachary Elsam, Trinity Consultants/BREEZE
Software*

9:20 am – 9:40 am

Session 1 Discussion

9:40 am – 10:00 am

Networking Break and Display Viewing

Trinity Foyer

Session 2: Mobile Source Modeling

Co-Chairs: Anthony Schroeder, Trinity Consultants, and Ryan
Cleary, ALL4 Inc.

10:00 am – 10:20 am

MO-19

**Modeling Uncertainty Associated with Use of RLINE in
AERMOD for Characterizing Mobile Source Impacts**

Sonja Sax, Sharmin Akter, Epsilon Associates, Inc., Maynard, MA

10:20 am – 10:40 am

MO-29

**How Much Resolution Is Enough? Input and Source-
Geometry Aggregation in Near-Road PM_{2.5} Dispersion**

*Hongyu Lu, Eunseo Ko, Angshuman Guin, Randall Guensler,
Georgia Institute of Technology, Atlanta, GA*

10:40 am – 11:00 am

MO-42

**Revisiting AERMOD Source-Type Differences in v24142: An
Atlanta Freeway Case Study**

*Hongyu Lu, Eunseo Ko, Angshuman Guin, Randall Guensler,
Georgia Institute of Technology, Atlanta, GA*

11:00 am – 11:20 am

MO-32

**Enhancing RLINEXT: Vegetative and Solid Barrier
Complexities**

*Michelle Snyder, Rebecca Miller, Michael Miller, WSP USA Inc.
Earth and Environment*

11:20 am – 11:40 am

Session 2 Discussion

11:40 am – 12:00 pm

**Featured Presentation: How Did I Get Here and Where Are
We Going?**

*David Long, American Electric Power Service Corporation
(Retired)*

12:00 pm – 1:00 pm

Lunch

University 1 & 2

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Technical Program – Wednesday, October 14, con't.

Session 3: Emissions & Source Characterization

Co-Chairs: Mary Kaplan, AECOM, and Pao Baylon, Amazon Web Services

1:00 pm – 1:20 pm

MO-39

Generators at Data Centers: Regulatory Uncertainty in Air Modeling Intermittent Source Operations

Joseph Sabato, ALL4 Inc.

1:20 pm – 1:40 pm

MO-22

Optimizing Intermittent Source Operations in AERMOD Utilizing Source Decoupling and Post-Processing

Surya Ramaswamy, Zak Schmidt, Civil & Environmental Consultants, Inc.

1:40 pm – 2:00 pm

MO-16

Evaluation of a Probabilistic Approach to Emission Variability in AERMOD

Zachery Emerson, Tanvir Khan, NCASI

2:00 pm – 2:20 pm

MO-09

Including Plume Rise with Lumber Kilns to Demonstrate Compliance with the PM_{2.5} Short-Term NAAQS

Andrew Rogers, Maul Foster & Alongi, Inc, Portland, OR

2:20 pm – 2:40 pm

MO-23

Emissions Inventories vs. Background: Approaches to Characterizing Ambient Air Quality

Emily Tupper, Loren Brink, Michael Ring, Ramboll Americas Engineering Solutions, Inc.

2:40 pm – 3:00 pm

Session 3 Discussion

3:00 pm – 3:20 pm

Networking Break and Display Viewing

Trinity Foyer

Session 4: Alternative Modeling Techniques

Co-Chairs: Christopher Warren, AECOM, and Pao Baylon, Amazon Web Services

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3:20 pm – 3:40 pm

MO-15

Navigating PSD Class I SILs in Wyoming: Modeling Challenges and Pathways

Alexandria Brothers, Ramboll, Buffalo, NY; Janell Mellish, Air Quality Division, Wyoming Department of Environmental Quality, Cheyenne, WY; Jason Reed, Ramboll, Denver, CO; Michael Ring, Ramboll, Seattle, WA

3:40 pm – 4:00 pm

MO-27

An Analysis of AERMOD and CFD Results for Emergency Engines Over a Range of Meteorological Regimes

Jens Bennetsen, Michael Keinath, Ramboll

4:00 pm – 4:20 pm

MO-18

A Composite AERMOD-CALPUFF Modelling Approach for Aluminum Smelting Plants in Quebec, Canada

Joseph Lilek, Julien Poirier, Sylvain Marcoux, WSP Canada Inc.

4:20 pm – 4:40 pm

MO-31

CALPUFF Modeling System: Modernization and Enhancements

Michael Hammer, Ramiro Espada, David Weeks, Lakes Environmental Software

4:40 pm – 5:00 pm

Session 4 Discussion

5:00 pm

APM Atmospheric Modeling and Meteorology Committee Meeting

Technical Program – Thursday, October 15

7:00 am – 3:30 pm
Conference Registration
Trinity Foyer

7:00 am – 8:00 am
Continental Breakfast
University 1 & 2

Session 5: NAAQS Modeling

Co-Chairs: Christopher Warren, AECOM, and Qi Zhang, Bay Area Air Quality Management District

8:00 am – 8:20 am

MO-12

Analysis of AERMOD Performance at a Copper Smelter in Complex Terrain

Mike Sonenberg, Freeport-McMoRan Inc.; Stephen Ochs, Trinity Consultants

8:20 am – 8:40 am

MO-37

Strategies for Demonstrating PM2.5 NAAQS Compliance Amid Elevated Background Concentrations

Matt Stresing, Air Quality Modeling & Monitoring Tech Team, ALL4, Atlanta, GA

8:40 am – 9:00 am

MO-07

Is That a Data Center I See? A Deep Dive into NOx Modeling

Pao Baylon, Amazon Web Services

9:00 am – 9:20 am

MO-35

Comparison of AERMOD NO2 NAAQS Modeling Techniques for Cumulative Inventory Analysis

Mary Kaplan, Christopher Warren, AECOM

9:20 am – 9:40 am

MO-40

An Observation-Based Evaluation of NOx Partitioning Assumptions in AERMOD's NOx Chemistry Methods

Jason Reed, SOLA Environmental

9:40 am – 10:00 am

Session 5 Discussion

10:00 am – 10:20 am

Networking Break and Display Viewing

Trinity Foyer

Session 6: PM2.5 & Ozone Modeling

Co-Chairs: Ralph Morris, Ramboll, and Michelle Snyder, WSP

10:20 am – 10:40 am

MO-03

Evaluation of a Photochemical Model for the Permian Basin Region with Ozone Source Apportionment

Trang Tran, Marco Rodriguez, Pradeepa Vennam, Ralph Morris, Ramboll, Novato, CA

10:40 am – 11:00 am

MO-04

Single-Source Photochemical Grid Model Modeling to Assess Ozone, PM2.5 and/or Visibility Impacts

Ralph Morris, Marco Rodriguez, Jason Reed, Ramboll, Novato, CA

11:00 am – 11:20 am

MO-08

Wildfire Smoke and Ozone: Identification of Atypical Days and Implications for NAAQS Assessments

Brian Dinkelacker, Jeffrey Connors, AECOM, New Jersey

11:20 am – 11:40 am

Session 6 Discussion

11:40 am – 12:00 pm

Featured Presentation: Communication of Air Modeling Results

Anthony J Sadar, Environmental Science Communication, LLC and Geneva College

12:00 pm – 1:00 pm

Lunch

University 1 & 2

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Technical Program – Thursday, October 15, con't.

Session 7: Recent AERMOD Developments

Co-Chairs: Anthony Schroeder, Trinity Consultants, and
Abhishek Bhat, VoltaGrid

1:00 pm – 1:20 pm

MO-10

The AERMOD Highly Buoyant Plume Option in Complex Terrain

Anthony Schroeder, Trinity Consultants

1:20 pm – 1:40 pm

MO-30

Case Study Applying AERMOD Low Wind Adjustments

Christopher Warren, Robert Paine, AECOM, Chelmsford, MA

1:40 pm – 2:00 pm

MO-34

Implementation of AERMOD Shoreline Fumigation Algorithm

Rebecca Miller, Michelle G. Snyder, Michael J. Miller, WSP USA Inc., Durham, NC

2:00 pm – 2:20 pm

MO-38

Exploration of AERMOD/PRIME Wake Behavior at Oblique Wind Angles for Elongated Industrial Structures

Bharathi Bhattu, Michelle G. Snyder, Earth & Environment - Air Quality and GHG, WSP USA, Jacksonville, FL

2:20 pm – 2:40 pm

MO-06

Machine-Learning Equivalent Building Prototype for Improving Downwash Modeling Performance

Joshua Molvar, Christopher J. Warren, Robert J. Paine, Jeffrey Connors, Brian Dinkelacker, AECOM, Chelmsford, MA

2:40 pm – 3:00 pm

Session 7 Discussion

3:00 pm – 3:20 pm

Networking Break and Display Viewing (Trinity Foyer)

Session 8: Other Regulatory Applications

Co-Chairs: Qi Zhang, Bay Area Air Quality Management
District, and Abhishek Bhat, VoltaGrid

3:20 pm – 3:40 pm

MO-21

What is “Cumulative Impact” and How Do You Evaluate It? Massachusetts Tries Two Different Approaches

Sonja Sax, Epsilon Associates, Maynard, MA

3:40 pm – 4:00 pm

MO-13

AERSCREEN Options Case Study

Katrina Becker, Trinity Consultants, Cleveland, OH

4:00 pm – 4:20 pm

MO-41

Modeling of Air Toxics from Battery Energy Storage Systems Fires

Clayton Queen, ALL4 Inc.

4:20 pm – 4:40 pm

Session 8 Discussion

4:40 pm

Conference Adjourns

About the Air & Waste Management Association



Founded in 1907, the Air & Waste Management Association is a nonpartisan professional organization that enhances knowledge and expertise by providing a neutral forum for the professional development, networking, and public education to thousands of members and an even greater audience of environmental professionals worldwide. A&WMA also promotes global environmental responsibility and increases the effectiveness of organizations to make critical decisions that benefit society. For more information, visit our website at www.awma.org.