CONFERENCE PROGRAM

GENERAL INFORMATION

CONFERENCE OVERVIEW

The Air & Waste Management Association is proud to continue our focused conference on Freight and Environment: Ports of Entry. This conference will explore many solutions to reduce the environmental impacts of all freight transportation, focusing on air quality, noise, climate change and sustainability.

The technical program will include panel discussions of experts in the field and forward-looking presentations on reducing impacts on the environment. The conference will bring together a community of scientists, regulators, practitioners, and students to share ways to make freight more sustainable.

CONFERENCE COMMITTEE

Conference Chair:
Helen Ginzburg, VHB

Committee:
• Brian Bunger, Bay Area Air Quality Management District (retired)
• Sara Head, Yorke Engineering
• Lee Lundberg, Bedrock Enterprises, Inc.
• Robert Mentzer, HMMH
• George Noel, Federal Highway Administration
• Roger Wayson, AECOM

CONFERENCE PROCEEDINGS

Conference proceedings will be accessible to all full conference registrants for viewing and download for a limited time following the conference. Attendees will be notified via e-mail when the presentations are available.

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. 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 Cindy Fontanesi at cfontanesi@awma.org to make those needs known in advance. A&WMA will make every reasonable effort to accommodate them.

ABOUT THE AIR & WASTE MANAGEMENT ASSOCIATION

A&WMA is a not-for-profit, nonpartisan professional organization that enhances knowledge and expertise by providing a neutral forum for technology exchange, professional development, networking opportunities, public education, and outreach to more than 5,000 environmental professionals in 65 countries. A&WMA also promotes global environmental responsibility and increases the effectiveness of organizations to make critical decisions that benefit society. For more information, please visit www.awma.org.

LOCATION AND LODGING

Waterfront Hotel
10 Washington Street
Oakland, CA 94607
Phone: 510-836-3800

REFUND POLICY

If written notice of cancellation is received on or before August 29, 2022 payment will be refunded, less a $100 cancellation fee. (Cancellation fees apply regardless of payment method). 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 event cancellation, the Association is not liable for any expenses incurred by the registrant other than the full refund of registration fee(s) paid.

PRESENTERS’ MEETING

Presenters and Session Chairs will meet during breakfast on the day of their session involvement to review program details. Presenters should bring their presentations on a memory stick/USB to this meeting, as well as a brief biography.

REGISTRATION

Register online at www.awma.org/ports. Your registration will not be processed without payment. Conference check-in and badge pickup will be held at the Waterfront Hotel during the following hours:

Thursday, September 29: 7:15 am – 4:30 pm
Friday, September 30: 7:00 am – 12:00 pm
TECHNICAL AGENDA – Thursday, September 29

7:15 am – 8:15 am  
Continental Breakfast and Presenters’ Meeting

OPENING KEYNOTE SESSION

ALL SESSIONS WILL BE HELD IN THE SPINNAKER ROOM

8:15 am – 9:15 am
Conference Opening and Welcome  
Nancy E. Meilahn Fowler, A&WMA President  
Keynote Presentation  
Danny W. Wan, Executive Director, Port of Oakland

9:15 am – 9:30 am  
Networking Break

SESSION 1: HEALTH IMPACTS OF FREIGHT OPERATIONS

Session Chair: George Noel, FHWA

9:30 am – 9:50 am  
FE09  
Quantifying and Characterizing the Nationwide Population Living Near Potential Port-related Sources of Air Pollution  
Ali Kamal, Sarah Froman, Marion Hoyer, Chad Bailey, Anne Neale, Jeremy Baynes, Jeremy Schroeder, US EPA; Laurina Bird, ORISE

9:50 am – 10:10 am  
FE19  
Health Risk Assessment for Heavy Truck Freight Operations in Sutter County  
Cheri Velzy, Bailey Setzler, Christopher Easter, Environmental Science Associates, Walnut Creek, CA

10:10 am – 10:30 am  
FE14  
SIFT-MS as a Robust Tool for Real-Time Container Safety Analysis  
Leslie P. Silva, Syft Technologies, Ltd, San Francisco, CA

10:30 am – 10:50 am  
FE13  
CFD Studies on Potential Mitigation Measures for Particulate Pollutants from Stock Piles of Dusty Cargo  
Umangi Mehta, Rasma K., Vamsi Botlaguduru, Manaswita Bose, Virendra Sethi, Indian Institute of Technology Bombay, Mumbai, India

10:50 am – 11:00 am  
Networking Break

SESSION 2A: MARINE EMISSIONS

Session Chair: Helen Ginzburg, VHB

11:00 am – 11:20 am  
FE01  
Remote Estimation of Sulfur Content in Fuel from Quantification of Ship Exhaust Plume  
Jean-Philippe Gagnon, Telops, Québec, Canada

11:20 am – 11:40 am  
FE08  
Best Practices for Reducing Emissions at Ports  
Sarah Froman, US EPA, Washington, DC

11:40 am – 12:00 pm  
FE16  
Monitoring for Compliance with the Fuel Sulfur Standards of the North American (and related) Emissions Control Area  
Matt Haber, Seema Kakade, Eastern Research Group, San Francisco, CA

12:00 pm – 1:00 pm  
Lunch for all attendees  
Portside Room
CONFERENCE PROGRAM

TECHNICAL AGENDA – Thursday, September 29, con’t.

SESSION 2B: MARINE EMISSIONS CONT’.
Session Chair: Helen Ginzburg, VHB

1:00 pm – 1:20 pm
FE22
Emission Inventories and Air Quality Planning at the Port of Oakland
Tracy Fidell, Andrea Gardner, Richard Sinkoff, Port of Oakland, Oakland, CA; Till Stoeckenius, Chris Lindhjem, John Grant, Ramboll US Consulting, Oakland, CA

1:20 pm – 1:40 pm
FE31
Evaluating NOx Emission Inventories for Ocean-Going Vessels Using Real Emissions Data
Bettina Knudsen, Arturo Lewis Lallana, Luca Ledermann, Explicit ApS, Virum, Denmark; I-Ling Elaine Shen, South Coast AQMD, Diamond Bar, CA

1:40 pm – 2:00 pm
FE15
Emission Measurement Challenges for Vessels at Berth in California
Kevin Crosby, Montrose Air Quality Services, LLC, Antioch, CA

2:00 pm – 2:10 pm
Networking Break

SESSION 3: POLLUTION REDUCTION AND ENVIRONMENTAL JUSTICE ISSUES
Session Chair: Roger Wayson, AECOM

2:10 pm – 2:30 pm
FE02
California Clean-Off Road Equipment Voucher Incentive Project
Nestor Cruz, CALSTART, Pasadena, CA

2:30 pm – 2:50 pm
FE07
Addressing Environmental Justice and Building Collaborations Between Ports and Near-Port Communities
Sarah Froman, Rob Schweinfurth, US EPA, Washington, DC

2:50 pm – 3:10 pm
FE23
California’s 2020 Mobile Source Strategy for Mass Scale Zero Emission Vehicle Transition: Is this the Right Approach?
Varalakshmi Jayaram, Akshay Ashok, Jeremy Horne, Julia Lester, Scott Weaver, Ramboll US Consulting; Christina Chen, Massachusetts Institute of Technology, Cambridge, MA

3:10 pm – 3:30 pm
FE28
T. Baker Smith’s Dock Management System
Kyle Clark, Boyd Boswell, T. Baker Smith, LLC, Galveston, TX

3:30 pm – 3:50 pm
FE30
Innovation in Air Quality Regulation - South Coast AQMD’s Warehouse Indirect Source Rule
Ian MacMillan, South Coast AQMD, Diamond Bar, CA

3:50 pm – 4:10 pm
FE29
Addressing Truck Emissions and Noise at Truck Freight Bottlenecks
David Kall, U.S. Department of Transportation, Federal Highway Administration (FHWA); Christopher Porter, Daniel Beagan, Elizabeth Welch, Cambridge Systematics; John Koupal, ERG; Roger Wayson, AECOM; Victoria Martinez, Aileen Varela-Margolles, Jeff Purdy, Cecilia Ho, FHWA

4:10 pm – 4:20 pm
Networking Break

SESSION 4: PANEL — APPLICATIONS OF EMISSION REDUCTION TECHNOLOGIES AND PROGRAMS

4:20 pm - 5:40 pm
Moderator: George Noel, FHWA
Panelists include:

- BIL’s Reduction of Truck Emissions at Port Facilities Program
  Carl Millard, FHWA Office of Freight Management and Operations

- Congestion Mitigation and Air Quality (CMAQ) Program
  George Noel, FHWA Resource Center

- CMAQ Emissions Calculator Tools
  Abigail Raymond, U.S. DOT Volpe National Transportation Systems Center

- Airport Grant Successes: Great Freight Takeaways
  Alice Richard, HMMH

5:45 pm – 6:45 pm
Networking Reception
## SESSION 5: CARBON FOOTPRINT REDUCTION

**Session Chair:** Roger Wayson, AECOM

**8:00 am – 8:20 am**

**FE04**  
**Expert Assessments of Future Marine Shipping Decarbonization Pathways**  
Imranul I. Laskar, Bryan Comer, Hadi Dowlatabadi, Amanda Giang, The University of British Columbia, Vancouver BC, Canada

**8:20 am – 8:40 am**

**FE25**  
**Understanding the CO2 Impacts of Zero Emission Trucks**  
Jeffrey Short, Danielle Crownover, American Transportation Research Institute (ATRI), Atlanta, GA

**8:40 am – 9:00 am**

**FE17**  
**Quantification of Carbon Sequestration and Storage in San Diego Bay’s Eelgrass Beds**  
Alicia Juang, Lindsey Sheehan, Environmental Science Associates; Keith Merkel, Merkel & Associates; Heather Kramp, Port of San Diego, San Diego, CA

**9:00 am – 9:20 am**

**FE20**  
**Roadmap to Carbon Neutrality and Net Zero with Resilient, Sustainable Infrastructure for Port Operations**  
Chris Easter, Michelle Le, Tim Sturtz, Jeff Caton, Environmental Science Associates, Walnut Creek, CA; Joseph Gale, EXP, Seattle, WA

**9:20 am – 9:40 am**

**FE10**  
**Port of Vancouver Adopted and Began Implementation of a Climate Action Plan (CAP)**  
Amnon Bar-Ilan, Amy Malick, Ramboll US Consulting, Novato, CA

**9:40 am - 9:50 am**

**Networking Break**

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## SESSION 6: FREIGHT TRUCK EMISSIONS AND ENVIRONMENTAL JUSTICE IMPLICATIONS

**Session Chair:** George Noel, FHWA

**9:50 am – 10:10 am**

**FE26**  
**ATRI Research on Electric Truck Infrastructure for Long-Haul Trucking**  
Jeffrey Short, Danielle Crownover, American Transportation Research Institute (ATRI), Atlanta, GA

**10:10 am – 10:30 am**

**FE35**  
**The 7th Street Grade Separation Project: Improving Access and Air Quality at the Port of Oakland**  
Harold Brazil, Bay Area Metro Center, San Francisco, CA

**10:30 am – 10:50 am**

**FE06**  
**CMAQ Emissions Calculator Tools for Ports of Entry**  
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TECHNICAL AGENDA – Friday, September 30, con’t.

SESSION 7: STUDIES OF FREIGHT IMPACTS ON AIR QUALITY AND NOISE

Session Chair: Robert Mentzer, HMMH

10:50 am – 11:10 am
FE12
Studies for Influence of Dusty Cargo Handling on Air Pollution in a Port City in India
Rasma K., Umangi Mehta, Virendra Sethi, Indian Institute of Technology Bombay, Mumbai, India; Nitin Goyal, National Environmental Engineering Research Institute, Mumbai, India; Harish Gadhavi, Physical Research Laboratory, Ahmedabad, Gujarat, India

11:10 am – 11:30 am
FE18
Environmental Noise Impacts from Container Terminals – A 15 Year Review
David Jones, SLR Consulting, Houston, TX

11:30 am – 11:50 am
FE21
Comparative Study of Air Quality During Freight Management in Afghanistan
Mohammad Hashim Pashtun, Ohio University, Athens, OH

11:50 am – 12:10 pm
FE33
Environmental Noise and Air Quality Considerations for Ports and Points of Entry
Paul Burge, Roger Wayson, AECOM, Cottonwood Shores, TX

12:15 pm - 1:15 pm
Lunch for all attendees
Portside Room

TECHNICAL TOUR - PORT OF OAKLAND

Friday, September 30, 2:00 pm

The Port of Oakland approved its Maritime Air Quality Improvement Plan (MAQIP) in 2009. The MAQIP included goals for substantial reductions in criteria pollutants, most notably an 85% reduction goal in diesel particulate matter over 2005 levels to reduce excess cancer health risk in the nearby West Oakland community.

This tour will highlight strategies that enabled the Port to surpass its emissions reductions goals in 2020, and new strategies set forth in its Maritime Air Quality 2020 & Beyond Plan – the Pathway to Zero Emissions. The tour also includes a site visit to see Class 8 battery-electric trucks, electric top-picks, and associated charging equipment.

Cost: $35. Pre-registration required.
Since 1955, the Bay Area Air Quality Management District has been the public agency responsible for protecting air quality in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. Air District programs monitor air emissions sources, promote climate protection, provide clean air grants, draft rules and regulate stationary air pollution sources. The Air District’s mission is to protect and improve public health, air quality and the global climate. The Air District encourages clean commute alternatives through the Spare the Air program. [www.baaqmd.gov](http://www.baaqmd.gov)

Kimley-Horn is a full-service design, engineering, planning, landscape architecture, and environmental consulting firm providing services to municipalities, transportation, public agencies, and private developers. Since our founding, Kimley-Horn has grown from a small group of traffic engineers and transportation planners to a firm of more than 5,500 employees with 99 offices nationwide. [www.kimley-horn.com](http://www.kimley-horn.com)

Ambilabs specializes in supplying innovative ambient air monitoring technology solutions. Our experienced staff provide instrumentation, systems and solutions for obtaining valid, accurate, and precise air quality data. We directly supply, install, and train on a broad range of gas and particulate monitoring instrumentation for our customers in Canada, USA, and the Caribbean. Please visit our booth to discuss the latest “Airpointer” which is an EPA FEM & FRM designated air monitoring “station in a suitcase”, and also the new AqMesh suite of pollutant monitoring sensors packaged together into a tiny pod that is no larger than a football. Also ask about our latest “2WIN” high precision particulate/haze/visibility monitoring sensor solution.

American Ecotech specializes in supplying state of the art instruments measuring specific gases, aerosols, and particulate airborne matter, including gas analyzers to measure NOx, CO, SO2, CO2, NH3, H2S, NOy, and/or ozone. We supply digital dataloggers, and advanced remote maintenance software for automated field data validation and reporting.