



Air & Waste Management Association's 117<sup>th</sup> Annual Conference & Exhibition

## Emissions Reductions for Sustainable Energy Futures

June 24-27, 2024 • Calgary, AB

ACE 2024

Technical Program  
Timeline

**November 27, 2023**

Abstract Deadline for Professional and Student Platform Presentations, Technical Posters, and Panel Sessions

**December 13, 2023**

Early Notification of Non-North American Proposals

**December 13, 2023 – January 31, 2024**

Notification of Acceptance

**January 19, 2024**

Abstract Deadline for Student Posters

**January 31, 2024**

Author Notification of Presentation Format

**March 5, 2024**

Draft Paper, Poster, and Panel Synopsis Due

**March 5 – May 15, 2024**

Review Period

**May 15, 2024**

Final Submissions Due

**June 24-27, 2024**

ACE 2024 in Calgary, AB

[www.awma.org/ACE2024](http://www.awma.org/ACE2024)

## ACE 2024 CALL FOR ABSTRACTS

Submit your work and present at the premier conference on environmental science, technology, and regulation

### Emissions Reductions for Sustainable Energy Futures

A&WMA invites abstracts of 200-400 words on a range of topics from climate change, energy, economic, social, scientific, political and pandemic factors shaping environmental policy and decision-making. Abstracts for individual platform and poster presentations, and panel sessions consistent with the theme of *Emissions Reductions for Sustainable Energy Futures* to address current and future environmental challenges are encouraged. Case studies and practical applications are especially desired.

Abstracts are due by **November 27, 2023** for: (1) **Platform Presentations**—individual oral presentations by professionals or students in a platform session; (2) **Technical Posters**—for display/presentation in the poster session; and (3) **Panel Sessions**—these require submitters to propose a panel session topic with three to five likely panelists and be committed to organize/conduct the panel. The deadline for **Student Poster** abstracts is January 19, 2024. For accepted abstracts, several options are available for submission of manuscripts for review and acceptance for presentation and inclusion in the online conference proceedings:

1. **Platform Presentations and Technical Posters:** Authors may submit a full-length manuscript or extended abstract for technical review, or PowerPoint presentation slides that will receive only a content review (Draft due March 5, 2024; final due May 15, 2024).
2. **Technical and Student Posters:** Authors must submit a poster board in accordance with A&WMA guidelines for content and format (Technical poster draft due March 5, 2024; final due May 15, 2024. Draft and final submissions not required for student posters).
3. **Panel Sessions:** Requires panel chair to submit a 150-word Panel Synopsis describing the panel topic/goals listing panelists and their affiliations (Draft due March 5, 2024; final due May 15, 2024).

Categories of interest are outlined on the following pages by major topic areas and subtopics, but other related topics are welcome. **The abstract submission site can be accessed via [www.awma.org/ACE2024authors](http://www.awma.org/ACE2024authors).** See the Technical Program Timeline to the left for important deadlines related to development of the preliminary and final programs.

### Why you should present

A&WMA's Annual Conference is recognized as the premier international conference of its kind providing the latest information on air, environmental management and risk, climate change, resource conservation, and waste issues. The conference typically has over 200 platform and poster presentations, 35+ panel sessions, and up to 10 concurrent sessions each day. This is your opportunity to share your work at this technical conference and have it published in the proceedings, share and exchange knowledge, hear panel discussions from experts on current topics, and interact with your peers, including: industry practitioners, consultants, regulators, researchers, and students.

The conference location is Calgary, Alberta in the Canadian Prairies region, a fast-growing area that spans many latitudes, encompasses many biomes, and has many important exports including oil and gas, agriculture, and timber. With this diversity in ecosystems and major exports, a calculated balance between resource development, social responsibilities, and environmental stewardship is needed, making the region a hotspot for emissions reductions and technological innovations. Calgary is excited to host ACE 2024, bringing industry, academia, and policymakers together so that we can learn, collaborate, and improve environmental knowledge and decision-making in this unique landscape which is at the forefront of global change. Professional continuing education credits are available.

Mark your calendars for 3 days of professional growth in Calgary, a nexus for emerging ideas, innovations, and solutions in the field of environmental stewardship. We hope to see you in person to share and present your work and make key connections at the 117<sup>th</sup> Annual Conference and Exhibition, A&WMA's premier event for environmental professionals.

*David Long, Technical Program Chair*

*Mujtaba Shareef, Technical Program Vice Chair*



# 2024 ANNUAL CONFERENCE CALL FOR ABSTRACTS

## How to Submit an Abstract:

A&WMA welcomes abstract submissions from individuals with diverse backgrounds, including but not limited to gender, race, ethnicity, nationality, sexual orientation, disability and age. All abstracts must be submitted no later than **November 27, 2023**, using the abstract submission website. A&WMA cannot assure acceptance of late submittals. Detailed information, further instructions, and a link to the abstract submittal site can be found at the conference website: [www.awma.org/ACE2024authors](http://www.awma.org/ACE2024authors).

All abstracts are initially evaluated on technical quality; relevance and significance to current environmental issues; and absence of commercialism. Through this process, we strive to create an equitable review process that is free from bias and discrimination. Accepted abstract submissions will undergo a technical or content only review, depending on the author's choice for manuscript submission, and authors will be allowed to present in poster, platform, or panel sessions. The program will include a dedicated time-slot for a poster-only session, with no competing technical sessions. Panel Session Chairs will have the opportunity to structure the panelist presentations and discussions.

For accepted abstracts, required manuscript submissions include either a full-length paper, extended abstract, or PowerPoint slides. A Panel Synopsis with confirmed panelists is required for each accepted panel session by March 5. Final, reviewed, submissions in accordance with the submittal guidelines ([www.awma.org/ACE2024authors](http://www.awma.org/ACE2024authors)) will be included in the online conference proceedings provided they were actually presented in a platform, poster, or panel session at the conference.

## Submission Process

- Step 1:** Link to A&WMA's online submission site via [www.awma.org/ACE2024authors](http://www.awma.org/ACE2024authors), create an account, and follow the guided process. The listing of planned session topics along with general topic areas can be found on the online submission site to assist you with abstract submission.
- Step 2:** If you have been invited to submit an abstract in a specific area or for a specific session, check the solicitation box on the form, and be sure to include the name of the individual who asked you to submit your proposed abstract.
- Step 3:** Double check that the contact info and name spelling for you and your co-authors is current and entered correctly. Note that the e-mail address you provide is our primary means for contacting you regarding your submission.

## Special Awards for YP and Student Presentations

Presenters at the conference can be selected for awards in the following categories:

- Young Professional (YP) Best Paper Award (**must submit full-length paper or extended abstract for technical review to be considered for this award**)
- Student Poster Awards

For more information and details related to eligibility criteria for these awards and requirements, please visit the conference website at [www.awma.org/ACE2024](http://www.awma.org/ACE2024)

**Student Poster abstracts may be submitted until January 19, 2024.**

## Special Instructions

Individual submitters should note that they have the choice of presentation formats. Professionals may choose either Platform or Poster presentation format and can indicate a preference for one format or the other. A&WMA will make every effort to honor the choice, but it may be necessary to reassign some platforms to posters in some cases if an appropriate session is unavailable. Undergraduate, masters, and doctoral students have the choice of a Student Platform presentation or a Student Poster (note alternative Student Poster deadline above).

When submitting an abstract, please **do not** submit the same abstract more than once with different formats (e.g., one for a Platform and a duplicate abstract for a Student Platform). **Note that if you are an individual author (or primary author with co-authors) submitting a single work for presentation at the conference, do not select the Panel Session option.** Individual presentations will be grouped with other presentations in a similar topic area into a Platform Session by the Technical Program Committee, or included in the main Poster Session, as appropriate.

Abstracts for Panel Sessions should preferably be submitted by potential session chairs who want to propose a topic area with multiple panelists for a full panel session, typically about 100 to 120 minutes in duration. Professionals submitting an abstract for a Panel Session will be expected to recruit panelists for the session, organize the session, review and coordinate the presentations from the panelists, and chair the session at the conference. Panel chairs also have the responsibility to submit the Panel Synopsis and a list of confirmed panelists by the deadline of March 5, 2024.

**PLEASE NOTE: A&WMA policy requires that all speakers, including panelists, who attend the conference register and pay the appropriate registration fee. All travel, housing, and expenses are to be covered by the speaker.**



# 2024 ANNUAL CONFERENCE CALL FOR ABSTRACTS

## 2024 Mini-Symposium – Emissions Reductions for Sustainable Energy Futures

The program will include a Mini-Symposium connected with the conference theme, “Emissions Reductions for Sustainable Energy Futures.” There is an increasing need to develop more sustainable energy to: conserve resources; achieve greater criteria and hazardous air pollutant emissions reductions to lower community exposures; and reduce greenhouse gas (GHG) emissions to address the rapidly increasing threats from global climate change and its potential for sea level rise, extreme weather events, and wildfires. Multi-disciplinary work is needed to continue toward a more sustainable future. This year’s Mini-Symposium will focus on a variety of innovative ideas and approaches for a more sustainable energy future. Mini-Symposium sessions will be formed from submitted abstracts and panels scheduled to minimize conflict with other sessions of similar content. The range of topics that touch on the conference theme may include presentations on power plant emissions reductions, low-carbon fuels, energy transitions, transportation planning, sustainable practices, climate change, and regulatory policies.

### PROPOSED TOPICS

#### Conference Theme, Local, and Hot Topics

- Agricultural Sector Emissions Reductions Technologies and Practices
- City/Regional Climate Action Planning
- Clean Technology
- Coastal Adaptation to Climate Change
- Community-Based, Mobile, Remote, and Fenceline Monitoring
- Community-Focused Emission Reductions
- Corporate Greenhouse Gas Target-Setting Factors
- ESG Approaches and Reporting
- Environmental Issues from Wildfires
- Emerging Contaminants of Concern
- Federal versus State/Local Perspectives on Renewables
- Hydrogen: Associated Emissions and Challenges
- Policies and Regulations on Carbon Capture and Storage
- Site Remediation and Brownfields Redevelopment
- State and Local Government Climate Change Programs
- Use of Low Cost Sensors and Emerging Technology

#### Environmental Education

- Challenges Facing Environmental Education
- Environmental Lesson Plans
- How to Liven Up Technical Presentations

#### Air Quality Issues

##### *Air Measurements, Monitoring, and Controls*

- Air Quality Measurements in Developing Countries
- Air Quality Issues in Latin America
- Developments in Emission Inventories
- Direct Carbon Capture Technologies
- E-Enterprise for the Environment: Challenges for Air Emission Reporting
- Emissions for Point and Non-Point Sources
- GHG/CO<sub>2</sub> Control Technologies and Strategies
- Impact of COVID-19 on Air Quality
- Near-Source Measurement and Monitoring
- Next Generation of Air Monitoring Tools for Fugitive, Fenceline, and Area Source Applications
- Ozone State Implementation Plan (SIP) Strategies

- Personal Exposure Measurement in Community Settings
- PM, VOC, NO<sub>x</sub> and Mercury Control Technologies

##### *Atmospheric Processes*

- Air Dispersion Modeling: Case Studies, Issues, Applications, Advances, and Guidance
- Air Quality Impacts of Wildfires and Prescribed Burning
- How to Present Modeling Results to the Public
- Innovative Air Quality Modeling Techniques
- Photochemical Assessment Monitoring Stations (PAMS) and Precursor Data Analysis
- Particulate Methods, Speciation, and Analysis
- Photochemistry—New Insights in Our Understanding of the Atmospheric Processes
- PM<sub>2.5</sub> Long Range Transport
- Regional Haze—Industry, State, and Federal Actions
- Secondary Particulate Formation
- Visibility Science, Policy, and Related Topics

##### *Environmental Justice (EJ)*

- Climate Change and Environmental Justice
- EJ Impacts on Policy, Regulatory Development, Future Planning, and Permitting
- EJ Impacts on Waste Disposal and Site Remediation
- EJ in Transportation and Land Use Policies
- Emissions Impacting on Overburdened Communities
- Health Effects & Exposure (HE&E) Evaluation in Overburdened Communities
- Modeling, Monitoring, and Risk Assessment for EJ Impacts
- Public Participation in Environmental Justice Issues

##### *Environmental Management*

###### *Effects and Exposure*

- Agricultural Emissions and Impacts on Air Quality
- Air Quality and Health Effects
- Characterization of Odors using FIDOL (Frequency, Intensity, Duration, Offensiveness and Location)
- Emerging Contaminant Exposures (PFAS)
- Environmental Management Systems
- Exposure and Health Effects of Regulated and Non-Regulated Air Pollutants
- Indoor/Outdoor Pollution Exposure and Effects
- International Air Pollution Exposure and Effects
- Multi-Pollutant Health Effects
- Odor Measurement, Monitoring, and Control Methods
- Odor Mitigation and Ambient Air Assessment
- Risk Assessment, Management, and Communication: Issues and Recent Experience
- Safety: Management and Recent Experience

###### *Transportation*

- Air Pollution from Internal Combustion Engines
- Alternative Fuels and Transportation
- Exhaust and Non-Exhaust Emissions
- Freeway/Highway Vehicle Speed Effects on On-Road Mobile Source Emissions
- Innovative Policies on Land Use to Reduce Transportation Source Impacts and Address Environmental Justice Concerns
- Off Road Mobile Sources: Rail, Ship, Airplane Emissions
- On- and Off-Road Mobile Sources, Near Road Air Quality
- Transportation: Climate Change and Resiliency
- Transportation: Community Noise and Vibration Issues
- Transportation: Sustainability and Health Issues
- Worldwide Trends in Vehicle Emission Standards





# 2024 ANNUAL CONFERENCE CALL FOR ABSTRACTS

## **Program Administration**

- Air Legislation, Regulation, and Policy Developments
- Air Permitting Problems and Solutions
- Air Permitting Requirements for PFAS and Emerging Pollutants
- Best Available Control Technology (BACT) Development and Implementation
- Citizen Monitoring
- Clean Air Act Regulatory and Policy Developments - Time for Amendments/Revisions?
- EPA Priorities 2024 and Beyond
- Impact of Recent Court Rulings on Clean Air Act Implementation
- Modeling Issues in Prevention of Significant Deterioration (PSD)/Nonattainment/Minor New Source Review (NSR) Permitting
- NSR Issues and Recent Developments

## **Industry, Power Generation, Government, and Indigenous Sectors**

### **Industry, Power Generation, and Nanotechnology**

- Environmentally-Responsible Power Plant Decommissioning
- Hot Topics in the Chemical and Refining Industries
- International Power Generation (Fossil, Renewable, Nuclear): Status, Policy, Regulations, and Technology
- Mineral Processing and Extraction
- Nanomaterials: Environmental and Occupational Safety and Health, and Regulatory Developments
- Nanotechnology: Applications, Research Advances, and Safety
- Petroleum, Industry, Mining Issues and Case Studies
- Power Generation Industry—GHG Reduction Programs and Sustainability
- Power Industry Technology - Innovation, Challenges, and Benefits
- Power Plant Efficiency Improvements and Emissions Reductions through Technological Innovation
- Power Plant Effluent Guideline and Regulation Challenges
- Regulations Impacting the Power Generation Industry
- Regulatory Opportunities and Challenges for the Power Generation Industry
- Renewable Energy Impact to Grid Stability, Resilience, and Reliability
- Repowering Coal-Fired Generation
- Unconventional Oil & Gas: Issues, Controls, and Emission Calculations

### **Government Facilities and Indigenous Environmental Affairs**

- Environmental Compliance Issues at Federal Facilities and Policy
- Environmental Considerations in Military Procurement
- Evaluation of Duplicative Regulations and Executive Orders 13771 and 13777: Issues, Opportunities, and Potential Efficiencies
- Indigenous Environmental Affairs: Issues, Regulations, Projects, and Case Studies
- Meeting Sustainability Goals for Federal Facilities
- National and Global Security Issues Related to Environmental Sustainability and Climate Change
- Planning and Implementing Sustainability and Resiliency at Federal Facilities and the Public Sector
- Regulatory/Compliance Cost Impacts on Modernization of National Security Facilities

## **Sustainability, Climate Change, Resource Conservation, and Waste Management**

### **Climate Change – Science, Policy, Impacts, Regulations, Mitigation, and Adaptation**

- Climate Change Data Visualization and Management
- Climate Change Impacts
- Climate Change Policy and Regulatory Issues
- Climate Change Resiliency and Adaptation
- Climate Change Risk Management
- Comparative Regulatory Approaches: Cap and Trade vs. Carbon Tax
- Downscaling Climate Change Models
- Environmental Justice and Climate Change
- Federal vs. State vs. Regional GHG Policies
- Financing Mechanisms for Climate Change
- GHG Emissions and Reporting Programs
- GHG Impacts from/on Agriculture and Wildfires
- GHG Reduction and Decarbonization Through Sustainable Materials Management
- Insurance Industry: Accounting for Climate Change
- Integrated Air Pollution and GHG Policy
- Lessons Learned: North American Cap and Trade Programs
- Local Climate Change Planning and Tracking

### **Sustainability and Resource Conservation**

- Corporate Sustainability: Plans, Programs, Ethics, and Performance Tracking
- Energy-Water-Waste Nexus
- Green Production and Consumptions: Initiatives, Life Cycle Impacts, and Opportunities
- Organic Waste Reduction and Reuse: Innovations, Regulations, and Programs
- Plastics Waste: Economics, Innovations, and Supply Chain Management
- Sustainability Metrics and Analytics
- Sustainability and Resiliency Planning: Global Perspectives and Case Studies
- Sustainable Waste/Materials Management: International Perspectives and Practices
- State and Local Government Sustainability Programs
- Zero Waste and Circular Economy: Plans, Programs, Metrics, Economics, Innovation, and Climatic Benefits

### **Waste Processing, Waste-to-Energy, and Bioenergy**

- Conflicts and Gaps in Waste Management Regulations
- Hazardous Waste Characterization, Treatment, and Reuse
- International Perspectives on Waste Management
- Landfills: Management, Remediation, Gas Collection, and Utilization Systems
- Residuals Management and Reuse: Agriculture, Water/Wastewater, Ash, Construction & Demolition (C&D), Industrial, and Waste Tires
- Site Assessment, Site Remediation, and Vapor Intrusion
- Solid Waste Generation, Characterization, and Collection
- Sustainable Site Remediation and Brownfields Development, Emerging Contaminants
- Waste-to-Energy and Waste and Biomass Conversion Technologies and Systems