



LAKE MICHIGAN AIR DIRECTORS' CONSORTIUM

POSITION DESCRIPTION

Executive Staff: Atmospheric Scientist/Emissions Specialist

The Atmospheric Scientist/Emissions Specialist on the executive staff is responsible for managing the emissions data and modeling program at LADCO.

The primary duties of this position are as follows:

- Compiling, analyzing, and managing emissions inventories for criteria pollutants, and supporting air quality modeling studies.
- Conduct, evaluate, and document regional emissions modeling with the Sparse Matrix Operator Kernel Emissions (SMOKE) model to support air pollution policy decisions of the LADCO states
- Use SMOKE, the Motor Vehicle Emissions Simulator (MOVES), NONROAD, the Biogenic Emissions Inventory System (BEIS), the Model of Emissions of Gases and Aerosols from Nature (MEGAN), and other emissions processing software to prepare inputs for photochemical air quality models
- Develop and evaluate non-inventory emissions data, including chemical speciation profiles, temporal profiles, spatial surrogates, and control/projection data
- Coordinate and support the emissions modeling activities of the LADCO states
- Gather, develop, and evaluate emissions model input data
- Evaluate, diagnose, and rectify emissions model performance issues
- Analyze and document emissions model outputs in the context of air pollution policy decision support
- Track, understand, and communicate emerging air pollution emissions technology and policy issues
- Write, modify, and maintain pre- and post-processing software for emissions modeling systems and data visualization programs
- Develop and apply software for conducting model performance evaluations of emissions models
- Work directly with state agency technical staff, EPA regional and national staff, federal land managers, and other multi-jurisdictional organizations (MJOs) on issues related to emissions and air quality modeling
- Prepare technical reports and present modeling results to technical and non-technical audiences
- Support computer operations, including Linux-based workstations, in the LADCO executive office

Additional responsibilities may include the following activities, depending on program needs and the selected candidate's expertise:



- Use Geographic Information System (GIS) software to prepare emissions data for modeling or to analyze emissions data
- Conduct, evaluate, and document urban- to continental-scale photochemical grid modeling to support air pollution policy decisions of the LADCO states
- Conduct, evaluate, and document energy system, agricultural system, transportation system, or other emissions-related modeling

Required qualifications:

- Strong foundation in atmospheric science, environmental science, or a related field, with knowledge of air quality, emissions, and Clean Air Act regulatory frameworks.
- Master's degree in atmospheric science, environmental engineering, environmental science, geography, chemistry, physics, computer science, or a closely related discipline.
- Experience working with emissions inventories, air quality or emissions models, and related analytical tools and datasets.
- Proficiency in data analysis and management, including the use of spreadsheets, databases, and scientific or statistical software.
- Ability to prepare clear technical documentation, reports, and presentations for both technical and non-technical audiences.
- Effective collaboration and communication skills for working with state, local, and tribal agencies and multidisciplinary teams.
- Experience with programming or scripting (e.g., Python, R, MATLAB) for data processing and analysis is beneficial.
- Familiarity with EPA emissions guidance, air quality regulations, and regional planning processes is an asset.
- Experience with Linux computing systems, including hardware and software technology, software compilation, and systems administration
- Ability to perform detailed computer-based emissions modeling, programming, data analysis, and documentation for substantial portions of the workday, with or without reasonable accommodation.

Preferred qualifications:

- Experience setting up, running, and evaluating SMOKE and MOVES
- Experience setting up, running, and evaluating CAMx, CMAQ, WRF-Chem, or GEOS-Chem
- Experience with cloud computing
- Proficiency with large language models to support software development

This is a full-time, exempt position that will be located at the LADCO executive office in Hillside, IL. Salary will be commensurate with education and experience. LADCO offers outstanding employee benefits and a 403(b) matching program. See the [LADCO Employee Handbook](#) for details on hiring, compensation, and benefits.

To apply for this position, email a cover letter, CV, and a list of references to LADCO's Executive Director at adelman@ladco.org. Applications must be received by 5:00 p.m. Central on November 30, 2026. The tentative start date for this position is March 1, 2027. Applicants must be currently authorized to work in the United States on a full-time basis.



LADCO provides equal opportunities to all employees and applicants for employment without regard to race, color, religion, age, sex (including pregnancy), national origin, ancestry, disability, genetic information, marital status, protected veteran status, citizenship status, sexual orientation, gender identity or expression, or any other characteristic protected by federal, state, or local law. LADCO also prohibits discrimination and harassment of any type.

Applicants who need a reasonable accommodation to participate in the application or interview process may contact LADCO's Executive Director at adelman@ladco.org.