

Arizona Department of Environmental Quality

The Arizona Department of Environmental Quality's (ADEQ) mission is to protect and enhance public health, welfare and the environment in Arizona. ADEQ administers a variety of programs to improve the health and welfare of our citizens and ensure the quality of Arizona's air, land and water resources meets healthful, regulatory standards.

ADEQ is committed to leading Arizona and the nation in protecting the environment and improving the quality of life for the people of our state. Our diverse workforce connects to more than just a career; we share a common passion to promote a cleaner, healthier environment.

Visit our website at <http://www.azdeq.gov/>

To apply for this position, visit <http://www.hr.az.gov/azstatejobs/> and search for the job using job ID 10252 or visit <http://jobs.azdeq.gov/senior-environmental-engineer-job-id-10252/job/4686646>

SENIOR ENVIRONMENTAL ENGINEER

Air Quality Division

State Implementation Plan Section / Technical Analysis Unit

JOB SUMMARY

Provide analyses, conduct studies, and perform dispersion modeling simulations of criteria pollutants for nonattainment area State Implementation Plans (SIPs) on both local and regional scales. Performs air quality modeling using Windows-based dispersion models (AERMOD, CALPUFF). Develops and pre-processes air quality and meteorological data sets for input into dispersion modeling systems. Develops point, area and mobile source emission inventories for SIPs and other special studies. Develops mathematical equations and the ability to perform calculations for a variety of emission sources. Function at a consultant level within the organization, providing the expertise in atmospheric chemistry needed to understand the formation of ozone, particulate matter, and other secondary air pollutants in a complex urban airshed. Provide and communicate both orally and in writing the results of dispersion and photochemical modeling analyses. Assume the role as Project Manager working with contractors performing photochemical modeling simulations.

MINIMUM QUALIFICATIONS

Extensive knowledge and experience in using Gaussian plume models and an in-depth understanding of photochemical models. This position will utilize dispersion models such as AERMOD and CALPUFF for nonattainment area State Implementation Plans (SIPs) as well as others. Specifically, an understanding in the use of LINUX-based photochemical and meteorological grid-based models (CMAQ, CAMx) to study atmospheric chemical reactions and identify the controlling chemical species. Lastly the candidate will have experience in analyses and interpretation of results from dispersion and photochemical models on both local and regional scales and may be heavily involved in modeling Regional Haze, Ozone, Sulfur Dioxide, and Particulate Matter SIPs. Utilize principles, theories, and practices of engineering. Utilize principles, theories, and practices of environmental science. Use scientific instruments and equipment. Perform advanced mathematical calculations using higher math such as Algebra, Geometry, Calculus, and Statistics to solve problems. Speak clearly, concisely and effectively; listen to, and understand, information and ideas as presented verbally.

Strong analytical, communication, and interpersonal skills in interpreting and apply complex scientific methods and tools towards completing air quality projects. Skills in preparing clear concise and accurate written technical support documents (TSDs) and reports, and conduct well organized and clear verbal communications with individuals and groups.

Ability to analyze complex problems, perform scientifically based analyses, evaluate results, draw conclusions, prepare a work product and present the data and analysis in graphical and narrative forms. Additionally, the employee should have the ability to provide prepared material to management regarding policies and decisions with regard to modeling processes or modeling results as they relate to State Implementation Plans and compliance with Federal air quality standards. Ability to configure and run diagnostic 3-dimensional meteorological models (e.g. CALMET) and post processing packages such as CALPOST in support of modeling studies using CALPUFF. Ability to perform wind trajectory analysis using the National Oceanic and Atmospheric Administration's (NOAA) HYSPLIT model. Ability to apply technical tools (processing, visualization, statistical) to aide in the analysis of atmospheric chemical processes. Abilities in the following areas; 1) research and understand scientific methods, 2) deploy complex statistical/mathematical software, 3) deploy Gaussian plume models and 4) an in-depth understanding of photochemical and meteorological models. Develop approaches for implementation of an idea, program or change in operations. Plan, organize and prioritize time and workload in order to accomplish tasks and meet deadlines.

PREFERRED QUALIFICATIONS

The Preferred candidate would have the following in addition to the minimum qualifications:

- BS or advanced degree in engineering, atmospheric sciences or chemistry and a minimum of 5 years working experience in dispersion modeling (e.g., AERMOD, CALPUFF) for air quality research or regulatory purposes.
- Experience in interpreting photochemical models in order to assign tasks and oversee photochemical contract work.

LICENSING, CERTIFICATIONS, & OTHER REQUIREMENTS

- **A valid certification as a licensed Professional Engineer with the Arizona Board of Technical Registration.**
- A valid driver license with no major driving citations in the last 39 months is required for all positions where driving is an essential function of the job.

BENEFITS

The State of Arizona provides an excellent comprehensive benefits package including:

- Top-ranked retirement and long-term disability plans
- Affordable medical, dental, life, and short-term disability insurance plans
- Accrued vacation pay and sick days
- 10 paid holidays per year
- Deferred compensation plan
- Credit union membership
- Wellness plans

HOW WE WORK

Today's ADEQ has a strong foundation upon which to build its future. Success depends heavily on its committed and engaged employees. Ours is a culture of continuous improvement, embodied in the following 10 organizational habits known as The ADEQ Way:

- Evaluate everything we do for its impact on the mission.
- Hire only those who believe in our way and have a passion for their work.
- Train those who cannot, replace those who will not, and promote those who excel.
- Never hide a problem – respect others enough to be honest, even if the truth is uncomfortable.
- Do not blame, but hold each other accountable.
- Involve end users early and often when creating or improving services.
- Never stop asking why.
- Continuously design and redesign for quality and radical simplicity.
- Freely discuss, promptly decide, and totally commit.
- Do not fear failure.

ADEQ offers employees a positive, results-oriented work environment that promotes continuous education and development.

**If you have a passion for the environment and are ready to make a difference in our agency,
we welcome you to join us!**

**All newly hired employees will be subject to the E-Verify Employment Eligibility Verification program.

The State of Arizona provides an excellent comprehensive benefits package, including a top-ranked retirement plan, low-cost health and dental coverage, supplemental policies such as vision and short-term disability, and generous leave programs.

Arizona State Government is an EOE/ADA Reasonable Accommodation Employer.

Having trouble applying for this position?

Email HRIShelpdesk@azdoa.gov or call 602-542-4700 for assistance.

Position Number: SEV000000905

Close Date: 08/04/2014