South Coast Air Quality Management District

Air Quality Specialist (Meteorology/Assessment)

SALARY	$3,631.30 - $5,014.15 Biweekly $94,413.88 - $130,367.81 Annually	**LOCATION**	Diamond Bar, CA
JOB TYPE	Full-Time	**JOB NUMBER**	25:56:GS
DEPARTMENT	Planning, Rule Development & Implementation	**OPENING DATE**	08/27/2025
CLOSING DATE	9/10/2025 11:59 PM Pacific		

SOUTH COAST AQMD AND JOB OVERVIEW

South Coast Air Quality Management District (South Coast AQMD) is one of the largest and most technologically sophisticated environmental regulatory agencies in the nation, serving a four-county region that includes Los Angeles, Orange County, Riverside and San Bernardino counties and the Coachella Valley. South Coast AQMD's headquarters is located in Diamond Bar, 30 miles east of downtown Los Angeles, at the junction of the 57 and 60 Freeways. With a highly diverse "Clean Air Team" of over 850 employees, an annual budget of $216.5 million, and a state-of-the art air quality laboratory, our mission is to ensure clean air and a healthy environment. South Coast AQMD is an organization you can be proud to work for -- we make a difference in the quality of life in Southern California!

South Coast AQMD is committed to creating and maintaining a work environment that appreciates the unique backgrounds, skills, and experiences of our employees and fosters professional development and growth. South Coast AQMD respects the ideas and perspectives of our stakeholders and works to bring them together toward the common goal of clean air.

ABOUT THIS POSITION

We are recruiting for one Air Quality Specialist position in the Meteorology/Air Quality Assessment unit of our Planning, Rule Development, and Implementation (PRDI) division, a major branch of South Coast AQMD. The most competitive candidate will have a strong background in air quality science along with expertise in computer programming and software development. An eligible list of candidates established with this recruitment can be used to fill a current and future Air Quality Specialist vacancies in the PRDI division.

One of the main goals of the Meteorology/Air Quality Assessment unit is to help the public reduce their exposure to poor air quality by disseminating air quality science in an easy-to-understand way to facilitate health-protective decision making. The Meteorology/Air Quality Assessment unit is on the cutting edge of both air quality science and the information technology needed to disseminate air quality data and guidance most effectively.

Activities within the Meteorology/Air Quality Assessment unit include:

- Performing complex analyses of large measured meteorological and air quality data sets from ground- and satellite-based measurement platforms

- Air quality forecasting and developing air quality forecast models
- Issuing predictive air quality advisories during extreme events such as wildfires and dust storms
- Developing and maintaining the South Coast AQMD real-time air quality index map
- Conducting technical analyses to support rule-making
- Addressing air quality related inquiries from the public and the media
- Conducting media interviews
- Analyzing ambient air quality data and regulatory implications
- Preparing reports and presentations related to air quality and meteorological analysis
- Geographic analysis using GIS software
- Disseminating graphical and tabular air quality data to the public
- Conducting air quality dispersion modeling
- Conducting air quality research that has a direct impact on public health
- Developing software to analyze data
- Developing interactive websites to display and access data for use by the general public and technical users

The Meteorology/Air Quality Assessment unit is composed of four Air Quality Specialist positions, a Senior Meteorologist, and a Program Supervisor. The group is extremely collaborative as most projects require contributions from multiple group members and often works with other groups within and outside the agency.

Please note: This job posting will close on Wednesday, September 10, 2025.

Example of Duties for this position:

- Technical analysis of historical air pollution events using statistical and geospatial software to analyze surface air quality/meteorological measurements, satellite-measurements, and air quality/meteorological model data.
- Conduct applied air quality research projects independently or collaboratively to answer policy-relevant questions and guide policy development.
- Develop exceptional event demonstrations for air pollution events that influence attainment of federal air quality standards.
- Conduct the daily air quality forecast to provide guidance to over 17 million residents in Los Angeles, Orange, San Bernardino, and Riverside counties.
- Develop, train, test, and implement air quality forecast models.
- Analyze and forecast extreme air quality events such as wildfires, dust storms, and prolonged air quality episodes.
- Generate publicly accessible advisories to help residents reduce their exposure to poor air quality.
- Develop and implement new publicly accessible mobile apps and websites to show forecasted air quality, real-time air quality index readings, and advisories.
- Design of interactive tools to visualize or analyze air quality data, mostly using MATLAB App Designer, ESRI ArcGIS and R Shiny.
- Analyze air quality trend data including regulatory statistics such as design values, which are used to determine whether an air basin attains federal standards.
- Statistical and geospatial analysis of community level data and develop interactive maps to support Community Air Programs.
- Analyze regulatory monitoring, low-cost sensor, air toxics, satellite, and meteorological data to evaluate emission source contributions and air quality impacts
- Address science-related air quality questions from the public via email or phone.
- Prepare and perform presentations to convey complex air quality concepts to technical and/or general-public audiences.
- Contribute to technical and policy reports on various air quality analyses and modeling exercises.
- Collaborate with other government agencies, academic institutions, and other professional communities on air quality projects.

EXAMPLE OF DUTIES

*The general Example of Duties for this classification are highlighted below, for full description of duties please refer to this link **here**.*

Works with engineers, planners, other environmental professionals, Information Management staff, and other personnel to develop and implement methods and techniques for the analysis and evaluation of air quality studies and plans.

Applies mathematical, statistical, and engineering modeling and analytical techniques to the analysis of research and survey data; prepares graphs, charts, and statistical summaries from derived data; determines appropriate data collection methods for use in research projects; and may assist in determining methods for more complex studies.

Assists in developing or develops recommendations concerning air quality management programs, plans, and rules and prepares related reports and correspondence.

Assists in preparing technical analyses and recommended positions on proposed and pending legislation relating to air quality management.

MINIMUM AND DESIRABLE QUALIFICATIONS

DESIRABLE QUALIFICATIONS:

In addition to the *Minimum Qualifications*, which follow in the next section, the most competitively qualified candidates will possess:

- An advanced degree in atmospheric science, environmental/chemical/mechanical engineering, meteorology, environmental science, environmental geoscience, public health, computer science, data science, software engineering, mathematics, atmospheric chemistry or a related technical field.
- A proven record of successful collaborations with internal or external colleagues
- Strong computer programming skills in MATLAB, Python, R, or another modern computer language
- Extensive experience visualizing, presenting, and publishing statistical/geographic data for technical and/or non-technical audiences
- Experience preparing interactive maps, reports, publications, recommendations, technical papers, presentations, talking points, and correspondence for technical and/or general-public audiences
- Experience in reviewing complex technical documents, making related recommendations, and communicating key issues, orally and in writing, to superiors, teammates, special interest groups, the public, and other audiences

In addition to the desirable qualifications above, the most competitively qualified candidates will possess skills from the two subsets below:

Air Quality Science Skills Subset

- Experience conducting research on atmospheric particulate matter, ozone, and/or meteorology
- Knowledge of the capabilities and limitations of air quality and meteorological instrumentation
- Experience building, improving, training, evaluating and deploying air quality models

Advanced Computer Programming and Software Development Skills Subset

- Experience building interactive software and websites for the display and analysis of technical data
- Experience using large language models to generate code, programming collaboration tools like git, or other tools to assist with program development
- Expertise with machine learning techniques.
- Fluency with geospatial mapping and analysis software
- Extensive expertise with multiple programming languages
- Experience administering databases
- Experience using SQL and databases in applications and data analysis
- Experience using Linux, such as installing and updating packages and compiling applications

MINIMUM QUALIFICATIONS

EDUCATION:
Graduation from an accredited college or university with a bachelor's degree in engineering, environmental science, planning, or the physical, social, or biological sciences, depending upon the functions of the assigned unit.

EXPERIENCE:
Two years of technical air quality or professional analytical experience that would demonstrate the requisite knowledge, skills, and abilities of the position to which assigned

KNOWLEDGE OF:
One or more professional disciplines, such as chemistry, toxics, statistics, economics, environmental planning, or engineering, with emphasis on its relationship to planning, rule development, or engineering activities; principles, methods, and procedures of environmental review, planning, rule development, or air quality monitoring, including related instrumentation; air quality regulations and review process; air quality modeling; emissions calculations; PC software applications commonly used in the field; research methods and techniques, including statistical and computer applications for data analysis; professional report writing; and State, federal, and local programs, guidelines, and code regulations related to air quality management.

SKILL OR ABILITY TO:
Compile, analyze, and interpret technical air quality data; learn and apply District air quality regulations to stationary and mobile source monitoring; monitor and evaluate the performance of consultants; oversee stationary and mobile source monitoring projects under minimum supervision; maintain accurate records of air quality planning, research, monitoring, or rule development projects and prepare clear and persuasive reports and recommendations; represent South Coast AQMD interests at public, professional, and internal meetings and communicate with a variety of technical and professional air quality and legal staff; maintain current knowledge of applicable federal, State, and local regulations and technical or scientific developments; provide expert testimony, advice, and counsel in a specialized field; apply appropriate computer-based analytical techniques to complex air pollution control problems; develop new techniques and approaches to the solution of complex air pollution control problems; proficiently use PC and mainframe software applications common to the field and to the general business environment of the South Coast AQMD; read, understand, and follow verbal and written directions; communicate clearly and concisely, both orally and in writing; and establish and maintain effective relationships with all those contacted in the course of work.

OTHER IMPORTANT INFORMATION

APPLICATION PACKETS MUST INCLUDE:

1. A completed employment application covering at least the past 10 years of employment history (or longer if you have other relevant experience), and your entire South Coast AQMD employment history if you are a South Coast AQMD employee.
2. Responses to the Supplemental Questionnaire (SQ). The SQ is a form of written test and will be evaluated as such. Your responses should be well written, clear, concise, and directly responsive to the question.
3. Up to four references which include the names and phone numbers of your present and past supervisors or managers, and/or college professors or persons for whom you have directly provided services, not **peers**.

At a later date, candidates under final consideration will be required to arrange for original, official transcripts (or equivalency evaluation, if applicable) to be mailed directly from their college/university to South Coast AQMD, documenting all education claimed on their application.

Job applications must be completely filled out. A resume cannot be substituted for the required information. Be sure to detail any education, training or other relevant coursework that would make you a particularly strong candidate.

THE SELECTION PROCESS

Application packets, including responses to the Supplemental Questionnaire, will first be screened, and the most competitively qualified candidates will be invited to a multiple-choice examination, to be rated on a pass/fail basis. Candidates who pass the exam will advance to the next step in the process, which may include a panel interview. (Please note that all assessments will be conducted remotely).

Following the assessment process, a ranked eligible list is expected to be created, from which the current vacancy may be filled, during the 6–12-month life of the list. Only those who demonstrate at each successive step of the selection process that they are among the most competitively qualified will be advanced to the next step. (Meeting the minimum qualifications does not guarantee an invitation to future steps in the process.)

Important note for potential candidates who do not have the continued and unrestricted right to work full time in the United States: If you currently, or will in the future, require sponsorship (i.e., H1-B Visa) in order to maintain your right to work in the United States, please be aware that decisions regarding sponsorship for maintaining a right to work in the United States are made on a case-by-case basis. You are welcome to participate in this recruitment process, but there is no guarantee that a job offer with the requested sponsorship will be made to you.

South Coast AQMD reserves the right to add, delete, and modify any elements of the selection process as deemed appropriate, based on the number and quality of applicants at each step.

Candidates who may need accommodations during the selection process must call the Human Resources Department at least one week prior to any test dates.

If you have any questions regarding this recruitment, please contact Human Resources Department at (909) 396-2800.

Employer
South Coast Air Quality Management District

Address
21865 Copley Drive

Diamond Bar, California, 91765

Phone
909-396-2800

Website
http://www.aqmd.gov

Air Quality Specialist (Meteorology/Assessment) Supplemental Questionnaire

*QUESTION 1

How many years of air quality research or applied air quality science experience in academia, private industry or government do you have? Please provide a brief description of your experience.

- ◯ I have no air quality reach or applied air quality science experience
- ◯ One to Two years
- ◯ Two to Three years
- ◯ Three to Four years
- ◯ Four to Five years
- ◯ Over Five years

*QUESTION 2

Rate your experience and abilities in Air Quality Research or Applied Air Quality Science from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 3

Rate your experience and abilities in analyzing Ambient Air Quality measured concentration data from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 4

Rate your experience and abilities in analyzing Low-Cost Sensor measured concentration data from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 5

Rate your experience and abilities in analyzing Satellite Data from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 6

Rate your experience and abilities in developing Air Quality or Meteorological models from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 7

Copy OF [Rate your experience and abilities in running Air Quality or Meteorological models from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):]

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 8

Rate your experience and abilities in writing technical reports or publications from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 9

Rate your experience and abilities in disseminating complex scientific concepts to the general public from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 10

Rate your experience and abilities in development of web tools to disseminate scientific data from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 11

Rate your experience and abilities in oral public communications from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 12

Rate your experience and abilities in using geographic mapping software such as ArcGIS from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 13

Rate your experience and abilities in computer programming with MATLAB, R, or Python from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 14

Rate your experience and abilities in using programming-related collaboration tools such as Git from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 15

Rate your experience and abilities in using large language models to generate code from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 16

Rate your experience and abilities in developing computer software from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 17

Rate your experience and abilities in collaborating on teams with multiple researchers or software developers from 0 to 5 (0 indicates that you have no experience and 5 indicates that you have enough experience to teach a graduate level course on the topic):

- ◯ Zero
- ◯ One
- ◯ Two
- ◯ Three
- ◯ Four
- ◯ Five

*QUESTION 18

For each topic in the questions above that you assigned a score larger than 3, please provide a brief description (1-3 sentences) of your experience and abilities.

* Required Question