

METEOROLOGIST I

This is professional meteorological work involved in the review of air quality permit applications or in the establishment or revision of existing air quality standards. Employees either function in the permit review section or the planning section within the Division of Air Quality. Employees in the permit review section consult with permit applicants on the selection and use of appropriate mathematical dispersion models and other technical requirements of the permit process, review models and results submitted with permit applications, select and apply models to verify information submitted and either recommend the acceptance or rejection of the permit modeling technique and results. In addition, employees will conduct screen level modeling with their supervisor or with Meteorologist II oversight. Employees in the planning section provide mathematical dispersion modeling expertise in support of the establishment and revision of air quality standards, consult with other state employees and industry officials, monitor air stagnation problems and report critical situations, and review and adapt existing models for use in the State. Work is performed under the general supervision of an Environmental Engineering Supervisor, an Environmental Program Supervisor, or Meteorologist II and may include other duties as assigned.

I. DIFFICULTY OF WORK:

Variety and Scope - Work involves the technical review of mathematical dispersion models selected and applied by other meteorologists; the selection, modification and application of models to determine the effects of increased emissions on air quality; the provision of technical assistance and consultation to a variety of individuals and corporations; and the selection, modification and application of models in support of efforts to assure compliance with applicable pollutant air quality standards.

Intricacy - Models require detailed, accurate information such as hourly meteorological conditions, topography, source emission parameters and a variety of other factors in order to estimate the environmental impact of sources. In addition to assuring the accuracy of input, employees must select the appropriate model and model options, decide upon the appropriate input into the model which will best simulate dispersion in a given location, input the data into the computer in the correct format and, finally, accurately interpret the results.

Subject Matter Complexity - Employees must have a thorough knowledge of the meteorological concepts and theories as applied to the analysis of local and regional dispersion of air-borne particulates. Employees must maintain a state of the art knowledge of available mathematical dispersion models and their uses. Employees must also have a thorough knowledge of federal and state air quality regulations as applied to the application of models in the permitting process.

Guidelines - Permit guidelines are fairly specific in regard to the more routine modeling requirements. However, the extensive use of models for determining dispersion is rapidly developing and changing and on more difficult modeling application, a Meteorologist II would provide any additional needed guidance.

II. RESPONSIBILITY:

Nature of Instructions - As some supervisors are not knowledgeable of meteorology, instructions are general in nature indicating only the project to be undertaken and timeframes where appropriate. A Meteorologist II would provide more technical and specific instructions.

Nature of Review - An Environmental Program Supervisor or Meteorologist II would review technical work for accuracy and reasonableness. Routine results would be administratively reviewed for reasonableness only.

Scope of Decisions - Decisions could impact on the owners, operators and employees of an individual manufacturing plant or an industry as a whole. In addition, decisions could impact on members of the general public living in the vicinity of a plant requesting a permit.

Consequence of Decisions - Decisions could result in the disapproval of a permit to build or expand a plant. This, in turn would have an impact on the local economy as well as the sponsors or owners of the plant. Incorrect assessment of potential decrease in air quality could adversely impact plant life and the general quality of life for area residents.

III. INTERPERSONAL COMMUNICATIONS:

Scope of Contacts - Employees have contacts with industry officials, governmental officials both on the state and local level, private and governmental meteorologists, and the general public.

Nature and Purpose - Employees explain the permitting process to industry officials and other meteorologists, advise them on the proper models to select and their correct use, and inform them of problems with their analysis. Employees also consult with other governmental meteorologists on available models, their strong and weak points and their potential adaptability for use in the state. In addition, employees explain potential environmental impacts for new or expanding industries to local governmental officials and members of the general public.

VI. OTHER WORK DEMAND:

Hazards - Work is primarily performed in an office setting.

Work Conditions - Work is primarily performed in an office setting.

V. RECRUITMENT STANDARDS:

Knowledge, Skills, and Abilities –

Working knowledge of the theoretical and practical application of meteorology.

Working knowledge of the types and uses of mathematical dispersion models.

Working knowledge of the federal, state and local laws, regulations, and standards relating to the abatement and control of air pollution.

Working knowledge of industrial processes and the characteristics of their effluents.

Ability to select, modify, adapt, and run mathematical dispersion models to specific applications and to interpret their results.

Ability to express ideas and concepts clearly in oral and written form.

Ability to handle with tact, consistency and sound judgment the diversity of public contacts demanded in consultative services and enforcement.

Minimum Education and Experience - Bachelor's degree in meteorology from an appropriately accredited institution and one year of experience as a meteorologist; or an equivalent combination of education and experience.

Special Note

This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA. Examples of work are primarily essential functions of the majority of positions in this class but may not be applicable to all positions.