# DUTY STATEMENT (Proposed)

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| Employee Name: Vacant | Current Date:  |
| Classification: Air Pollution Specialist | Position #: 673-710-3887-XXX |
| Division/Office: AQPSD/MMB | CBID: R09 |
| Section: Regional Air Quality Modeling |
| Supervisor Name: Chenxia Cai | Supervisor Classification: ARS I |

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| I certify that this duty statement represents an accurate description of the essential functions of this position. |
| Supervisor: | Date:  |

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| I have read this duty statement and agree that it represents the duties I am assigned. |
| Employee: | Date: |

# SPECIAL REQUIREMENTS OF POSITION (IF ANY):

[x]  Designated under Conflict of Interest Code.

[ ]  Duties performed may require pre-employment physical.

[ ]  Duties performed may require drug testing.

[ ]  Duties require participation in the DMV Pull Notice Program.

[ ]  Requires the utilization of a 32-pound self-contained breathing apparatus.

[ ]  Operates heavy motorized vehicles.

[ ]  Requires repetitive movement of heavy objects.

[ ]  Works at elevated heights or near fast moving machinery or traffic.

[ ]  Performs other duties requiring high physical demand. (Explain below):

[ ]  Duties require use of hearing protection and annual hearing examinations.

# SUPERVISION EXERCISED

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| [x]  None | [ ]  Lead Person |
| [ ]  Supervisor | [ ]  Team Leader |

FOR SUPERVISORY POSITIONS ONLY: Indicate the number of positions by classification that this position DIRECTLY supervises: N/A

Total number of positions in Section/Branch/Office for which this position is responsible:

FOR LEADPERSONS OR TEAM LEADERS ONLY:

Indicate the number of positions by classification that this position LEADS: N/A

MISSION OF SECTION: The Regional Air Quality Modeling Section: 1) performs state-of-the-science meteorology and air-quality modeling required for control strategy evaluations, transport assessment, and State Implementation Plan updates for all criteria pollutants and regional haze; 2) provides modeling support for all major field studies conducted in California; 3) conducts technical reviews of modeling results produced by other agencies and consultants; 4) provides technical consultations for other sections of ARB; and 5) act as the ARB's technical liaison for regional and national air-quality management organizations.

CONCEPT OF POSITION: Under general direction, the incumbent performs the more responsible, varied, and complex air quality modeling work related to model development and application, testing of new chemical mechanisms for ozone, particulate matter and visibility, and provides data analysis to support the design of field studies to collect data for grid-based models. Specific duties include:

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| **% OF TIME** | **RESPONSIBILITIES OF POSITION** |
| 25% - E | Using scientific knowledge and principles, prepare inputs and conduct global chemical transport modeling to support statewide regional photochemical modeling for use in the development of State Implementation Plans (SIPs) and other regulatory studies. Derive boundary conditions for regional photochemical modeling from global chemical transport models and investigate the impact of global sources on California’s air quality. Provide modeling work to support field campaigns and study air pollution events in California. |
| 25% - E | Conduct model evaluation to compare model output with data collected through the routine monitoring network, field studies and satellite data products. Improve model performance through new and innovative approaches. Develop methods for evaluating the ability of a photochemical model to simulate the observed change in pollutant concentration over time; including recommendations on how to update/improve the emissions inventory, chemical mechanism, and meteorology used in the simulations. |
| 25% - E | Implement new chemical mechanisms in photochemical models and design inter-comparison modeling studies for evaluating these new chemical mechanisms. Investigate the role of chemical processes in determining chemical regimes in the atmosphere for different regions. Keep up to date on the latest developments in atmospheric chemistry and chemical mechanism development. |
| 15% - E | Assist in the quality assurance of air quality data, preparation of gridded emissions inventories and other model inputs. Participate in research activities related to air quality modeling and atmospheric chemistry. This includes participating in the design of research projects, providing comments on research reports, and managing research contracts. |
| 10% - M | Prepare technical reports and peer-reviewed journal articles on air quality modeling studies.  |