

**DEVELOPMENT OF A COMPREHENSIVE AIR POLLUTION PHOTOCHEMICAL MODELING  
SYSTEM FOR THE SAN  
FRANCISCO, CALIFORNIA REGIONAL AREA**

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The goal of the project is to provide a complete photochemical modeling and analysis system for use in the development of pollution planning for ground level ozone, with future capabilities for similar support for PM<sub>2.5</sub> management. ENVIRON International Corporation is working with the San Francisco Bay Area Air Quality Management District in the effort. The major components of this project are: a modeling protocol, acceptable meteorological and photochemical model simulations of three ozone episodes, performance evaluations of these simulations, acceptable estimate of future year emissions inventories, ozone simulations for future years, analysis of the sensitivity of the future year modeled ozone to changes in emissions of the oxides of nitrogen and hydrocarbons in the form of an O<sub>3</sub> (NO<sub>x</sub>, HC) sensitivity diagram for selected sites, and a demonstration of the collective effect of alternative emissions controls upon future ambient ozone levels. This modeling system will consist of a computing system, an emissions model, a prognostic meteorological model and a grid-based photochemical model used in the work described above, including appropriate interconnections and analysis tools. Specific project tasks include: (1) Develop Modeling Protocol; (2) Acquire Computer System; (3) Simulate Meteorological Conditions; (4) Produce Emission Inputs for Years 2000 and Future Years; (5) Simulate Ozone and Evaluate Photochemical Model Performance; (6) Simulate Future Ozone and Examine its Sensitivity to Emissions; (7) Simulate Year Future Emissions Control Strategies; and (8) Technology Transfer of Computer and Modeling System.