

upper limit predictions of air pollution potential or air quality cannot be a substitute for controls of air contamination at the source of emission. At times the atmosphere has a diluting ability which is as high as 1,000 times greater than at other times. Therefore the ability to predict with a high degree of confidence can make a significant contribution to the amelioration of air pollution problems. Given a satisfactory mathematical model, forecasts of meteorological parameters can be used to delineate the expected spatial extent and duration of critical concentrations of significant pollutants in a community and to forestall the occurrence of "critical" concentrations by alerting the proper control authority to the potential hazard to permit the early reduction or prevention of pollution by selected techniques before undesirable air quality levels are attained.

BIBLIOGRAPHY

- Boettger, C. M., 1961: Air pollution potential east of the Rocky Mountains—Fall 1959. *Bulletin, American Meteorological Society*, 42, 615-620.
- Holzworth, G. C., 1962: A study of air pollution potential for the Western United States. *Journal of Applied Meteorology*, 1, 366-382.
- Holzworth, G. C., 1964: Estimates of mean maximum mixing depths in the contiguous United States. *Monthly Weather Review*, 92, 235-242.
- Holzworth, G. C., 1965: A note on surface wind speed observations. *Monthly Weather Review*, 93, 323-326.
- Hosler, C. R., 1961: Low-level inversion frequency in the contiguous United States. *Monthly Weather Review*, 89, 319-339.
- Hosler, C. R., 1964: Climatological estimates of diffusion conditions in the United States. *Nuclear Safety*, 5, 184-192.
- Korshover, J., 1960: Synoptic climatology of stagnating anticyclones east of the Rocky Mountains in the United States for the period 1936-1956. Technical Report A60-7, U.S. Public Health Service, R. A. Taft Sanitary Engineering Center, Cincinnati, Ohio.
- Lynn, D. A., B. J. Steigerwald, and J. H. Ludwig, 1964: The November-December 1962 air pollution episode in the Eastern United States. Public Health Service Publication No. 999-AP-7; 29 pp.
- Miller, M. E., and L. E. Niemeyer, 1963: Air pollution potential forecasts—a year's experience. *Journal Air Pollution Control Association*, 13, 205-210.
- Miller, M. E., 1964: Semi-objective forecasting of atmospheric stagnation in the Western United States. *Monthly Weather Review*, 92, 23-32.
- Miller, M. E., and G. C. Holzworth, 1966: An atmospheric diffusion model for metropolitan areas. Presented at the 59th Annual Meeting, Air Pollution Control Association, San Francisco, California; June 20-24, 1966.
- Niemeyer, L. E., 1960: Forecasting air pollution potential. *Monthly Weather Review*, 88, 88-96.

GRANT-SUPPORTED RESEARCH

The following research grants currently in progress are concerned with early warning and air pollution forecasting:

Ben Davidson, New York University, "Mathematical Models of Urban Air Pollution Dynamics." The aim of this project is to develop and verify numerical models of diffusion which can predict urban air pollution levels on a time scale of an hour and on a space scale of several miles. These models will be capable of application to any city but will be verified specifically for New York City. These models require an input data specification of source strength and meteorological conditions consistent with the time and space scale of the model. The research covers investigation of the source and meteorological conditions in the New York City area as well as meas-