
Introduction

This report presents the results of air quality monitoring conducted in 1999 throughout Arizona. These data represent more than one hundred monitoring sites, many of which have multiple instruments measuring a variety of gaseous, particulate and visibility parameters. The majority of the air quality measurements are for traditional pollutants (ozone, particulate matter, sulfur dioxide, carbon monoxide, nitrogen dioxide and lead) for which EPA has established National Ambient Air Quality Standards (NAAQS). Visibility-related measurements are an increasing part of air monitoring activities in Arizona. In addition to the ADEQ monitoring network, Maricopa County, Pima County and Pinal County air quality agencies also operated networks, as did several industrial facilities. Their data are summarized in this report.

Chapter 1 of the report discusses the purpose, measurement methods, and the specific scale of geographic resolution of the various air monitoring networks in Arizona. A new monitoring program for collecting data on ozone precursors is introduced.

Chapter 2 summarizes the monitoring data and shows the compliance status for criteria pollutants. The three sections of this part are measurement of traditional criteria pollutants, compliance status of the criteria pollutants and visibility characterization. The text describes how the measurements are made and how they relate to compliance with the NAAQS.

Chapter 3 summarizes activities from special monitoring projects. The projects that will be presented in this section of the report are an expanding Class I visibility monitoring network for larger national parks and wilderness areas, an ongoing PM₁₀ study centered on the Greenwood monitoring site, and a new and expanding effort to characterize ozone precursors.

Chapter 4 reports air quality trends. Concentrations of carbon monoxide, lead and sulfur dioxide have dramatically improved since measurements began in the 1970s, and all monitors for these pollutants have shown compliance with their health standards in recent years. Particulate matter concentrations have improved in rural and industrial areas where controls have been implemented, while less dramatic improvements have occurred in Phoenix and Tucson. Ozone concentrations have been fairly steady in Phoenix, Tucson and Yuma and Phoenix is the only area where violations of the ozone standard have been recorded, although concentrations have fallen significantly, and no exceedances have been recorded since 1997. Shorter recording periods for visibility in urban and national parks/wilderness areas make trend assessments less definitive, but assessments are shown for the two urban areas.

The supplement includes tables and maps describing where and why monitoring is conducted.
