

Abstract

The purpose of this study was to use a portable aerosol monitor as a preliminary screening tool to identify local sources of coarse ($PM_{10-2.5}$) and fine ($PM_{2.5}$) particulate matter within the Coachella Valley, a low-elevation desert community. The portable aerosol monitor proved to be useful in identifying particle sources unique to the region, namely, sand dunes with sparse ground cover (vegetation), a river wash, and diesel truck and freight train traffic. The general limitations relate to discrepancies in the fraction of $PM_{10-2.5}$ when compared to regional air quality data and a lack of accurate mass-based data.