Appendix C
Correlated PM_{10} Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds[1] and PM_{10} concentrations at select monitoring sites within the Salton Sea Air Basin on January 31, 2016 and February 1, 2016. See **Figure 2-8** or **Figure B-1** for location of sites. Note that wind speed measurements may be taken at any time during the hour. Therefore, the following graphs reflect only the hour in which wind measurements were taken, and not necessarily the exact time. Air quality concentration data in all graphs from the EPA's AQs data bank.

IMPERIAL COUNTY SITES
(Figures C-1 to C-5)

FIGURE C-1
BRAWLEY
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

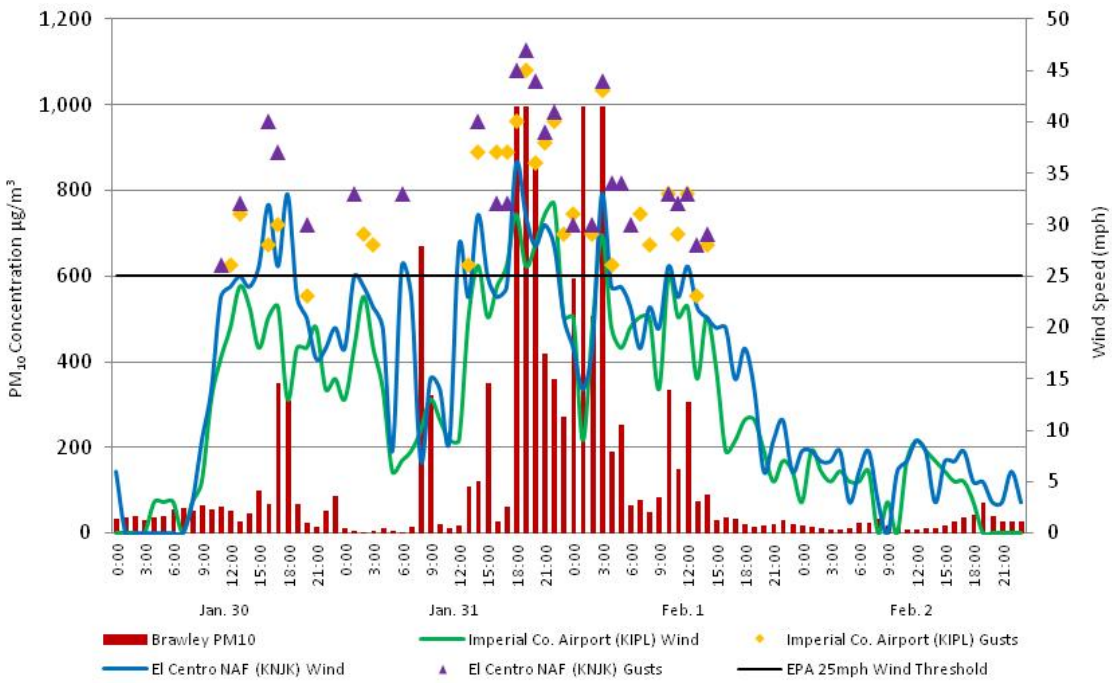


Fig C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, and particularly gusts, at Imperial County Airport (KIPL) and El Centro NAF (KNJKL). Brawley station does not measure wind. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system

[1] National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall)[http://w1.weather.gov/glossary/index.php?letter=w]

FIGURE C-2
WESTMORLAND
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

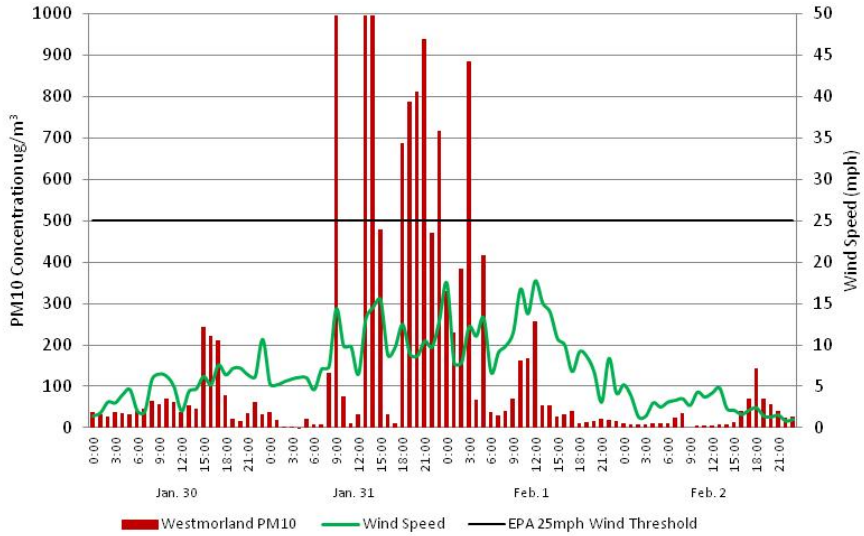


Fig C-2: Winds at Westmorland were not as high as at Niland (English Rd) or the more open areas of El Centro NAF and Imperial County Airport. The lesser wind speeds allowed for greater deposition of dust on the monitor, and as a result it had a higher 24-hour average than either the Brawley or Niland FEM monitors. Air quality and wind data from the EPA's AQS data bank

FIGURE C-3
NILAND (ENGLISH RD)
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

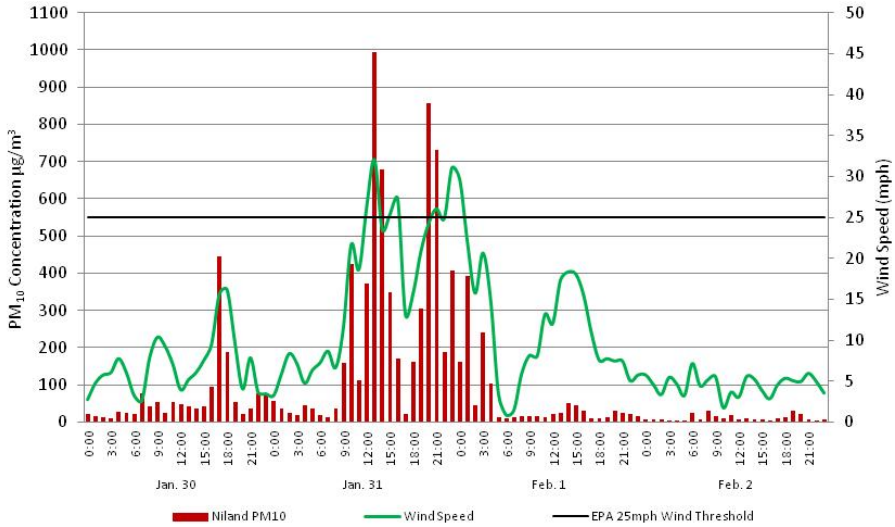


Fig C-3: Winds at Niland surpassed the 25 mph threshold. Although the station was farther north than Brawley or Westmorland, this allowed the suspended dust to reach the monitor. Air quality and wind data from the EPA's AQS data bank

FIGURE C-4
EL CENTRO (9TH ST)
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

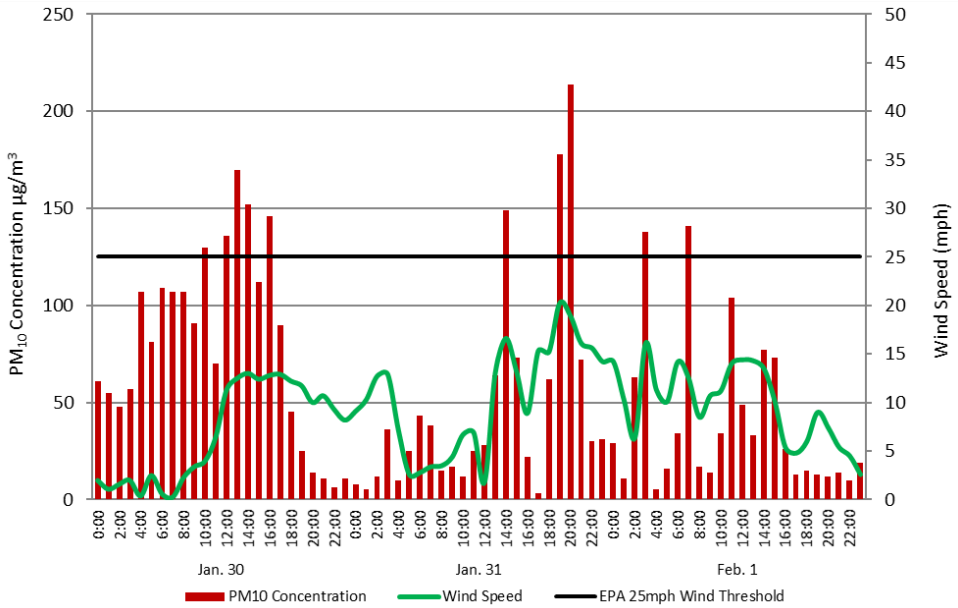


Fig C-4: Concentrations at El Centro (9th St) did rise in response to an uptick in winds during January 31, 2016 and February 1, 2016, but the station did not exceed. Air quality and wind data from the EPA's AQS data bank

FIGURE C-5
CALEXICO (ETHEL ST)
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

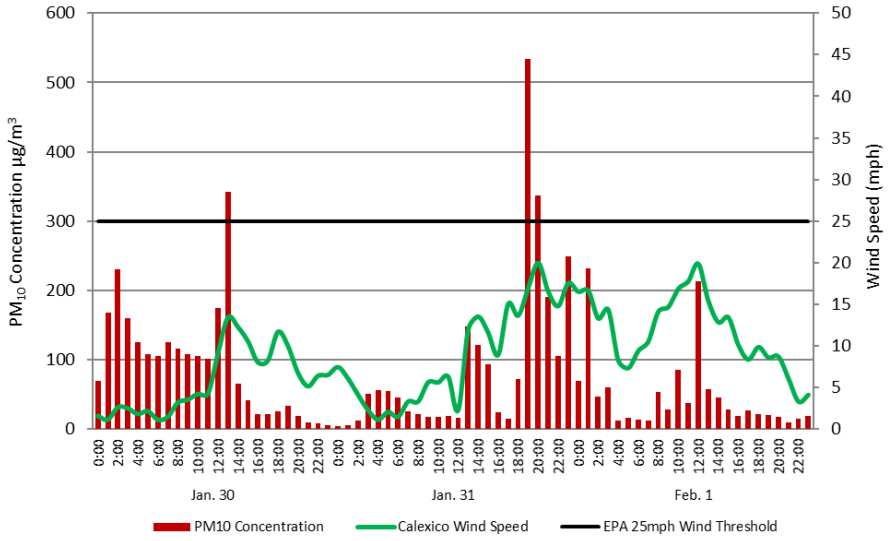


Fig C-5: Concentrations at El Centro Calexico did rise in response to an uptick in winds during the afternoon of January 31, 2016 and February 1, 2016, but the station did not exceed. Air quality and wind data from the EPA's AQS data bank

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ TRIBAL
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

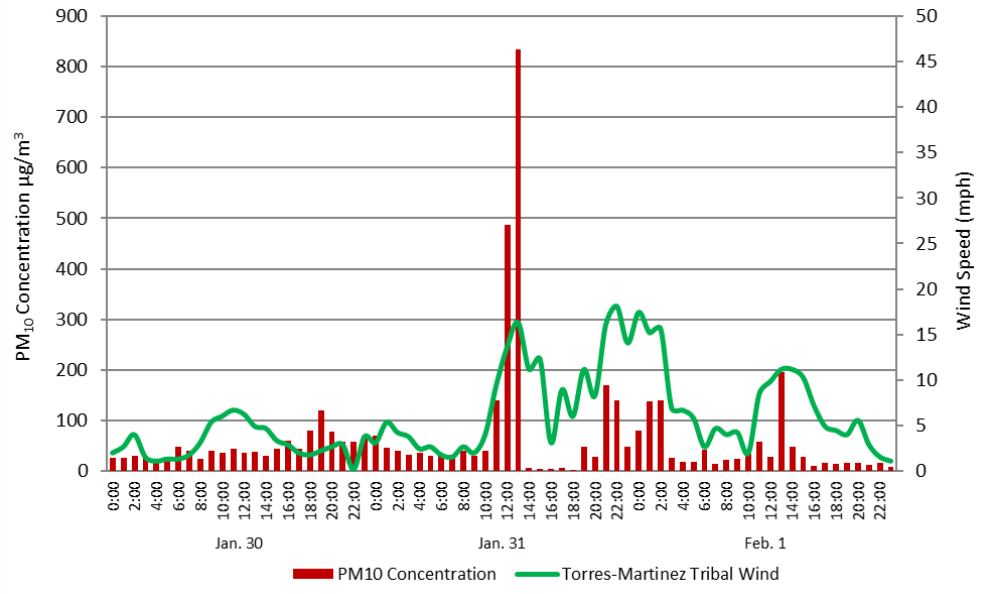


FIGURE C-7
INDIO (JACKSON ST)
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

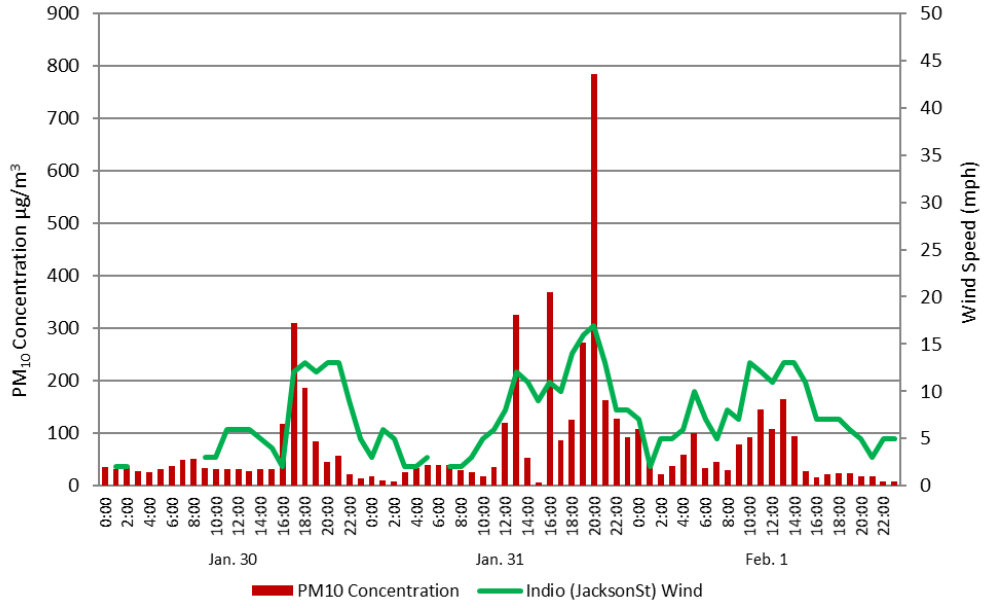
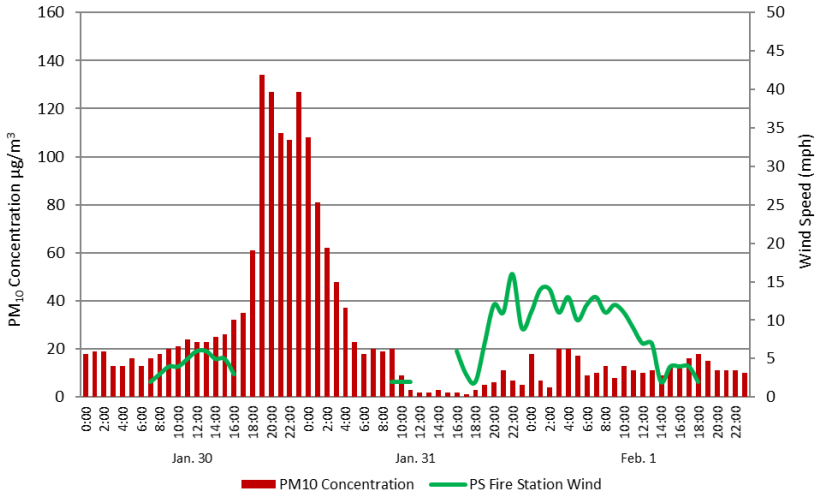


FIGURE C-8
PALM SPRINGS FIRE STATION
PM_{10} CONCENTRATION & WIND SPEED CORRELATION



Figs C-6 through C-8: All monitoring sites in eastern Riverside County displayed a similar correlation between increased wind speeds and gusts, and an increase in PM_{10} levels. Torres-Martinez Tribal wind data from the EPA's AQS data bank. Palm Springs Fire Station and Indio wind data is from AQMIS

SOUTHWESTERN ARIZONA

FIGURE C-9
YUMA, ARIZONA SUPERSITE
PM_{10} CONCENTRATION & WIND SPEED CORRELATION

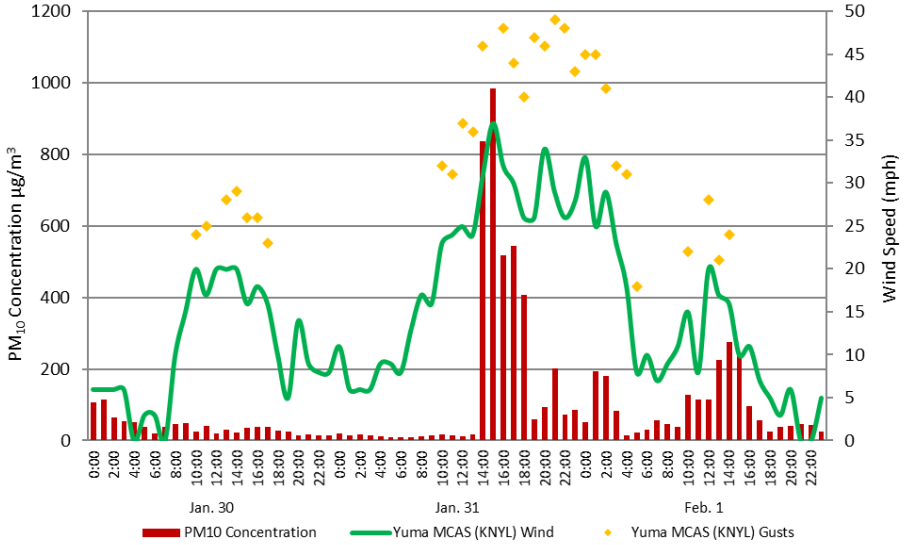


Fig C-9: Yuma Supersite in Yuma, Arizona, located downstream in the southwestern portion of Arizona, saw corresponding increases in particulate matter as wind speed increased during the day. Wind data from the NCEI's QCLCD system