

## **7.0 Santa Rosa Band of Mountain Cahuilla Indians Technical Support Document**

The following chapter contains the technical support document for the 24-hour PM<sub>2.5</sub> NAAQS designations for the Santa Rosa Band of Mountain Cahuilla Indians.

### **EPA Technical Analysis for the Santa Rosa Band of Mountain Cahuilla Indians**

Pursuant to section 107(d) of the Clean Air Act, following the promulgation of a new or revised national ambient air quality standard (NAAQS) for any pollutant under section 109 of the Clean Air Act, EPA must designate areas as nonattainment, attainment or unclassifiable for that pollutant. EPA has re-evaluated the intended nonattainment designation for the 2006 24-hour fine particle (PM<sub>2.5</sub>) NAAQS for the lands of the Santa Rosa Band of Mountain Cahuilla Indians that are located in that part of Riverside County, California, currently designated as nonattainment for the 1997 PM<sub>2.5</sub> NAAQS. As a result of this re-evaluation, in response to the Tribe's recommended designation of attainment, EPA is designating all of the lands of the Santa Rosa Band of Mountain Cahuilla Indians, including those located in that part of Riverside County, California, that are in the existing 1997 PM<sub>2.5</sub> nonattainment areas, as attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA has based this decision on the weight of evidence of the following nine factors recommended in EPA guidance and any other relevant information:

- pollutant emissions
- air quality data
- population density and degree of urbanization
- traffic and commuting patterns
- growth
- meteorology
- geography and topography
- jurisdictional boundaries
- level of control of emissions sources

Figure 1 is a map of the Santa Rosa Band of Mountain Cahuilla Indians Reservation and its location within the State of California, plus other relevant information.

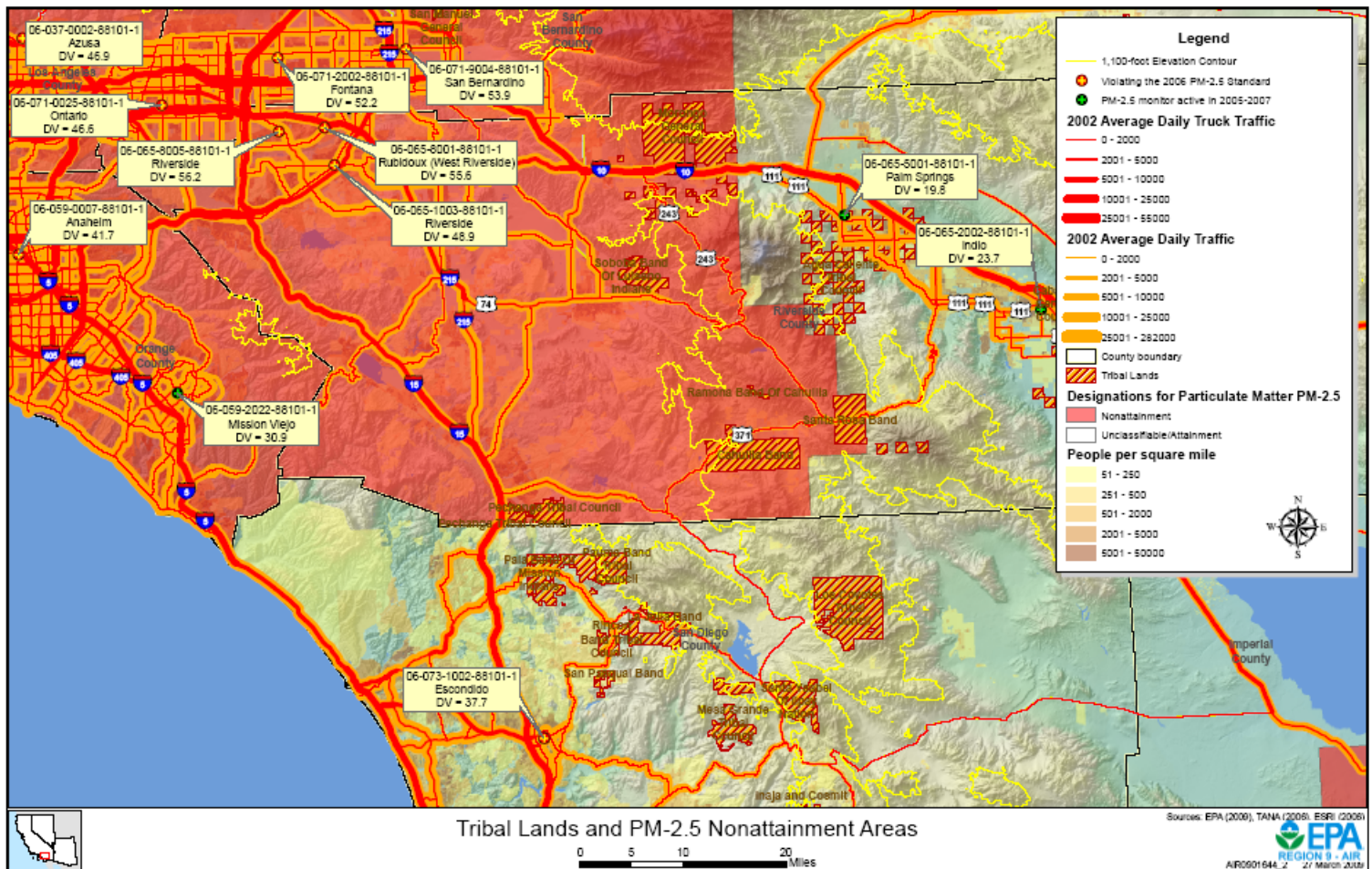


Figure 1

For this area, EPA previously established PM<sub>2.5</sub> nonattainment boundaries for the 1997 PM<sub>2.5</sub> NAAQS that included the entire South Coast Air Quality Management District including the Santa Rosa Band of Band of Mountain Cahuilla Indians Reservation.

Based on EPA's 9-factor analysis, described below, which contains currently available information, EPA is designating the lands of the Santa Rosa Band of Mountain Cahuilla Indians as unclassifiable/attainment for the 2006 24-hour PM<sub>2.5</sub> standards. Based on EPA's technical analysis, this area does not cause or contribute to the violations of the 2006 24-hour PM<sub>2.5</sub> standards.

The following is a summary of the 9-factor analysis for the Santa Rosa Band of Mountain Cahuilla Indians Reservation.

**Factor 1: Emissions data**

While the Tribe does not monitor or maintain an emissions inventory, there are no significant sources of PM<sub>2.5</sub> on the reservation. Minimal power generation sources situated atop Toro Peak, and operated in connection with certain low amperage radio and antennae transmission devices, are the only industrial sources of PM<sub>2.5</sub>. Other potential sources of PM<sub>2.5</sub> are limited to wood smoke and/or emissions from mobile sources. In light of the fact that only sixty-seven Tribal Members reside on the 11,000 acre reservation, such emissions are minimal in both frequency and volume.

EPA has evaluated the information presented by the tribe and concurs that there are no significant sources of PM<sub>2.5</sub> on the Reservation. EPA also concurs that the contribution from area sources will be small based on the small population of the Reservation. EPA therefore believes that the potential sources of PM<sub>2.5</sub> are very limited and unlikely to cause or contribute to violations of the 2006 24-hour PM<sub>2.5</sub> standards.

**Factor 2: Air quality data**

There are no PM<sub>2.5</sub> monitors situated on the Santa Rosa Band of Mountain Cahuilla Indians Reservation. There are violating monitors maintained within the South Coast PM<sub>2.5</sub> nonattainment area, and these are located in Los Angeles and San Bernardino Counties, approximately 41 miles from the Santa Rosa Reservation. There is an additional monitor in Orange County located 50 miles from the Reservation, which is not violating. Given the large distance involved, as well as the characteristics of the surrounding environment where these monitors are located, none are indicative of the air quality of the Reservation. Due to the distance involved, unique topography and meteorological conditions, those measurements are not representative of air quality on the Santa Rosa Reservation.

EPA has reviewed the air quality data for the area and concurs that there are not measured violations of the PM<sub>2.5</sub> NAAQS at or near the Santa Rosa Band of Mountain Cahuilla Indians Reservation. However, this information does not provide conclusive evidence of the absence or existence of contribution to elevated PM<sub>2.5</sub> levels in the South Coast PM<sub>2.5</sub> nonattainment area. The contribution of the Santa Rosa Band of Mountain Cahuilla Indians Reservation to the nearby and violating monitors in the nonattainment area is discussed further in Factor 6, below.

**Factor 3: Population density and degree of urbanization (including commercial development)**

Approximately 67 full-time residents live on the 11,000 acres comprising the Santa Rosa Reservation. All of the Reservation's current land use is agricultural because it is used as open range land for cattle grazing. There are no cattle feedlots or crop agriculture on the reservation.

Due to the small population size and low population density at the Santa Rosa Reservation, EPA believes that the tribe is not likely to cause or contribute to a violation of the 2006 24-hour PM<sub>2.5</sub> NAAQS.

#### **Factor 4: Traffic and commuting patterns**

One major highway, US 371, runs through the reservation. Truck traffic on that highway is estimated to be a maximum of 2,000 trucks per day. Average daily vehicle traffic is estimated to be between 2001 and 5000 vehicles per day. This level of vehicle traffic is very low and an insignificant part of overall vehicular traffic within the South Coast Air Quality Management District, and its urbanized areas. Based on traffic and commuting patterns as shown by these statistics, it is unlikely that emissions from these vehicles have any impact on air quality in the South Coast Air Quality Management District.

EPA has evaluated the motor vehicle traffic estimate and concurs that the average vehicle traffic is limited, and together with factor 3, support that there is not a substantial commuting pattern to the South Coast Air Basin.

#### **Factor 5: Growth rates and patterns**

The Santa Rosa Reservation is relatively remote and sparsely populated. Historically, there has been little demand for development, and it is expected that this trend will continue. Presently, there are no pending or contemplated plans for development in this area or upon the Reservation.

EPA has evaluated this information and concurs that future growth is not likely to increase emissions. EPA therefore concludes that future growth on the Santa Rosa Band of Mountain Cahuilla Indians Reservation is unlikely to cause or contribute to a violation of the PM<sub>2.5</sub> standards.

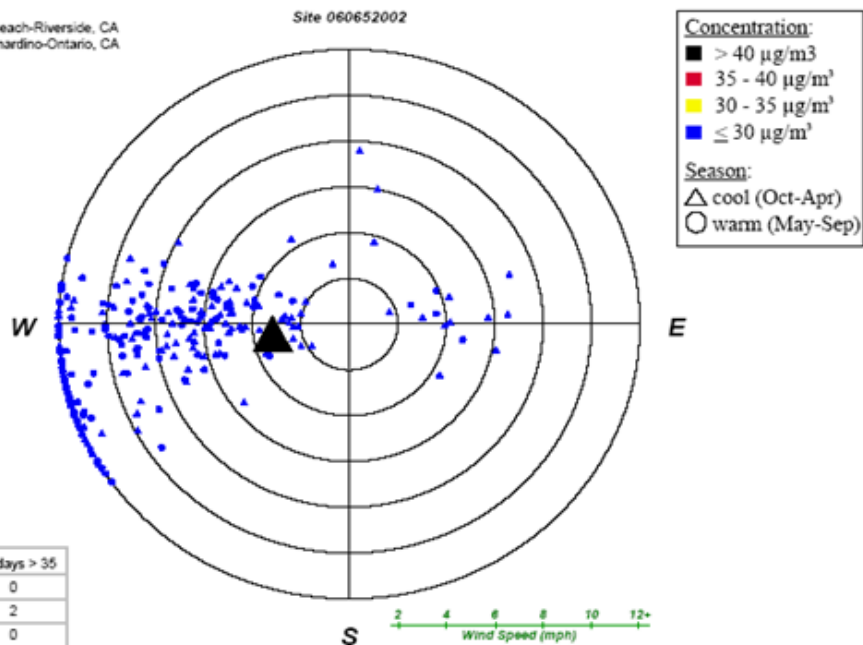
#### **Factor 6: Meteorology (weather/transport patterns)**

The pollution roses for the nearest two monitoring sites in Riverside County indicate that the Santa Rosa Band of Mountain Cahuilla Indians Reservation is unlikely to contribute to elevated levels of PM<sub>2.5</sub>. The pollution roses for the nearest two monitoring sites, Indio (060652002) and Palm Springs (060655001) in Riverside County are shown below. The monitor for Indio reflects no periods of elevated levels of PM<sub>2.5</sub>. The monitor for Palm Springs depicts only a single day where measured PM<sub>2.5</sub> levels exceeded 35 µg/m<sup>3</sup>. On that date, the wind direction was primarily from the west, and it is unlikely that the Santa Rosa Reservation contributed to the elevated levels of PM<sub>2.5</sub> for this monitor on this day.

Riverside County, CA  
Pollution Rose, 2004-2006

Not in an existing NAA  
CSA: Los Angeles-Long Beach-Riverside, CA  
CBSA: Riverside-San Bernardino-Ontario, CA

Site 060652002



Year	98th %ile	# days > 35
2004	26.8	0
2005	25.0	2
2006	19.0	0
Design Value	24-A	

1 exceedance(s) not plotted  
(due to missing or Variable wind data)

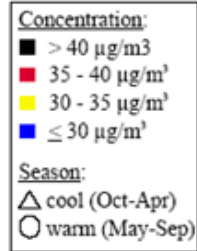
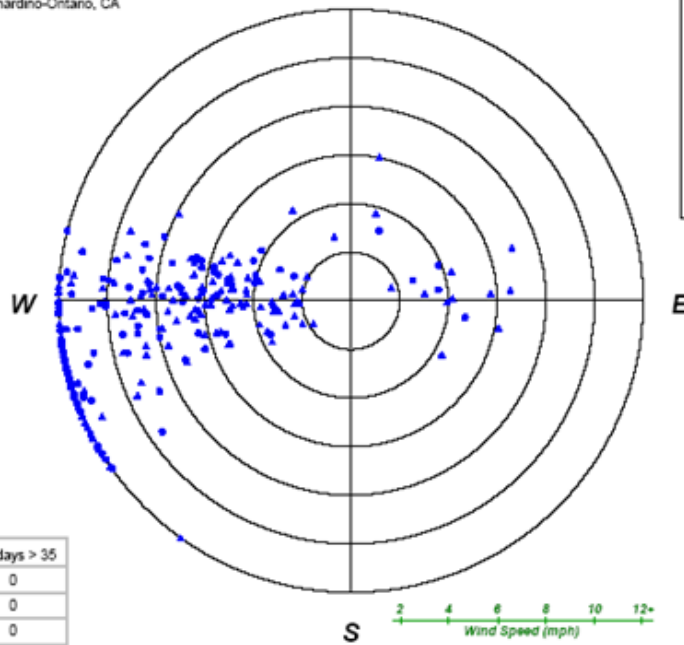
Metereological data from 86.4 miles away  
DAGGETT\_BARSTOW-DAGGETT\_AP (ID=23181)

located 19 miles Los Angeles-South Coast Air

Riverside County, CA  
Pollution Rose, 2004-2006

Not in an existing NAA  
CSA: Los Angeles-Long Beach-Riverside, CA  
CBSA: Riverside-San Bernardino-Ontario, CA

Site 060655001



Year	98th %-ile	# days > 35
2004	23.3	0
2005	25.0	0
2006	15.8	0
Design Value	21-a	

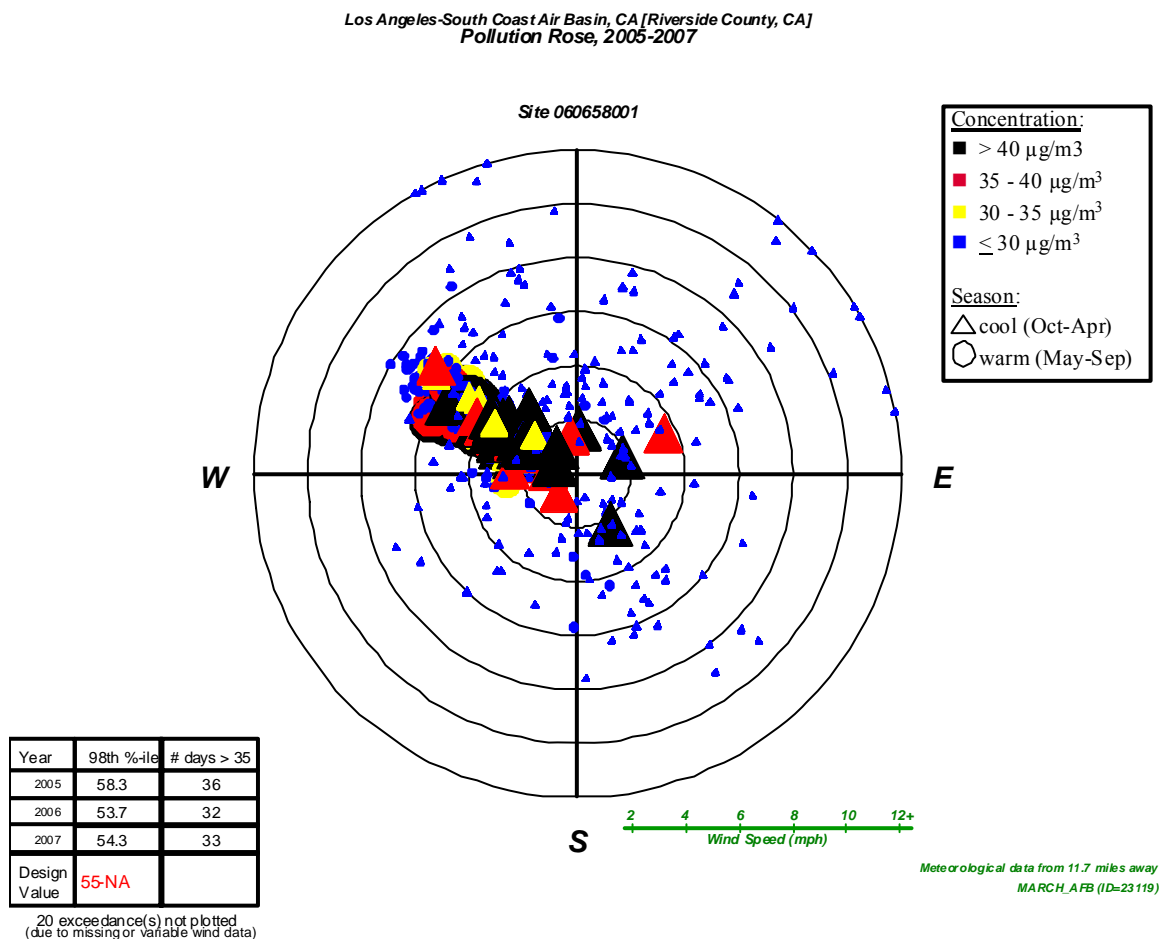
No exceedances

Meteorological data from 71.4 miles away  
DAGGETT\_BARSTOW-DAGGETT\_AP (ID=23161)

located inland Los Angeles-South Coast Air

In addition, EPA has reviewed the pollution rose at the Rubidoux (West Riverside) monitor, shown below. The Santa Rosa Band of Mountain Cahuilla Indians Reservation is located to the southeast of the Rubidoux monitoring site. For the years 2005-2007, 101 values above 35  $\mu\text{g}/\text{m}^3$  were measured, and 81 are displayed on the pollution rose below. Of the 81 days above the level of 35  $\mu\text{g}/\text{m}^3$ , one day occurs when the wind is from the southeast, in the direction of the Santa Rosa Band of Mountain Cahuilla Indians Reservation. The majority of the days with elevated  $\text{PM}_{2.5}$  are when the wind is from the northwest.

EPA has evaluated  $\text{PM}_{2.5}$  pollution roses at the two nearest monitors to the Santa Rosa Band of Mountain Cahuilla Indians Reservation, as well as the Rubidoux monitoring site. EPA has evaluated this information and determined that the Santa Rosa Band of Mountain Cahuilla Indians Reservation does not cause or contribute to a violation of the 2006 24-hour  $\text{PM}_{2.5}$  NAAQS in the South Coast  $\text{PM}_{2.5}$  non-attainment area.



**Factor 7: Geography/topography (mountain ranges or other air basin boundaries)**

The reservation of the Santa Rosa Mountain Band of Mountain Cahuilla Indians consists of a land base of approximately 11,000 acres, and spans an elevation ranging from 4000 ft. to nearly 9000 ft. The Reservation is divided into four land parcels, one part is located in the southeastern boundary of the South Coast PM<sub>2.5</sub> nonattainment area in Riverside County and the other three parcels are located in that part of Riverside County that is in attainment for the 1997 PM<sub>2.5</sub> NAAQS.

The Reservation is bounded on the northwest by the Cahuilla Mountains and by Beauty Mountain to the southeast. The majority on the reservation is uninhabited, as is the rather substantial adjacent acreage maintained by the Department of Forestry and the Bureau of Land Management. The city of Hemet is located in southwestern Riverside County, and is located in the San Jacinto Valley. Hemet is south of the city of San Jacinto, and located near the base of the San Jacinto Mountains. The valley is surrounded by the Santa Ana Hills and San Jacinto Mountains, and is mostly dry land, except for Diamond Valley Lake to the south of Hemet.

EPA has evaluated the geography/topography information for the Reservation of Santa Rosa Mountain Band of Mountain Cahuilla Indians. EPA believes that the high elevation of the reservation (4000-9000 ft.), as well as the meteorology, discussed in factor 6, above, supports the conclusion that the Reservation of Santa Rosa Mountain Band of Mountain Cahuilla Indians is not likely to cause or contribute to a violation of the 2006 24-hour PM<sub>2.5</sub> standards.

**Factor 8: Jurisdictional boundaries (e.g., existing PM and ozone areas)**

Part of the lands of the Santa Rosa Mountain Band of Mountain Cahuilla Indians are located within the South Coast Air Quality Management District (SCAQMD), which has been designated by the U.S. EPA as nonattainment for the 2006 PM<sub>2.5</sub> NAAQS. The SCAQMD encompasses all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. However, the Santa Rosa Band of Mountain Cahuilla Indians is a sovereign nation and a federally recognized Indian Tribe, governed by a majority vote of all adult members, meeting as a General Council. As such, the Tribe can recommend a PM<sub>2.5</sub> designation for tribal lands over which it has jurisdiction. The Tribe recommends a designation of attainment/unclassifiable for the entire reservation, including that portion of the reservation historically included in the South Coast Basin.

EPA had previously designated the South Coast Air Quality Management District (SCAQMD), including part of the Santa Rosa Mountain Band of Cahuilla Indians Reservation as nonattainment for the 1997 PM<sub>2.5</sub> standards. EPA concurs with the tribe, that based on an evaluation of the information presented above, that a designation of attainment/unclassifiable for the entire reservation, including that portion of the reservation historically included in the South Coast Basin is appropriate for the 2006 24-hour PM<sub>2.5</sub> standards.

**Factor 9: Level of control of emission sources**

There are no major sources of PM<sub>2.5</sub> on the Santa Rosa Reservation, so this factor is not a consideration for the Tribe.

EPA has evaluated that emission inventory and concurs that based on the lack of major sources, this factor is not a consideration for the Tribe.

**Conclusion**

Based on EPA's 9-factor analysis that contains currently available information, EPA believes that the Santa Rosa Band of Mountain Cahuilla Indians Reservation should be designated unclassifiable/attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA's evaluation of this information confirms that it is not likely that emissions from the Santa Rosa Band of Mountain Cahuilla Indians Reservation cause or contribute to violations of the 2006 24-hour PM<sub>2.5</sub> NAAQS in the South Coast Air Basin.