

4.0 Analyses of Individual Nonattainment Area

4.9 Region 9 Nonattainment Areas

4.9.3 Pechanga Band of Luiseno Mission Indians Reservation

Pechanga Band of Luiseno Mission Indians Reservation Area Designations For the 24-Hour Fine Particle National Ambient Air Quality Standard

EPA Technical Analysis for Pechanga Band of Luiseno Mission Indians Reservation

Pursuant to section 107(d) of the Clean Air Act, EPA must designate as nonattainment those areas that violate the NAAQS and those areas that contribute to violations. EPA has evaluated the recommendation of the Pechanga Band of Luiseno Mission Indians Reservation (Pechanga Reservation) based 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

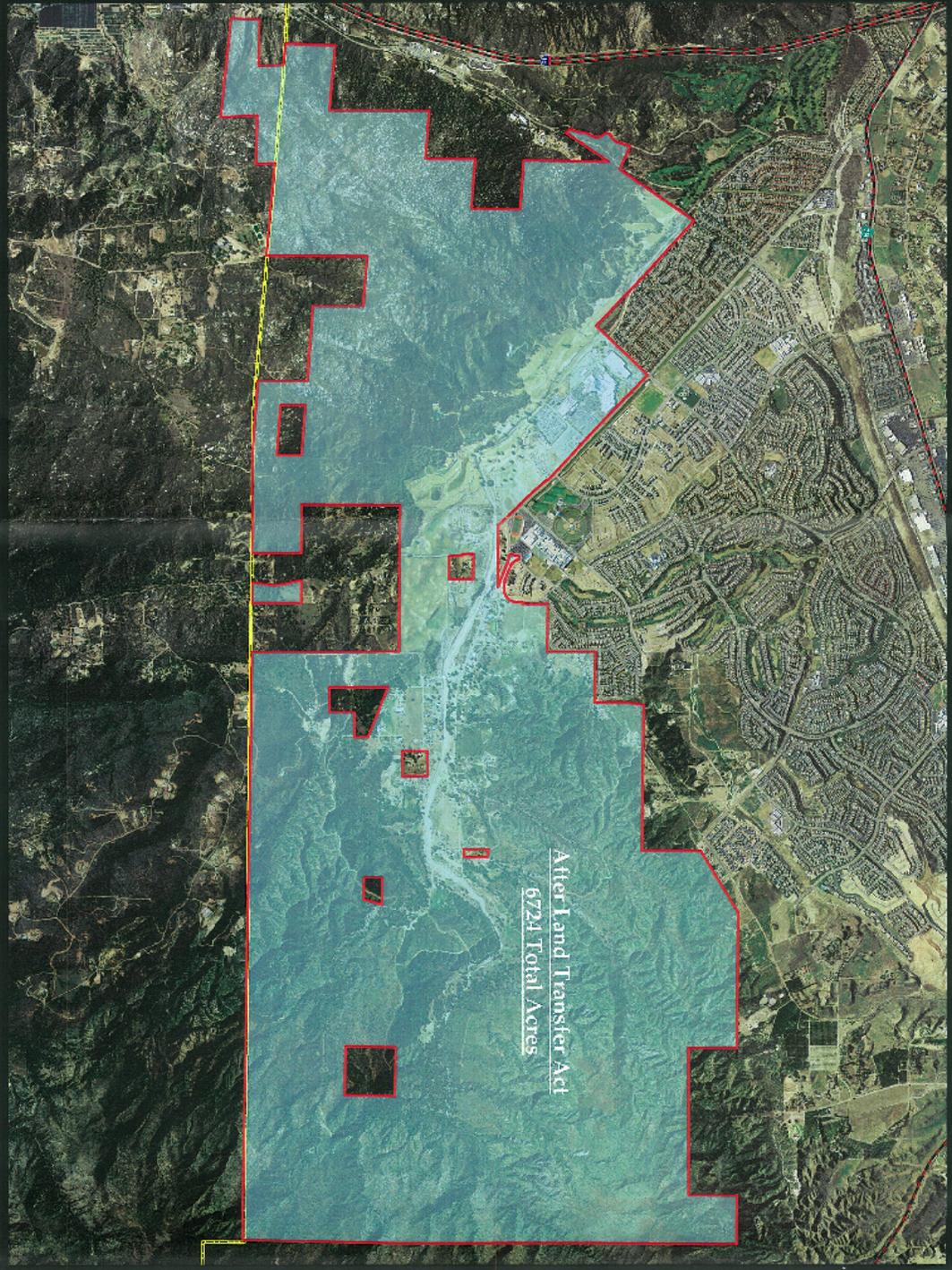
Figure 1 is a map of the Pechanga Indian Reservation and its location within the State of California, plus other relevant information.

Pechanga Indian Reservation & BLM Lands Transfer Act

- Pechanga Indian Reservation
- County Boundary
- Highways



MapArea



Pechanga Tribal Government
GIS Department

Map Date: 08/2018
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For this area, EPA previously established PM_{2.5} nonattainment boundaries for the 1997 PM_{2.5} NAAQS that included the entire South Coast Air Quality Management District which encompasses the Pechanga Reservation. EPA has made designations for the 2006 24-hour PM_{2.5} standard. We reviewed the tribe's request for this standard only.

On December 17, 2007, EPA Region 9 received a letter from Mark Macarro, the Tribal Chairman of the Pechanga Band of Luiseno Mission Indians. Chairman Macarro recommended that the air quality management area within the Pechanga Reservation's exterior boundaries be designated as unclassifiable for the annual and 24-hour standards for PM_{2.5}. His letter provided several factors for EPA's consideration. (Letter from Chairman Mark Macarro to Wayne Nastri, Regional Administrator, December 17, 2007)

Based on EPA's technical analysis described below, EPA believes that the Pechanga Indian Reservation should be designated nonattainment for the 2006 24-hour PM_{2.5} air-quality standard, based upon currently available information. It appears that the tribe is impacted by the poor air quality that exists within the South Coast Air Quality Management District.

The following is a summary of the technical analysis for the Pechanga Indian Reservation. EPA has included the information provided by the Pechanga Tribe in their letter as well as other relevant information as appropriate.

Factor 1: Emissions data

In 2005, the Pechanga Environmental Department conducted an emissions inventory for the areas within the exterior boundaries of the Pechanga Indian Reservation. The assessment focused on providing a baseline estimate of existing air pollution sources, collecting and evaluating current and historical meteorological and air quality information, identifying gaps in available information, and assessing whether additional monitoring is necessary. Overall estimates of emissions were derived from the Tribal Emissions Inventory Software Solution computer program based on US EPA's document "AP-42: Compilation of Air Pollution Emission Factors."

While the Tribe is assessing emissions data for their sources, they did not provide any emissions data to EPA at this time. The major sources on the Reservation are the casino, and operations related to this tourist destination, including visitor traffic.

Factor 2: Air quality data

The Pechanga Tribe states in their December 2007 letter that there is insufficient information to determine if the airshed within the exterior boundaries of the Reservation is in nonattainment for PM_{2.5}. The nearest PM_{2.5} monitor in Riverside County is in the City of Riverside, 42 miles north. The nearest PM_{2.5} monitor in San Diego County is in the City of Escondido, located about 35 miles south. The Tribe stated that neither monitor was representative of air quality on the Pechanga Reservation due to unique topography and complex meteorological conditions.

The Tribe decided that in order to characterize the air quality of the area within the Pechanga Indian Reservation jurisdiction, site-specific air quality monitoring is required.

The Tribe has purchased and installed a continuous air quality monitor, a Met-One Beta Monitor (BAM 1020), but did not expect to begin monitoring for PM 2.5 until February 2008. The Tribe has not yet submitted data to AQS, so we have no tribal-specific data at this time. Furthermore, while data from this monitor will be useful, eligible monitors for comparison to the relevant NAAQS must be a Federal Reference Method (FRM), a Federal Equivalent Method (FEM), or an Alternative Reference Method (ARM) which has operated for more than 24 months, subject to the requirements given in the October 17, 2006 Revision to Ambient Air Monitoring Regulations (71 FR 61236). All monitors used to provide data must meet the monitor siting and eligibility requirements given in 71 FR 61236 to 61328 in order to be acceptable for comparison to the 24-hr PM_{2.5} NAAQS for designation purposes.

In addition, the air quality outside the Reservation boundary is poor. Violations of the PM 2.5 standard have been recorded in Riverside County at levels above 50 micrograms per cubic meter (ug/m³). While it appears that emissions and emission sources within the Pechanga Reservation contribute minimally to these problems, the residents on the reservation are exposed to the poor air quality in this area. Airsheds do not correlate precisely with all jurisdictional boundaries.

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

Approximately 800 full-time residents live on the Main Reservation. The Main Reservation hosts 191 homes and 12 government buildings. Most of the Reservation's current land use is rural residential. The Kelsey Tract hosts the hotel and casino, associated parking structures, a 160 acre golf course, a gas station, and a 200 space RV Park. The casino and other activities bring in visitors from outside the Reservation.

While the population density on the Reservation is low, the Reservation is situated in one of the most densely populated areas in the western United States, which is growing at a rate of approximately 14% every 5 years. The growth off the Reservation can have an air quality impact on the reservation.

Factor 4: Traffic and commuting patterns

Two major roadways are within three miles of the Pechanga Indian Reservation; State Highway 79 (SH-79) and Interstate Highway 15 (I-15). State Highway 79 is located approximately two miles north of the Pechanga Indian Reservation. Traffic volumes on this highway are moderate but volumes are growing as development increases in the City of Temecula. The tribe believes that emissions from this highway have a relatively low impact on Pechanga's air quality due to the northeasterly wind patterns.

Interstate Highway 1-15 is located approximately three miles west of the Pechanga Indian Reservation. Traffic volumes are heavy, as this is a major commuter corridor between San Diego County and Riverside County. Actual emissions from either highway are unknown.

Looking at vehicle miles traveled (VMT) for Riverside County alone, there is heavy commuter traffic, numbering over 19 million VMT. The VMT numbers are extremely large for the counties beyond Riverside as well. In addition, Highway 15 near the Reservation experiences not only heavy commuter traffic but also heavy truck and commercial traffic, from 25,000 to 55,000 trucks annually.

Mobile source emissions are one of the major sources of PM_{2.5} emissions, and based on traffic and commuting patterns, it is likely that these emissions are contributing to the poor air quality in this area.

Factor 5: Growth rates and patterns

Though it borders the City of Temecula, the Pechanga Indian Reservation is relatively remote and sparsely populated. With a total reservation population of 800, there is little demand for development at the present time.

While we agree with the Tribe's assessment of the development on the Reservation, EPA notes that there is substantial development occurring just outside the Reservation. As mentioned above, Riverside County has experienced 14 % growth in the last 5 years, and a 7% growth in VMT.

Factor 6: Meteorology (weather/transport patterns)

The Lake Elsinore area north of Temecula is a convergence zone of winds from the coastal regions northwest of Lake Elsinore and from the southwest through the Temecula Valley by way of the Rainbow Gap. Winds that enter the Temecula Valley via the Rainbow Gap originate offshore and travel over the Camp Pendleton area, which then passes over the Pechanga Reservation. In addition, northeasterly winds that flow across the coastal regions of the South Coast Air Basin help prevent pollutants from being carried into the Temecula Valley from the Los Angeles and Orange County areas.

It appears that elevated levels of particulate matter occur predominately during the cool season during periods when the winds are light. Without local emissions data, it is difficult to determine the influence of local sources on the air quality under these conditions. In addition, without the support of air quality data and emission inventory data, it is difficult to quantify the combined effect of transported and locally generated air pollution at this time.

For this factor, EPA also considered data from National Weather Service instruments in the area. Wind direction and wind speed data for 2004-2006 were analyzed, with an emphasis on "high PM_{2.5} days" for each of two seasons (an October-April "cold" season and a May-September "warm" season). These high days are defined as days where any FRM or FEM air quality monitors had 24-hour PM_{2.5} concentrations above 95% on a frequency distribution curve of PM_{2.5} 24-hour values, or were 24-hr values exceeded 35.1 µg/m³.

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

The Pechanga Reservation is located on a total land base of approximately 5,600 acres. The Reservation is in Southern Riverside County, with its southern boundary at the San Diego County line. The City of Temecula is located to the northwest, the town of Rainbow to the southwest, and the Cleveland National Forest to the southeast. The Reservation is comprised of mountains and plateaus, with elevations ranging from 1,100 feet to 2,600 feet in the southeastern

portion. Agua Tibia Mountain and Wild Horse Peak are located to the southeast and east, and Mount Olympus and Gavilan Mountain are located to the southwest and west.

EPA looked at the topography in this area, and while there is complex terrain, the Reservation appears to be situated at the end of a valley with no significant topographical barrier to pollution from the Los Angeles area. We also considered the meteorology of the area and, without the support of air quality data, do not believe that Tribe's determination that the wind patterns would prevent pollution from being carried into the Temecula Valley is conclusive at this time.

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

The Pechanga Indian Reservation is located within the South Coast Air Quality Management District (SCAQMD), which has been designated by the U.S. EPA as non-attainment for the 1997 24-hour PM_{2.5} NAAQS. The SCAQMD encompasses all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. It is understood that the Pechanga Indian Reservation is not within the enforcement jurisdiction of the SCAQMD, but it is identified as having the same air quality as that of neighboring communities under the jurisdiction of SCAQMD. The Tribe states that there is a general consensus that the southwestern portion of Riverside County, in the vicinity of the Pechanga Reservation, has significantly better air quality than surrounding communities. The Tribe also asserts that EPA should not assume that the Pechanga Reservation's air quality is the same as larger metropolitan areas without valid data.

EPA recognizes the sovereignty of the Pechanga Indian Reservation, and the efforts on the part of the Pechanga Band of Luiseno Indians to address the nine factors recommended in EPA guidance for 2006 24-hour PM_{2.5} designations. We look forward to receiving air quality data from the Tribe once the air quality monitor is up and running. At this time, we have no such data to confirm that the Pechanga Reservation is experiencing cleaner air than the rest of Riverside County. Consequently, EPA has to conclude that the Reservation is exposed to the same air quality that has resulted in violations of the 2006 24-hour PM_{2.5} standard in Riverside County.

Factor 9: Level of control of emission sources

There are no major sources of PM_{2.5} on the Pechanga Reservation, so this factor is not a consideration for the Tribe. However, there are sources outside of the Reservation which are having an impact on the air quality within the Reservation boundaries.

Conclusion

The Pechanga Band of Luiseno Mission Indians recommended that the air quality management area within the Pechanga Reservation's exterior boundaries be designated as unclassifiable for the annual and 24-hour standards for PM 2.5. EPA believes that the Pechanga Indian Reservation should be designated nonattainment for the 2006 24-hour PM_{2.5} air-quality standard, based upon currently available information. It appears that the tribe is impacted by the poor air quality that exists within the South Coast Air Quality Management District. All of the Counties in the air basin, including Riverside County, are violating the 24-hour PM 2.5 standard and have been designated as nonattainment for the PM 2.5 standards. .