Technical Support Document for 2008 Ozone NAAQS Designations

California
Area Designations for the
2008 Ozone National Ambient Air Quality Standards

Technical Analysis for Los Angeles-San Bernardino Counties (West Mojave Desert)

Figure 1 is a map of the Los Angeles-San Bernardino Counties (West Mojave Desert), CA nonattainment area. The map provides other relevant information including the locations and design values of air quality monitors, county names and boundaries, and indicates EPA’s nonattainment designation. Also shown is the nonattainment boundary for the 1997 8-hour ozone NAAQS, which includes the Antelope Valley portion of Los Angeles County and the Mojave Desert Air Basin portion of San Bernardino County. This nonattainment area also includes a portion of the Twenty-Nine Palms Band of Mission Indians of California’s area of Indian county which was included in the 1997 8-hour ozone nonattainment area and is listed in Table 1, below.

In March 2009, California recommended that the same area previously designated as nonattainment for the 1997 ozone NAAQS be designated as nonattainment for the 2008 ozone NAAQS based on air quality data from 2006-2008. The state also requested that the area be split into two nonattainment areas along air district boundaries (letter from James Goldstene, Executive Officer, California Air Resources Board, to Laura Yoshii, Acting Regional Administrator, U.S. EPA Region IX, dated March 11, 2009).
California provided an update to their original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data, but did not revise its recommendation for the Antelope Valley portion of Los Angeles County and the Mojave Desert Air Basin portion of San Bernardino County. The 2009 and 2011 recommendations are based on data from Federal Equivalent Method (FEM) monitors sited and operated in accordance with 40 CFR Part 58 (letter from Lynn Terry, Deputy Executive Officer, California Air Resources Board, to Deborah Jordan, Director, U.S. EPA Region IX Air Division, dated October 12, 2011).

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating San Bernardino County (Mojave Desert Air Basin portion) and Los Angeles County (Antelope Valley portion) in California, and the area of Indian county in the area (identified in Table 1 below) nonattainment for the 2008 ozone NAAQS, together comprising the Los Angeles-San Bernardino Counties (West Mojave Desert) multi-jurisdictional nonattainment area.

Table 1. State’s or Tribe’s Recommended and EPA’s 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Los Angeles-San Bernardino Counties (West Mojave Desert).

<table>
<thead>
<tr>
<th>Los Angeles-San Bernardino Counties (West Mojave Desert), CA</th>
<th>State or Tribe Recommended Nonattainment Counties or Areas of Indian country</th>
<th>EPA’s Nonattainment Counties or Areas of Indian country ¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles County</td>
<td>Los Angeles County ¹</td>
<td>Los Angeles County</td>
</tr>
<tr>
<td>San Bernardino County</td>
<td>San Bernardino County (p) ¹</td>
<td>San Bernardino County (p)</td>
</tr>
<tr>
<td>Twenty-Nine Palms Band of Mission Indians of California ²</td>
<td>N/A</td>
<td>Twenty-Nine Palms Band of Mission Indians of California</td>
</tr>
</tbody>
</table>

p = partial
N/A = Tribe did not submit recommendation.

EPA modifications to state or tribe recommendations are shown in **bold**.

¹ California recommended the Antelope Valley portion of Los Angeles County and the Mojave Desert Air Basin portion of San Bernardino County be designated separate nonattainment areas. EPA is designating these two partial-county areas as one nonattainment area, keeping the same nonattainment boundary as the existing nonattainment area boundary established for the 1997 ozone NAAQS.

² Twenty-Nine Palms Band of Mission Indians of California (Twenty-Nine Palms) has land in both the West Mojave Desert nonattainment area and the Riverside (Coachella Valley) nonattainment area. Non-contiguous lands of Twenty-Nine Palms are being designated with the surrounding nonattainment areas. This technical analysis addresses only those lands within the West Mojave Desert nonattainment area.

**Factor Assessment**

**Factor 1: Air Quality Data**

For this factor, we considered 8-hour ozone design values for air quality monitors in counties in the existing 1997 8-hour ozone Los Angeles-San Bernardino Counties (West Mojave Desert) nonattainment area, based on data from the 2008-2010 period (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. A monitor’s DV is the metric or statistic that indicates whether that monitor attains a specified air quality standard. The 2008 ozone NAAQS are met at a monitor when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years, is 0.075 parts per million (ppm) (75 parts per billion (ppb)) or less. A DV is only valid if minimum data completeness criteria are met. See 40 CFR part 50 Appendix P. Where several monitors...
are located in a county (or a designated nonattainment area or maintenance area), the DV for the county or area is determined by the monitor with the highest level.

[Note: Monitors that are eligible for providing design value data generally include State and Local Air Monitoring Stations (SLAMS) that are sited in accordance with 40 CFR Part 58, Appendix D (Section 4.1) and operating with a federal reference method (FRM) or federal equivalent method (FEM) monitor that meets the requirements of 40 CFR part 58, Appendix A. All data from a special purpose monitor (SPM) using an FRM or FEM which has operated for more than 24 months is eligible for comparison to the NAAQS unless the monitoring agency demonstrates that the data came from a particular period during which the requirements of Appendix A (quality assurance requirements) or Appendix E (probe and monitoring path siting criteria) were not met.]

The existing West Mojave Desert nonattainment area comprises the southwestern Mojave Desert Air Basin portion of San Bernardino (partial county) and the northeastern Antelope Valley portion of Los Angeles County (partial county) (see Map 5a in Appendix 2). The 2010 DVs for the ozone NAAQS for these two counties are shown in Table 2.

Table 2. Air Quality Data.

<table>
<thead>
<tr>
<th>County</th>
<th>State Recommended Nonattainment?</th>
<th>2008-2010 Design Value (ppb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>Yes</td>
<td>103</td>
</tr>
<tr>
<td>San Bernardino, CA</td>
<td>Yes (partial)</td>
<td>112</td>
</tr>
</tbody>
</table>

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing West Mojave Desert nonattainment area are shown in Appendix 1, Map 5 (inserted below). EPA is designating the South Coast Air Basin portions of Los Angeles County and San Bernardino County as part of the Los Angeles-South Coast Air Basin nonattainment area (see Map 6 in Appendix 1). The design values shown in Table 2 are from monitors located within the Los Angeles-South Coast Air Basin nonattainment area portions of the two counties. As shown in Appendix 1, Map 5, the DV for the Los Angeles section of the existing West Mojave Desert nonattainment area is 91 ppb; the DV for the San Bernardino portion of the existing West Mojave Desert nonattainment area is 99 ppb based on certified 2008-2010 data.

California’s ozone season encompasses the entire year. Certified, quality assured data are available in EPA’s Air Quality System (AQS) for all areas through calendar year 2010. Map 5 in Appendix 1 includes preliminary 2011 DVs for the existing West Mojave Desert nonattainment area for informational purposes only. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS) and the 2009-2011 DV (data that are not yet certified and quality assured in AQS are denoted with an underline). Absence of a DV is symbolized with an “x”.

Appendix 3 lists the DVs for monitors in the existing Los Angeles-San Bernardino (West Mojave Desert) nonattainment area. Monitors shown in bold are the DV monitors (i.e., the monitor with the highest DV) for each individual county. Monitors shown in red font are the DV monitor for the nonattainment area. Values with an asterisk do not meet data completeness, and therefore those DVs are not relevant for comparison to the NAAQS and are solely provided for informational purposes.
From Appendix 1, Map 5: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

All ozone monitors within the Mojave Desert Air Basin portion of San Bernardino County and Antelope Valley portion of Los Angeles County within the state-recommended West Mojave Desert nonattainment area show violations of the 2008 8-hour ozone standard based on 2008-2010 data.

**Factor 2: Emissions and Emissions-Related Data**

EPA evaluated emissions of ozone precursors, nitrogen oxides ($\text{NO}_x$) and volatile organic compounds (VOC), and other emissions-related data that provide information on areas contributing to violating monitors.

**Emissions data**

EPA evaluated county-level emission data for $\text{NO}_x$ and VOC derived from the 2008 National Emissions Inventory (NEI), version 1.5. This is the most recently available NEI (see [http://www.epa.gov/ttn/chief/net/2008inventory.html](http://www.epa.gov/ttn/chief/net/2008inventory.html)). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of $\text{NO}_x$ and VOC (given in tons per year) for violating counties that we considered for inclusion in the Los Angeles-San Bernardino Counties (West Mojave Desert) area.
Table 3. Total 2008 NOx and VOC Emissions.

<table>
<thead>
<tr>
<th>County</th>
<th>State Recommended Nonattainment?</th>
<th>NOx (tpy)</th>
<th>VOC (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>Yes</td>
<td>219,340</td>
<td>124,133</td>
</tr>
<tr>
<td>San Bernardino, CA</td>
<td>Yes (partial)</td>
<td>99,779</td>
<td>43,359</td>
</tr>
<tr>
<td>Areawide:</td>
<td></td>
<td>319,119</td>
<td>167,492</td>
</tr>
</tbody>
</table>

Emissions of ozone precursors shown in Table 3 represent all of Los Angeles and San Bernardino counties, not just the Antelope Valley portion of Los Angeles County or the Mojave Desert Air Basin portion of San Bernardino County. Map 5 in Appendix 1 shows the distribution of stationary source emissions in the Los Angeles and San Bernardino County portions of West Mojave Desert. Stationary sources in the western portion of the West Mojave Desert nonattainment area, located in eastern Los Angeles County, are generally clustered near the major roadways. In contrast, stationary sources in the eastern portion of the West Mojave Desert nonattainment area, located in western San Bernardino County, are clustered around both major and minor roadways. Map 5 suggests that the majority of emission sources are located in the South Coast Air Basin portions of Los Angeles and San Bernardino counties. We are designating those portions of Los Angeles and San Bernardino counties as a separate nonattainment area (see technical analysis for the Los Angeles-South Coast Air Basin nonattainment area).

**Population density and degree of urbanization**

EPA evaluated the population and vehicle use characteristics and trends of the area as indicators of the probable location and magnitude of non-point source emissions. These include ozone-creating emissions from on-road and off-road vehicles and engines, consumer products, residential fuel combustion, and consumer services. Areas of dense population or commercial development are an indicator of area source and mobile source NOx and VOC emissions, which contribute to ozone formation. Rapid population growth or growth in vehicle miles traveled (VMT) (see below) in a county on the urban perimeter signifies increasing integration with the core urban area, and indicates that it may be appropriate to include the area associated with area source and mobile source emissions as part of the nonattainment area. Table 4 shows the population, population density, and population growth information for each county in the area.
Table 4. Population and Growth.

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>Yes</td>
<td>9,818,605</td>
<td>2.40</td>
<td>274,493</td>
<td>+3%</td>
</tr>
<tr>
<td>San Bernardino, CA</td>
<td>Yes (partial)</td>
<td>2,035,210</td>
<td>0.10</td>
<td>316,535</td>
<td>+18%</td>
</tr>
<tr>
<td>Areawide:</td>
<td></td>
<td>11,853,815</td>
<td>0.49</td>
<td>591,028</td>
<td>+5%</td>
</tr>
</tbody>
</table>

Sources: U.S. Census Bureau population estimates for 2010 as of August 4, 2011 (http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_PL_GCTPL2.STO5&prodType=table)

Maps 5 and 5a in Appendices 1 and 2, respectively, show population for the area. Population and growth statistics shown in Table 4 represent all of Los Angeles and San Bernardino counties, not just the Antelope Valley portion of Los Angeles County or the Mojave Desert Air Basin portion of San Bernardino County. In general, Los Angeles County is more highly and densely populated than San Bernardino County, however, San Bernardino County exhibited significantly greater growth over 2000 to 2010 than Los Angeles County. Map 5a in Appendix 2 shows two large population centers in the Antelope Valley portion of Los Angeles County, and a large but less dense population center in the western portion of San Bernardino County. Map 5a suggests that the majority of the dense population centers are located in the South Coast Air Basin portions of Los Angeles and San Bernardino counties. We are designating those portions of Los Angeles and San Bernardino counties as a separate nonattainment area (see technical analysis for the Los Angeles-South Coast Air Basin nonattainment area).

Traffic (VMT) data

EPA evaluated the commuting patterns of residents in the area, as well as the total VMT for each county. In combination with the population/population density data and the location of main transportation arteries (see above), this information helps identify the probable location of non-point source emissions. A county with high VMT is generally an integral part of an urban area and indicates the presence of motor vehicle emissions that may contribute to ozone formation that contributes to nonattainment in the area. Rapid population or VMT growth in a county on the urban perimeter signifies increasing integration with the core urban area, and indicates that the associated area source and mobile source emissions may be appropriate to include in the nonattainment area. Table 5 shows total 2008 VMT.

Table 5. Traffic (VMT) data.

<table>
<thead>
<tr>
<th>County</th>
<th>State Recommended Nonattainment?</th>
<th>2008 VMT* (million miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>Yes</td>
<td>78,315</td>
</tr>
<tr>
<td>San Bernardino, CA</td>
<td>Yes (partial)</td>
<td>20,229</td>
</tr>
<tr>
<td>Areawide:</td>
<td></td>
<td>98,544</td>
</tr>
</tbody>
</table>

*MOBILE model VMTs are those inputs into the NEI version 1.5.

Both Los Angeles and San Bernardino counties have VMT that are consistent with population and other emissions data for the two counties. Within the Los Angeles-San Bernardino Counties (West Mojave Desert) area, the heaviest non-truck traffic, as shown in Map 5, occurs in a discrete portion of the Antelope Valley portion of Los Angeles County and along a roadway that bisects the Mojave Desert portion of San Bernardino County along a roughly southwest-northeast axis. Map 5 also suggests that the heaviest traffic volumes occur in the South Coast Air Basin portions of Los Angeles and San Bernardino counties. Those portions of Los Angeles and San Bernardino counties are being designated...
as a separate nonattainment area (see technical analysis for the Los Angeles-South Coast Air Basin nonattainment area).

**Factor 3: Meteorology (weather/transport patterns)**

EPA evaluated available meteorological data to help determine how meteorological conditions, such as weather, transport patterns and stagnation, would affect the fate and transport of precursor emissions contributing to ozone formation.

Previous implementation plans and transport studies for the State of California have addressed the formation of ozone in the Mojave Basin and transport of ozone to the Mojave Basin. The Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area) includes a discussion of the ozone formation and transport patterns in the Western Mojave Air Basin. The “Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California” (California Air Resources Board (ARB), 1990) and the second triennial update to that report (1996) also discuss transport to the Western Mojave Air Basin. Excerpts from these documents are presented below:

“The Western Mojave Desert ozone non-attainment area, which includes the MDAQMD [Mojave Desert Air Quality Management District], is a small portion of the complex greater Southern California airshed. Ozone and ozone precursors are known to flow (or be transported), under the influence of winds, throughout Southern California. The most technically accurate method of evaluating ozone concentrations, ozone emissions, and future ozone behavior is through a large modeling project that includes all of the affected areas in Southern California (and a portion of northern Mexico).

The Western Mojave Desert area extends about 90 miles north to south and 120 miles east to west. The Planning Area is classified as high desert with elevations ranging from 2,000 to 5,000 feet and annual precipitation averaging 4 to 6 inches. Average daily maximum temperatures are highest during July, ranging from 100 to 105 degrees Fahrenheit. In contrast, winter daily maximum temperatures average in the low 60s. […]

Ozone concentrations in the Western Mojave Desert are impacted by transport from both the South Coast and San Joaquin Valley. Therefore, transport must be considered in evaluating the prospects for attainment. Several mountain passes provide transport routes into the Western Mojave Desert from the South Coast. Soledad Canyon on the eastern edge of the San Gabriel Mountains and Cajon Pass between the San Gabriel and San Bernardino mountains are the two major transport corridors from the South Coast to the Western Mojave Desert. A third transport corridor runs through the Tehachapi Pass in the Tehachapi Mountains and provides an outlet for emissions and pollutants from the southern San Joaquin Valley to the Western Mojave Desert. Previous ARB transport assessments

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2 Air Resources Board, 1990: Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California. ARB Staff Report prepared by the Technical Support Division and the Office of Air Quality Planning and Liaison, June 1990. [http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm](http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm)
concluded that during 1-hour State ozone exceedances, the transport contribution from the South Coast to ozone in the Western Mojave Desert could be overwhelming. The transport assessments also found there could be a shared impact between the South Coast and Western Mojave Desert, meaning ozone exceedances could be caused by a combination of transport and local emissions (ARB 1990; ARB 1996)\(^3,4\). In addition to the South Coast impact, the ARB transport assessments found an overwhelming transport impact from the San Joaquin Valley to the Western Mojave Desert.

Although the impact of transport on ozone air quality in the Western Mojave Desert can be overwhelming, the frequency of the impacts has not been determined. However, more recent analyses indicate that ozone exceedances in the Western Mojave Desert continue to be impacted by transported pollutants. Areas impacted by transport generally show ozone concentrations peaking in the late afternoon or evening hours.”

![Wind Frequency Distribution](image)

**Figure 2: San Bernardino County – Summer Wind Frequency Distribution**

The wind frequency distribution of wind direction data in Figure 2, above, is based on an average of 30 years of National Weather Service information for the months of June, July, and August. The prevailing winds during the ozone season have a strong westerly component.

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\(^3\) Air Resources Board, 1990: Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California. ARB Staff Report prepared by the Technical Support Division and the Office of Air Quality Planning and Liaison, June 1990. [http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm](http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm)

**Factor 4: Geography/topography (mountain ranges or other air basin boundaries)**

The geography/topography analysis evaluates the physical features of the land that might affect the airshed and, therefore, the distribution of ozone over the area.

The Western Mojave Air Basin is shown in Appendix 2, Map 5a. The Western Mojave Desert area extends about 90 miles north to south and 120 miles east to west. The Western Mojave Desert Planning Area is classified as high desert with elevations ranging from 2,000 to 5,000 feet and annual precipitation averaging 4 to 6 inches. The San Gabriel and San Bernardino mountains to the west separate the South Coast Air Basin from the Western Mojave Desert Air Basin. The Tehachapi Mountains to the northwest separate the San Joaquin Valley from the Western Mojave Desert Air Basin.

**Factor 5: Jurisdictional boundaries**

For each potential nonattainment area, we considered existing jurisdictional boundaries to provide a clearly defined legal boundary and to help identify the areas appropriate for carrying out the air quality planning and enforcement functions for nonattainment areas. Examples of jurisdictional boundaries include existing/prior nonattainment area boundaries for ozone or other urban-scale pollutants, county lines, air district boundaries, township boundaries, areas covered by a metropolitan planning organization, state lines, areas of Indian country, and the urban growth boundary. Where existing jurisdictional boundaries were not adequate or appropriate to describe the nonattainment area, other clearly defined and permanent landmarks or geographic coordinates were considered.

The Los Angeles-San Bernardino Counties (West Mojave Desert) area has previously-established nonattainment boundaries associated with the 1-hour and 1997 8-hour ozone NAAQS. The state recommended a nonattainment designation for the West Mojave Desert, but also recommended separating the Antelope Valley portion of Los Angeles County from the Mojave Desert Air Basin portion of San Bernardino County, thereby creating two nonattainment areas where there currently is one. The separation line follows part of a county boundary, as well as part of an air district boundary.

Los Angeles County and San Bernardino County both have several jurisdictional boundaries to consider. See Appendix 2, Map 5a. Los Angeles County is divided between two air districts, with the northeast portion falling under the Antelope Valley Air Quality Management District’s purview, and the remainder controlled by the South Coast Air Quality Management District (South Coast AQMD). San Bernardino County is mostly within the Mojave Desert Air Quality Management District (Mojave Desert AQMD), except for the southwest tip which is part of the South Coast AQMD. The portions included in the West Mojave Desert nonattainment area are under the jurisdictions of the Antelope Valley and the Mojave Desert AQMDs. Antelope Valley AQMD is operated and managed by the staff of the Mojave Desert AQMD, and both areas have been working together to address the 1997 ozone NAAQS. EPA, therefore, does not anticipate different AQMDs or different counties presenting an implementation challenge by keeping these two air district areas as one nonattainment area.

The West Mojave Desert area is included in the expansive Los Angeles-Long Beach-Riverside Combined Statistical Area (CSA). This CSA contains the entireties of Ventura, Los Angeles, Orange, San Bernardino and Riverside counties. Under the 1997 ozone standard, this large CSA encompasses four different nonattainment areas (Ventura County (continental portion), West Mojave Desert (northeast Los Angeles and a portion of southwest San Bernardino counties), Los Angeles-South Coast (the remainder of Los Angeles County to the southwest, Orange County, a portion of southwest San Bernardino County and west Riverside County), and central Riverside County (Coachella Valley)) and...
attaining portions of Ventura, San Bernardino and Riverside counties. Taking a regional approach to southern California and designating most if not all of the southern portion of the state as nonattainment for the 2008 ozone NAAQS may have merit, but would also be complicated and perhaps counterproductive. Coordination of a number of air districts would be required and the large CSA covering multiple air basins may make air quality planning impractical. While the Office of Management and Budget’s definition of urban areas describes economic interconnectedness, such an approach does not generally follow air basin or air shed boundaries. Furthermore, the state has asked EPA to designate areas along air basin and air district jurisdictional lines. The state’s requested nonattainment areas in totality in southern California are essentially the same boundaries EPA has used in the past to designate ozone nonattainment areas.

The Los Angeles-San Bernardino Counties (West Mojave Desert) area also includes portions of an area of Indian country. As defined at 18 U.S.C. 1151, “Indian country” refers to: “(a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.” EPA recognizes the sovereignty of tribal governments, and has attempted to take the desires of the tribe into account in establishing appropriate nonattainment area boundaries.

The Twenty-Nine Palms Band of Mission Indians of California (Twenty-Nine Palms) is a federally recognized tribe with non-contiguous areas of Indian country in both Riverside County and San Bernardino County. These portions of Indian country and the surrounding nonattainment areas are shown in Map 5a in Appendix 2. Due to the non-contiguous nature of these lands, the portions of Twenty-Nine Palms in San Bernardino County are being designated as part of the West Mojave Desert nonattainment area. See the technical analysis for Riverside County (Coachella Valley) for discussion of the portions of Twenty-Nine Palms in Riverside County (Coachella Valley).

Conclusion

Based on the assessment of factors described above, EPA is designating the following counties as part of the Los Angeles-San Bernardino Counties (West Mojave Desert), CA nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Los Angeles (partial) and San Bernardino (partial), including the portions of Twenty-Nine Palms within San Bernardino County.

Air quality data (Factor 1) indicate all ozone monitors within the Mojave Desert Air Basin portion of San Bernardino County and Antelope Valley portion of Los Angeles County show violations of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, Factor 1 supports designating these areas as “nonattainment.”

Emissions and emission-related data (Factor 2) show that the Mojave Desert Air Basin portion of San Bernardino County and Antelope Valley portion of Los Angeles County both contain generally discrete centers of stationary sources, population clusters, and areas of high traffic volume. Emission patterns and increasing population in these two counties leads EPA to believe that both counties generate levels of ozone precursor emissions that likely contribute to violations in both counties. Therefore, Factor 2 suggests that these areas should be designated nonattainment as one area.
Meteorology and weather or transport patterns (Factor 3) suggest that the Mojave Desert Air Basin portion of San Bernardino County and Antelope Valley portion of Los Angeles County are impacted by similar sources within the area and transport patterns from outside areas. Geography and topography (Factor 4) also show no topographical distinction between Antelope Valley and southeast San Bernardino County. Because the West Mojave Desert portions of Los Angeles and San Bernardino counties are contained in the same air basin, Factor 3 suggests that these partial counties should continue to comprise one nonattainment area.

In considering jurisdictional boundaries (Factor 5), EPA notes that the Antelope Valley and Mojave Desert were both previously designated together as the West Mojave Desert nonattainment area for the 1997 ozone NAAQS. Additionally, both of these areas are part of the same CSA and air basin. While it is true that the two areas fall into separate air district jurisdictions, the Antelope Valley Air Pollution Control District (APCD) is operated under agreement with the Mojave Desert APCD, which highlights the existing working relationship within the current jurisdictional structure. Although the state recommended Antelope Valley and Mojave Desert as separate nonattainment areas for the 2008 ozone NAAQS, there continues to be limited evidence to support the separation of these two areas.

Based on our consideration of all five factors, EPA is designating the Mojave Desert Air Basin portion of San Bernardino County (southwest portion of the county, excluding the Los Angeles-South Coast portion) and Antelope Valley portion of Los Angeles County nonattainment for the 2008 ozone NAAQS as the Los Angeles-San Bernardino Counties (West Mojave Desert), CA nonattainment area.