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

The table below identifies the areas and associated counties, parts of counties, or areas of Indian country in California that EPA is designating as nonattainment for the 2008 ozone national ambient air quality standards (2008 NAAQS). In accordance with section 107(d) of the Clean Air Act, EPA must designate an area "nonattainment" if it is violating the 2008 ozone NAAQS or if it is contributing to a violation of the 2008 ozone NAAQS in a nearby area. The technical analyses supporting the boundaries for the individual nonattainment areas are provided below.

Nonattainment Areas in California

Area	California's or Tribe's Recommended Nonattainment Counties	EPA's Designated Nonattainment Counties or Areas of Indian country
Calaveras County, CA	Calaveras County	Calaveras County
Chico (Butte County), CA*	Butte County	Butte County
Imperial County, CA*	Imperial County	Imperial County
Kern County (Eastern Kern), CA	Kern County (Eastern Kern, excluding Indian Wells Valley)	Kern County (Eastern Kern, excluding Indian Wells Valley)
Los Angeles-San Bernardino Counties (West Mojave Desert), CA*	San Bernardino County (Mojave Desert Air Basin portion) as a separate nonattainment area from Los Angeles County (Antelope Valley portion or Mojave Desert Air Basin portion) nonattainment area	**San Bernardino County (Mojave Desert Air Basin portion) and Los Angeles County (Antelope Valley portion or Mojave Desert Air Basin portion)**
Los Angeles-South Coast Air Basin, CA*	Los Angeles County (South Coast Air Basin portion which includes Santa Catalina and San Clemente Islands), Orange County, San Bernardino County (South Coast Air Basin portion), Riverside County (South Coast Air Basin portion)	Los Angeles County (South Coast Air Basin portion which includes Santa Catalina and San Clemente Islands), Orange County, San Bernardino County (South Coast Air Basin portion), Riverside County (South Coast Air Basin portion)
Mariposa County, CA	Mariposa County	Mariposa County
Morongo Band of Mission Indians	Morongo Band of Mission Indians	Morongo Band of Mission Indians
Nevada County (Western part), CA	Nevada County (Western part)	Nevada County (Western part)
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation

Tuscan Buttes, CA	Tehama County (Tuscan Buttes portion, above 1,800 feet elevation)	Tehama County (Tuscan Buttes portion, above 1,800 feet elevation)
Riverside County (Coachella Valley), CA*	Riverside County (Salton Sea Air Basin portion)	Riverside County (Salton Sea Air Basin portion)
Sacramento Metro, CA*	Sacramento County, Yolo County, Solano County (Sacramento Valley Air Basin portion), Sutter County (southern portion), El Dorado County (Sacramento Valley Air Basin portion), Placer County (Sacramento Valley Air Basin portion)	Sacramento County, Yolo County, Solano County (Sacramento Valley Air Basin portion), Sutter County (southern portion), El Dorado County (Sacramento Valley Air Basin portion), Placer County (Sacramento Valley Air Basin portion)
San Diego County, CA*	San Diego County	San Diego County
San Francisco Bay Area, CA*	San Francisco County, Marin County, Sonoma County (San Francisco Bay Air Basin portion), Napa County, Solano County (San Francisco Bay Air Basin portion), Contra Costa County, Alameda County, Santa Clara County, San Mateo County	San Francisco County, Marin County, Sonoma County (San Francisco Bay Air Basin portion), Napa County, Solano County (San Francisco Bay Air Basin portion), Contra Costa County, Alameda County, Santa Clara County, San Mateo County
San Joaquin Valley, CA*	San Joaquin County, Stanislaus County, Merced County, Madera County, Fresno County, Kings County, Tulare County, Kern County (San Joaquin Air Basin portion)	San Joaquin County, Stanislaus County, Merced County, Madera County, Fresno County, Kings County, Tulare County, Kern County (San Joaquin Air Basin portion)
San Luis Obispo (Eastern San Luis Obispo), CA	San Luis Obispo County (Eastern San Luis Obispo)	San Luis Obispo County (Eastern San Luis Obispo)
Ventura County, CA	Continental portion of Ventura County (excludes Anacapa and San Nicolas islands)	Continental portion of Ventura County (excludes Anacapa and San Nicolas islands)

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

*Indicates multi-jurisdictional nonattainment area or areas that include areas of Indian country of federally recognized tribes. Table 1, contained in the Technical Analysis section of each nonattainment area discussion, identifies the areas of Indian country of each tribe that EPA is designating as part of the nonattainment area.

Designation of a state area may also affect Indian country. As indicated in Table 1 above, areas of Indian country of two tribes are being designated as separate nonattainment areas from the surrounding state nonattainment areas: the Morongo Band of Mission Indians, and Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation. These nonattainment areas are referred to as the Morongo Band of Mission Indians nonattainment area and the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area, respectively. Additionally, areas of Indian country are located within the boundaries of the following nonattainment areas: Chico (Butte County), Imperial County, Los Angeles-San Bernardino Counties (West Mojave Desert), Los Angeles-South Coast Air Basin, Riverside County (Coachella Valley), Sacramento Metro, San Diego County, San Francisco Bay Area, and San Joaquin Valley. Designation of areas of Indian country is discussed in the Technical Analysis for each nonattainment area.

EPA is designating the remaining counties, portions of counties, and areas of Indian country in California as "unclassifiable/attainment" for the 2008 ozone NAAQS.

The analysis below provides the basis for the nonattainment area boundaries. It relies on our analysis of which monitors are violating the 2008 ozone NAAQS and an evaluation of whether nearby areas are contributing to such violations. EPA relies on the most recent, certified and quality-assured monitoring data available to inform our decisions. States are required to certify data by May 1st of the following year. California Air Resources Board (ARB) sent revised designation recommendations in October 2011 that relied upon preliminary, non-certified 2011 monitoring data for several areas. (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.) In December 2011, EPA sent California a letter conveying our preliminary designations and informing California that it would need to submit certified, quality-assured data to EPA by February 29, 2012 in order for EPA to consider 2011 data in our final decisions. (Letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Edmund G. Brown, Jr., Governor of California, dated December 9, 2011.) EPA received certified, quality-assured 2011 data before February 29, 2012 for the following counties in California[1]: Amador, Calaveras, El Dorado, Mariposa, Monterey, Nevada, Placer, Sacramento, San Benito, San Diego, San Luis Obispo, Santa Barbara, Santa Cruz, Solano, Sutter, Tehama, Tuolumne, and Yolo. EPA therefore based our designations on 2009-2011 data for these counties. For all remaining areas in California, EPA based our designation on certified, quality-assured 2008-2010 data. For informational purposes, the Technical Analysis for each nonattainment area provides maps showing both 2008-2010 and 2009-2011 data.

The analysis below also provides the basis for nonattainment area boundaries for federally recognized tribes. All tribes are being designated in accordance with two guidance documents finalized in late 2011 by EPA's Office of Air Quality, Planning, and Standards: *Guidance to Regions for Working with Tribes during the National Ambient Air Quality Standard (NAAQS) Designations Process*[2] and the *Policy for Establishing Separate Air Quality Designations for Areas of Indian Country*[3]; in addition to *EPA's Policy on Coordination and Consultation with Indian Tribes*[4]. In accordance with these documents, in

[1] Data certification packages for the listed areas are included in the docket associated with the 2008 ozone NAAQS designations.
[2] http://www.epa.gov/ttn/caaa/t1/memoranda/20120117naaqsguidance.pdf
[3] http://www.epa.gov/ttn/caaa/t1/memoranda/20120117indiancountry.pdf
[4] http://www.epa.gov/tp/pdf/cons-and-coord-with-indian-tribes-policy.pdf

January and February 2012, EPA conducted consultation on the 2008 ozone NAAQS designations with ten California tribes that requested consultation. On January 12, 2012, EPA held consultation by conference call with representatives from the La Jolla Band of Luiseño Indians, Pala Band of Luiseño Indians of the Pala Reservation, Iiplay Nation Santa Ysabel[5], and Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation. EPA consulted with representatives of the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation on January 12, 2012 in San Francisco, California. On January 20, 2012, EPA held consultation by conference call with the Picayune Rancheria of Chuckchansi Indians of California and the Table Mountain Rancheria of California. On February 1, 2012, EPA consulted with the Campo Band of Diegueño Mission Indians of the Campo Reservation at the Campo Reservation. On February 27, 2012, EPA held consultation by conference call with the Soboba Band of Luiseño Indians. On April 5, 2012, EPA held consultation by conference call with the Ewiiaapaayp Band of Kumeyaay Indians. EPA has carefully evaluated all tribal recommendations as well as all tribal responses to EPA's December 2011 preliminary designation letters. Additional information concerning EPA's analysis of areas of Indian country can be found under the jurisdictional boundaries section of the Technical Analysis for each nonattainment area that contains areas of Indian country[6].

EPA has evaluated contributions from nearby areas based on a weight of evidence analysis considering the factors identified below. EPA issued guidance on December 4, 2008 that identified these factors as ones EPA would consider in determining nonattainment area boundaries and recommended that states consider these factors in making their designations recommendations to EPA.[7]

1. Air quality data (including the design value calculated for each federal reference method (FRM) or federal equivalent method (FEM) monitor in the area);
2. Emissions and emissions-related data (including location of sources and population, amount of emissions and emissions controls, and urban growth patterns);
3. Meteorology (weather/transport patterns);
4. Geography and topography (mountain ranges or other basin boundaries); and
5. Jurisdictional boundaries (e.g., counties, air districts, existing nonattainment areas, Indian country, metropolitan planning organizations (MPOs)).

Ground-level ozone generally is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. Because NO_x and VOC emissions from a broad range of sources over a wide area typically contribute to violations of the ozone standards, EPA believes it is important to consider whether there are contributing

[5] Tribal representative for Iiplay Nation of Santa Ysabel indicated they were participating in the consultation conference call for informational purposes only.

[6] Bishop Paiute is a federally recognized tribe that is located in Inyo County. Currently, 2008-2010 monitoring data as well as preliminary 2009-2011 data show Inyo County attaining the 2008 ozone NAAQS. In February 2009, the Bishop Paiute Reservation recommended that the portions of Bishop Paiute in Inyo County be designated as "attainment/unclassifiable" for the 2008 ozone NAAQS. (Letter from Monty Bengochia, Tribal Chairman, Bishop Paiute Tribe, to Laura Yoshii, Acting Regional Administrator, U.S. EPA Region IX, February 26, 2009.) EPA agrees that the portions of Bishop Paiute located in Inyo County should be designated as unclassifiable/attainment, consistent with the surrounding area. This Tribe is not discussed further in the California Technical Support Document because it and the surrounding area are being designated unclassifiable/attainment.

[7] The December 4, 2008 guidance memorandum "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards" refers to nine factors. In this technical support document we have grouped the emissions-related factors together under the heading of "Emissions and Emissions-Related Data," which results in five categories of factors.

emissions from a broad geographic area. Accordingly, EPA chose to examine the five factors with respect to the larger of the Combined Statistical Area (CSA) or Core Based Statistical Area (CBSA) associated with the violating monitor(s).[8] All data and information used by EPA in this evaluation are the latest available to EPA and/or provided to EPA by states or tribes.

In EPA's designations guidance for the 2008 ozone NAAQS, EPA recommended examining CSA/CBSAs because certain factors used to establish CSAs and CBSAs are similar to the factors EPA is using in this technical analysis to determine if a nearby area is contributing to a violation of the 2008 ozone NAAQS. Congress required a similar approach in 1990 for areas classified as serious or above for the 1-hour ozone standard and EPA used the same basic approach in the designation process for the 1997 ozone NAAQS. Where a violating monitor is not located in a CSA or CBSA, EPA's guidance recommended using the boundary of the county containing the violating monitor as the starting point for considering the nonattainment area's boundary.

[8] Lists of CBSAs and CSAs and their geographic components are provided at www.census.gov/population/www/metroareas/metrodef.html . The lists are periodically updated by the Office of Management and Budget. EPA used the most recent update, based on 2008 population estimates, issued on December 1, 2009 (OMB Bulletin No. 10-02).

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Technical Analysis for Calaveras County, CA

Figure 1 is a map of the Calaveras County, 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 boundary of the existing area that is designated nonattainment for the 1997 8-hour ozone NAAQS.

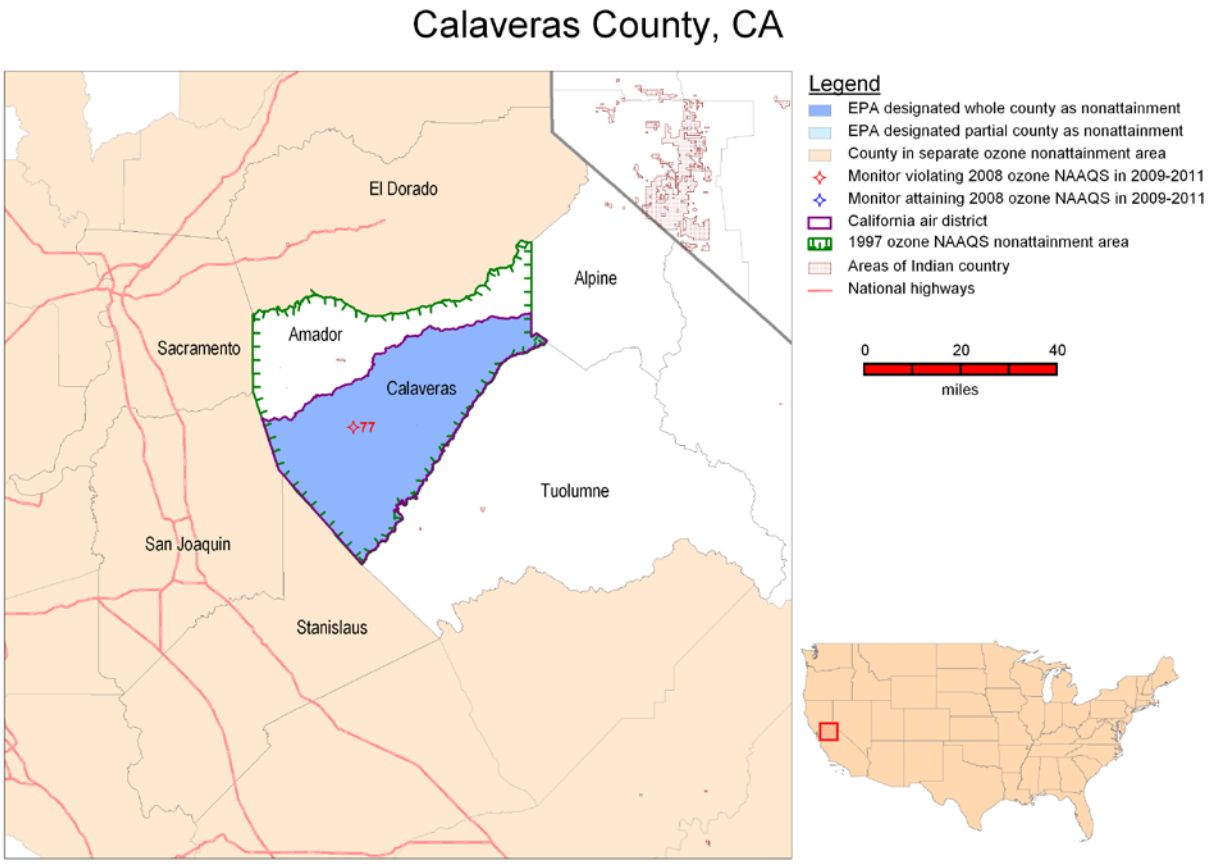


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from the 2009-2011 period (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

The Central Mountain Counties nonattainment area has previously established boundaries associated with the 1997 8-hour ozone NAAQS. Although these counties were designated as a separate nonattainment area for the 1997 ozone NAAQS, EPA believed, as we still believe, that the strongest contribution to the violations in the mountain counties comes from the San Joaquin Valley. However, for the 1997 ozone NAAQS, the state requested grouping Amador and Calaveras counties as one nonattainment area, separate from the San Joaquin Valley area, citing existing inter-county coordination, similarities in pollution transport paths, and support from the other factors analyzed. EPA accepted the state's recommendations and in 2004 designated Amador and Calaveras counties as one multi-jurisdictional nonattainment area (Central Mountain Counties).

In March 2009, California recommended that the Amador and Calaveras counties be designated as a nonattainment area for the 2008 ozone NAAQS based on air quality data from 2006-2008. (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations. Based on preliminary 2011 air quality data, California revised its recommendation for the Central Mountain Counties nonattainment area to include only Calaveras County and to exclude Amador 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.)

In December 2011, EPA sent California a letter conveying our preliminary intention to designate Amador and Calaveras counties as the Central Mountain Counties nonattainment area for the 2008 ozone NAAQS and informing California that it would need to submit certified, quality-assured data to EPA by February 29, 2012 in order for EPA to consider 2011 data in our final decisions. The letter also conveyed that the state should further provide a multi-factor analysis justifying the exclusion of Amador County from the designated nonattainment area for the 2008 ozone NAAQS if it continued to support that recommendation. (Letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Edmund G. Brown, Jr., Governor of California, dated December 9, 2011.) EPA received certified, quality-assured 2011 data before February 29, 2012 for Amador and Calaveras counties, as well as a multi-factor analysis justifying the exclusion of Amador County from the designated nonattainment area for the 2008 ozone NAAQS. (Letter from James Goldstene, Executive Officer, California Air Resources Board, to Jared Blumenfeld, Regional Administrator, Region IX, U.S. EPA, dated February 23, 2012.) Because of the State's timely submittal of the certified air quality data, we are basing our final designation decision on 2009-2011 data for these counties.

After considering the State's recommendations and based on EPA's technical analysis described below, EPA is designating Calaveras County (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as the Calaveras County nonattainment area and Amador County as "unclassifiable/attainment."

Table 1. State's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Calaveras County.

Central Mountain Counties	State or Tribe-Recommended Nonattainment Counties or Areas in Indian Country	EPA's Designated Nonattainment Counties or Areas of Indian Country
Calaveras County, CA	Calaveras County	Calaveras County
No areas of Indian country in the nonattainment area		

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Central Mountain Counties nonattainment area, based on data from the most recent three-year period for which we had timely submitted certified air quality data. For Amador and Calaveras counties, the state of California submitted certified air quality data for 2011 before February 29, 2012; thus, for purposes of the final designations, we are considering air quality data from the 2009-2011 period (i.e., the 2011 DV). 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.]

Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year. Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. California Air Resources Board (ARB) certified 2011 data by February 29, 2012 for Amador and Calaveras counties. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that Amador County is attaining the 2008 ozone NAAQS (DV is 71 ppb) and Calaveras County is violating the 2008 ozone NAAQS (DV is 77 ppb). Amador County's 2010 DV was 81 ppb and Calaveras County's 2010 DV was 83 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Central Mountain Counties nonattainment area are shown in Appendix 1.

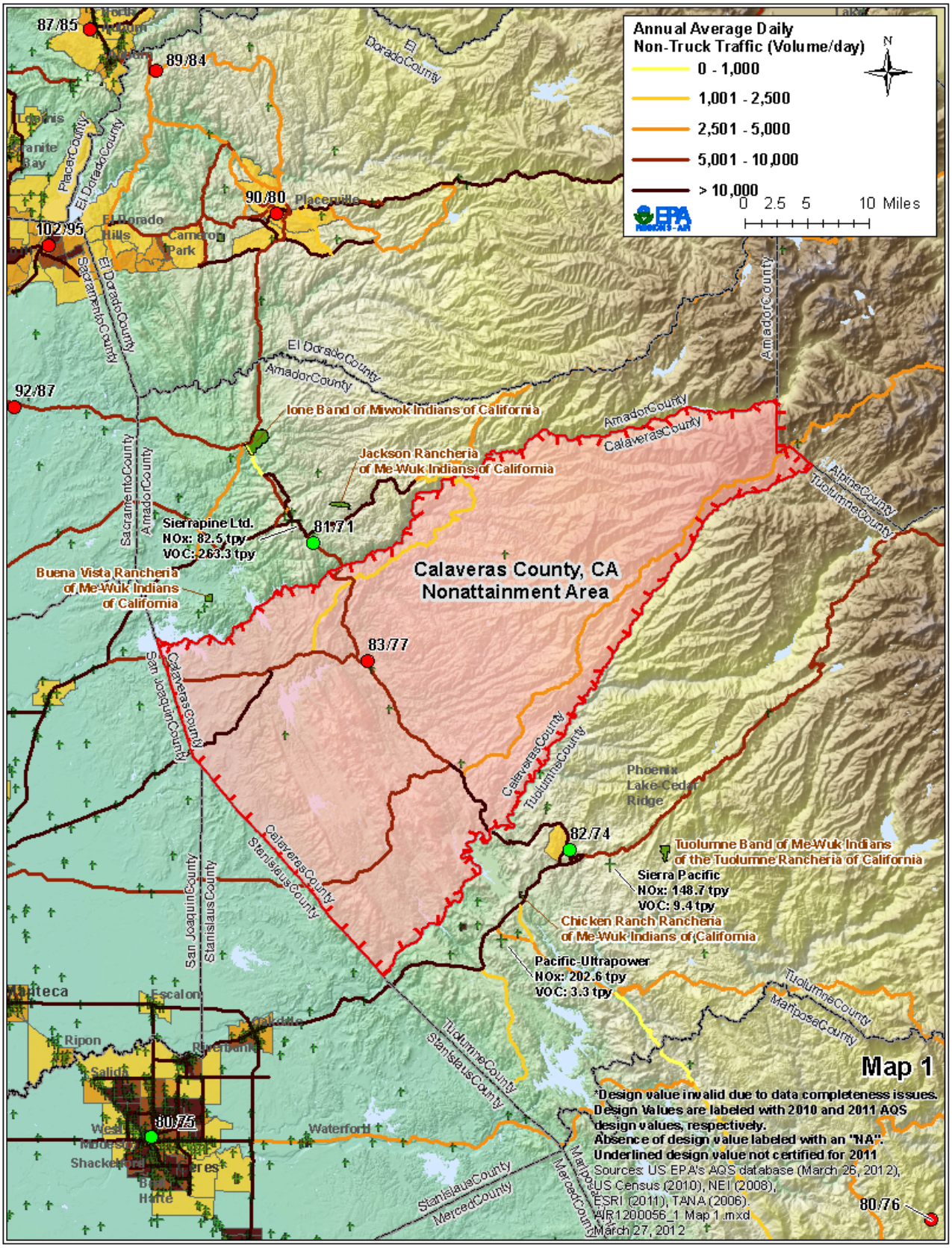
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
Amador, CA	No	71
Calaveras, CA	Yes	77

Maps contained in Appendix 1 show the geographic distribution of monitors. Maps 1 and 1b show monitor locations for Amador and Calaveras counties. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designations) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists 2009-2011 DVs for Amador and Calaveras counties. 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.

Based on 2009-2011 data, the monitor in Calaveras County is violating the 2008 standard while the monitor in Amador County is attaining. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.



From Appendix 1, Map 1: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Table 3 shows emissions of NO_x and VOC (given in tons per year) for violating and nearby counties that we considered for inclusion in the Calaveras County nonattainment area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Amador, CA	No	1,785	2,496
Calaveras, CA	Yes	1,792	3,558
	Areawide:	3,578	6,054

Both NO_x and VOC are precursors to formation of ozone in ambient air. Although Calaveras County has slightly higher emissions of VOC than Amador County, the two counties are similar to each other in terms of their emissions of NO_x. Map 1 in Appendix 1 indicates that stationary sources of ozone precursor emissions are mostly located in Amador County, including Sierra Pine Limited, the largest source of VOC in the existing Central Mountain Counties nonattainment area. However, emissions of ozone precursors in the adjacent counties in the Sacramento and San Joaquin valleys bordering Amador and Calaveras counties (Sacramento, San Joaquin, and Stanislaus counties) are significantly greater than emissions from Amador and Calaveras counties. In comparison, emissions of NO_x and VOC in Sacramento County in 2008 were more than 27,000 tpy of NO_x and 21,000 tpy of VOC; in San Joaquin County emissions were more than 32,000 tpy of NO_x and 17,000 tpy of VOC; and in Stanislaus County emissions were more than 15,000 tpy of NO_x and 16,000 tpy of VOC.

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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Amador, CA	No	38,091	0.06	2,916	+8%
Calaveras, CA	Yes	45,578	0.04	4,880	+12%
	Areawide:	83,669	0.05	7,796	+10%

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 1 and 1a in Appendices 1 and 2, respectively, show population for the area. The small populations and low population densities of Amador and Calaveras counties show that this area is sparsely populated. Although the population of Calaveras County is larger than Amador County, the population density of Amador County is greater than Calaveras County because Calaveras County encompasses a larger land area than Amador County. Additionally, Map 1a shows that Amador County contains a population center surrounding Jackson Rancheria, whereas Calaveras County contains no discrete population centers. For ozone, population is an indicator of ozone precursor emissions. During the period from 2000 to 2010, both counties showed population growth, with slightly larger growth, both in terms of absolute change and percent change, in Calaveras County.

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 and 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Amador, CA	No	640
Calaveras, CA	Yes	747
	Areawide:	1,387

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

Total VMT in Amador and Calaveras counties are similar. Calaveras County has a slightly higher VMT, which may be associated with the larger land area in the county. Maps 1 and 1b in Appendix 1 show annual average daily non-truck and truck traffic volumes. Heavy non-truck traffic occurs on roads that run north-south and link Amador and Calaveras counties, as well as east-west roads that link these two counties with San Joaquin and Stanislaus counties. The heaviest truck traffic occurs on Highway 88 that links Amador County with San Joaquin County. Truck and non-truck traffic is lightest on roads that link Amador and Calaveras counties with El Dorado and Alpine counties to the east.

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.

Amador and Calaveras counties are the center counties of the "Mountain Counties Air Basin" as defined by ARB[1]. Summers are generally fairly warm and dry, but there can be periods of quite cool weather. Depending on the meteorological station, in summer months, normal low temperatures range from 46 to 60 degrees Fahrenheit (8 to 16 degrees Celsius), and normal highs range from 74 to 96 degrees F (23 to 35 degrees C). Winds are generally daytime upslope and nighttime downslope flows, caused by the differential heating or cooling of air near mountain ground surfaces relative to air at the same height over land at lower elevations. Such flows follow the east-northeast and west-southwest orientation of the river valleys, described under Factor 4. This is generally consistent with the south-southwest flow in Amador and Calaveras counties seen in the 30-year average direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (see Figure 2). However, it should be noted that this diagram combines flows from multiple meteorological stations, from parts of the counties that do not have the same valley orientation.

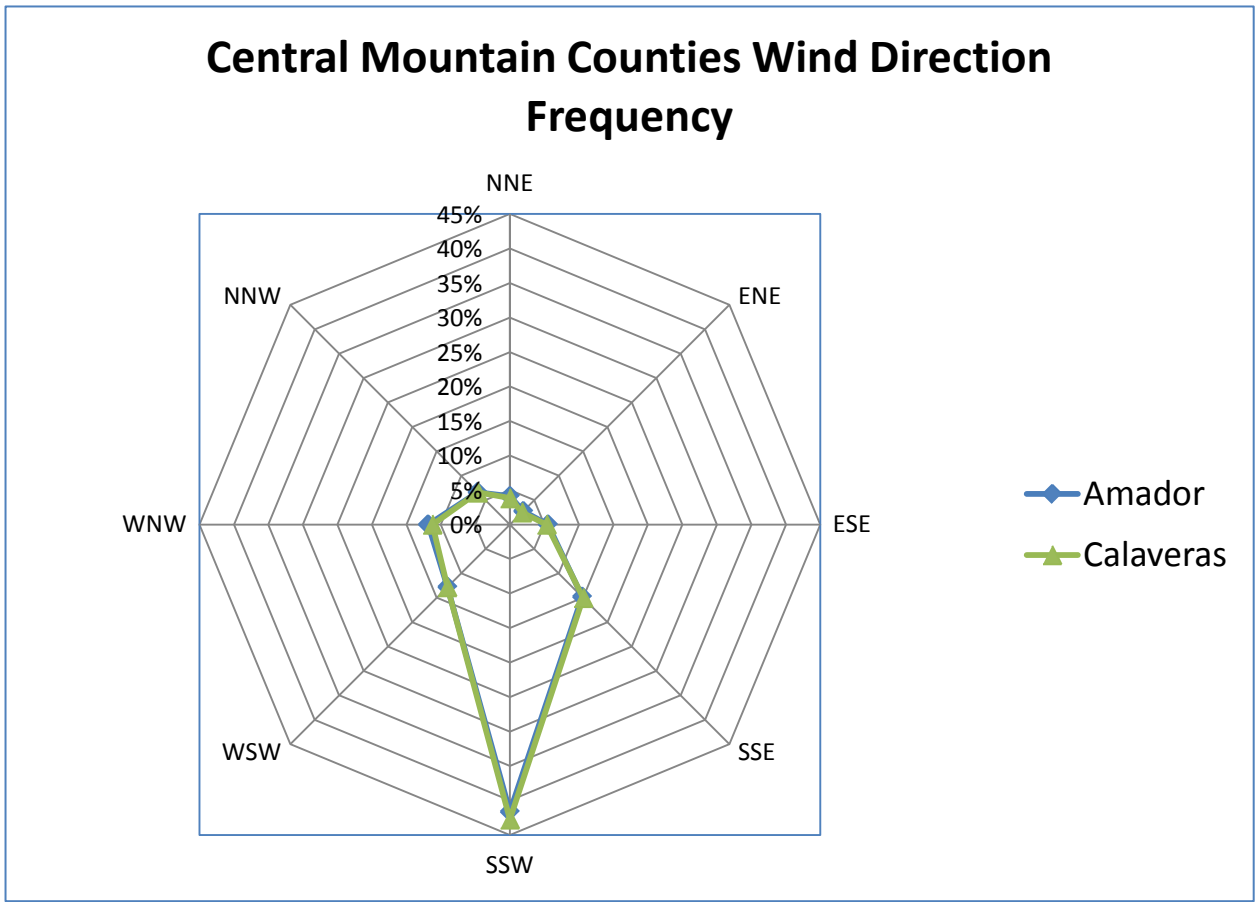


Figure 2

[1] http://www.arb.ca.gov/ei/maps/statemap/abmap.htm

Neighboring San Joaquin Valley can have temperature inversions from 2,000 to 2,500 feet (600 to 750 meters) above the valley floor, or even as high as 5,000 feet (1,500 meters). Ozone produced in the San Joaquin Valley and trapped under this inversion can reach fairly high into the mountain counties, or be advected there by daytime upslope flows. Previous assessments of transport by ARB[2] have found a strong potential for ozone transport from the Sacramento and San Joaquin valleys up into the mountain counties. Nighttime drainage flows reverse this, so some of this pollution, in combination with pollution generated in the mountain counties themselves, could be transported back into the valley, with the potential for some carryover into subsequent days. EPA is designating both the Sacramento Metro area and San Joaquin Valley as their own nonattainment areas for the 2008 ozone NAAQS.

North-south flow between Amador and Calaveras counties is possible as there are fewer barriers to this transport pattern due to the weaker topographic relief in the western parts of both counties. There is likely some transport of pollutants between these two counties, as well as transport from the Sacramento and San Joaquin nonattainment areas. Additionally, EPA notes that 2011 was anomalously cool, potentially creating localized ozone patterns that are not representative of expected normal conditions or ongoing trends.

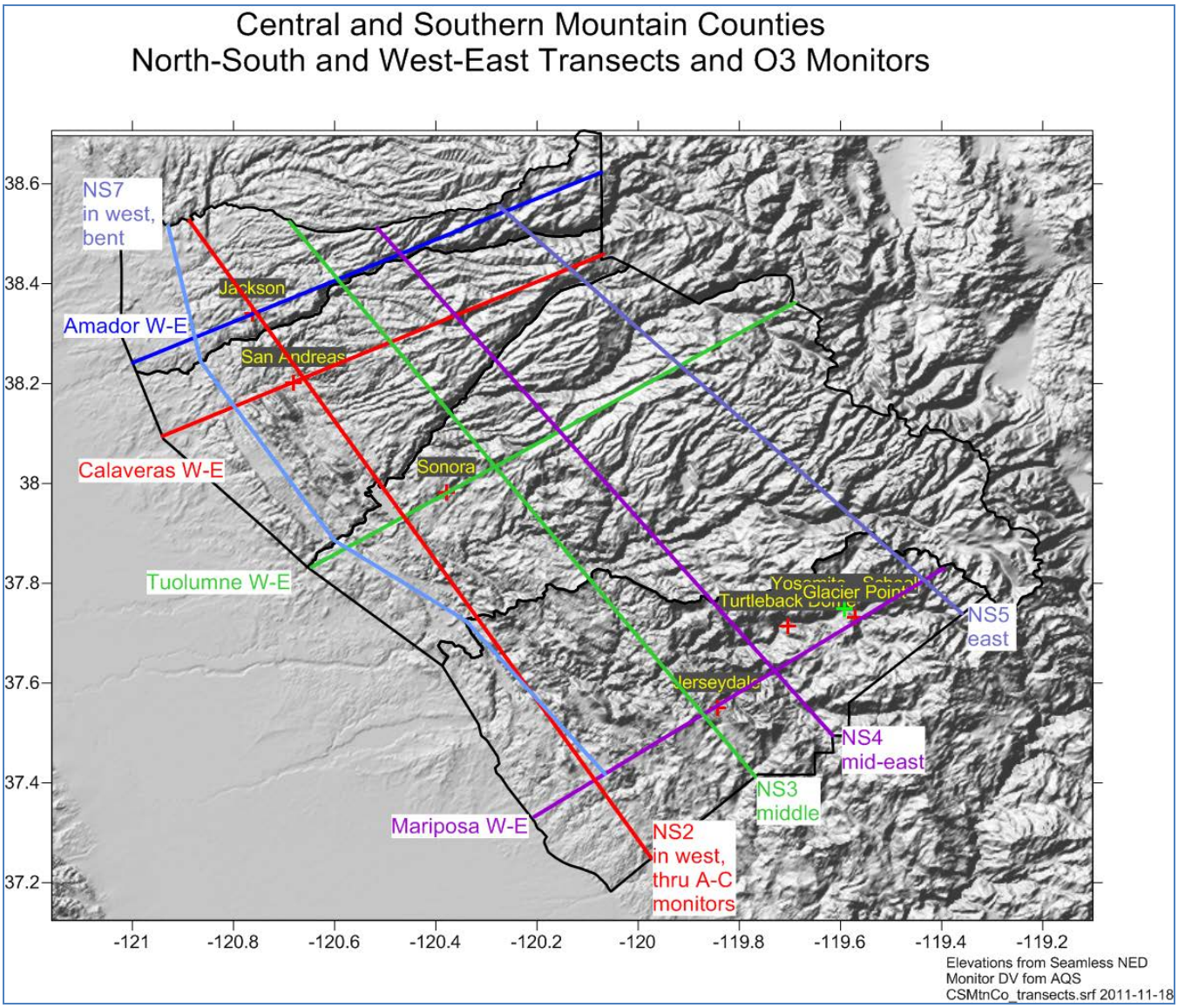
Factor 4: Geography/topography (mountain ranges or other air basin boundaries)

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.

Amador and Calaveras counties are the center counties of the "Mountain Counties Air Basin" as defined by ARB. This is not a "basin" in the sense of a single watershed or an area that is more or less surrounded by high terrain. Rather they are rural and largely mountainous counties that are similar in their better air quality, more pronounced topography, and rural character as compared to the more polluted, flatter, and more populous areas to the west (the broad Sacramento and San Joaquin valleys of central California). Both counties are in the foothills and mountains of the Sierra Nevada mountain range. Elevations increase from about 100 feet (24 meters) above mean sea level (MSL) in the west to over 8,000 feet (2,500 meters) in the east. The counties are characterized by rivers running roughly east-northeast to west-southwest, separated by mountains. The largest rivers are the Mokelumne River along the Amador-Calaveras border, the Calaveras River within Calaveras County, and the Stanislaus River along the southern boundary of Calaveras County. These rivers and their various forks and tributaries divide the counties into deep valleys. The strong relief of the terrain may be seen in Appendix 1, Map 1.

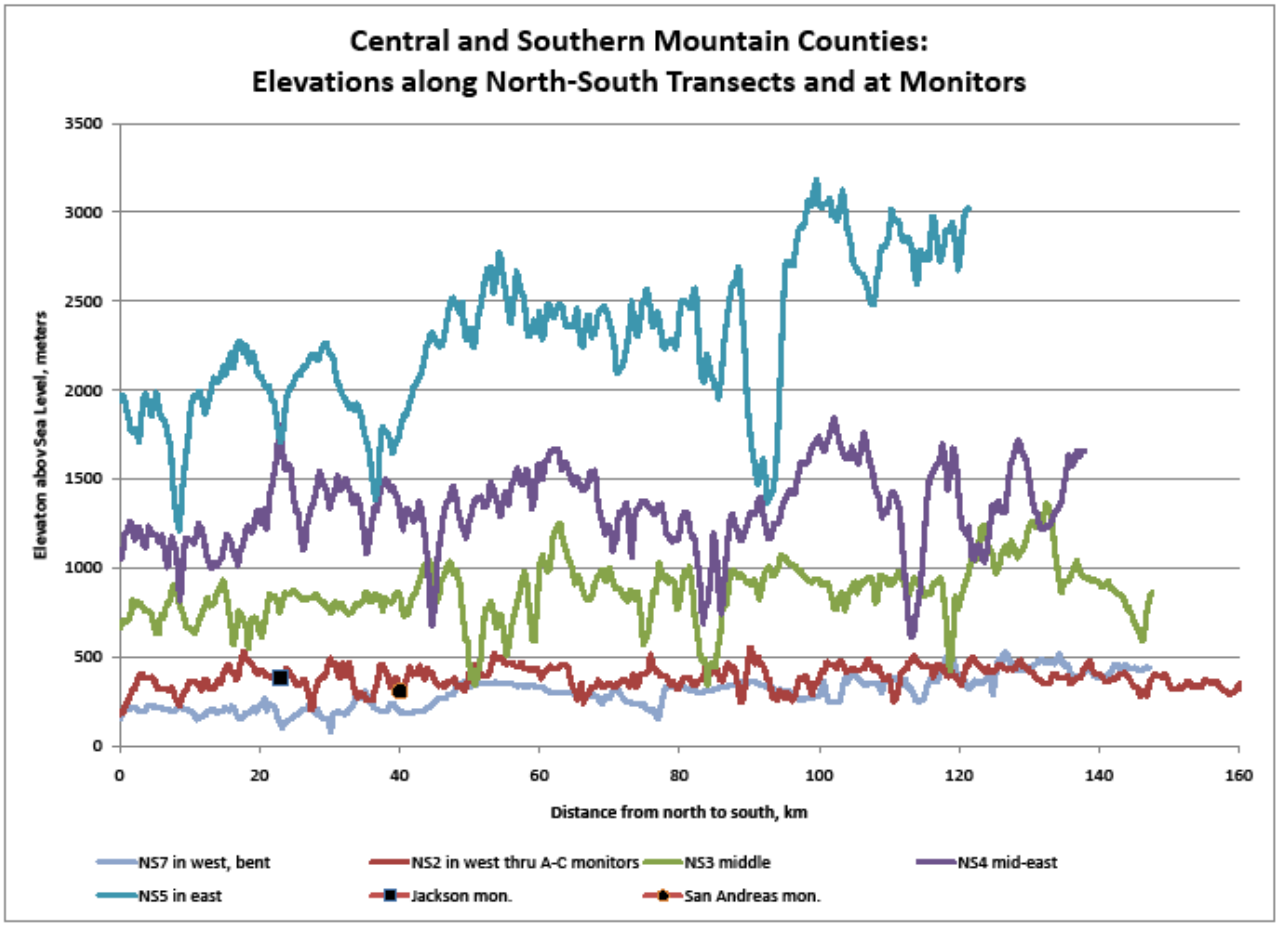
The eastern and western portions of the counties are different. The variation of elevation along a 20 kilometer (km) north-south transect is 500 meters and more in the east, decreasing to about 100 - 200 meters in the west. In the west, there are even some valleys with relatively low ridges oriented northwest-southeast, such as Gopher Ridge; these are roughly perpendicular to the orientation of the valleys in the east. Thus, in the eastern portion, the mountains separating the valleys pose a strong barrier to south-north air flow, but in the eastern portion the topography is only a partial barrier to the south-north transport of air, and thus to transport of pollution between the two counties (see Figures 3 - 5).

[2] "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California". California Environmental Protection Agency, Air Resources Board, March 2001. http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm



2011 DVs: Jackson-Clinton Road (Amador County): 71; San Andreas-Gold Strike Road (Calaveras County): 77; Sonora-Barretta Street (Tuolumne County): 74; Jerseydale (Mariposa County): 76; Yosemite National Park-Turtleback Dome (Mariposa County, CASTNET monitor): 77; Yosemite National Park-Glacier Point (Mariposa County, National Park Service monitor/non-regulatory): 72*. * = DV does not meet data completeness requirements.

Figure 3



* 2011 DVs: Jackson-Clinton Road (Amador County): 71; San Andreas-Gold Strike Road (Calaveras County): 77.

Figure 4

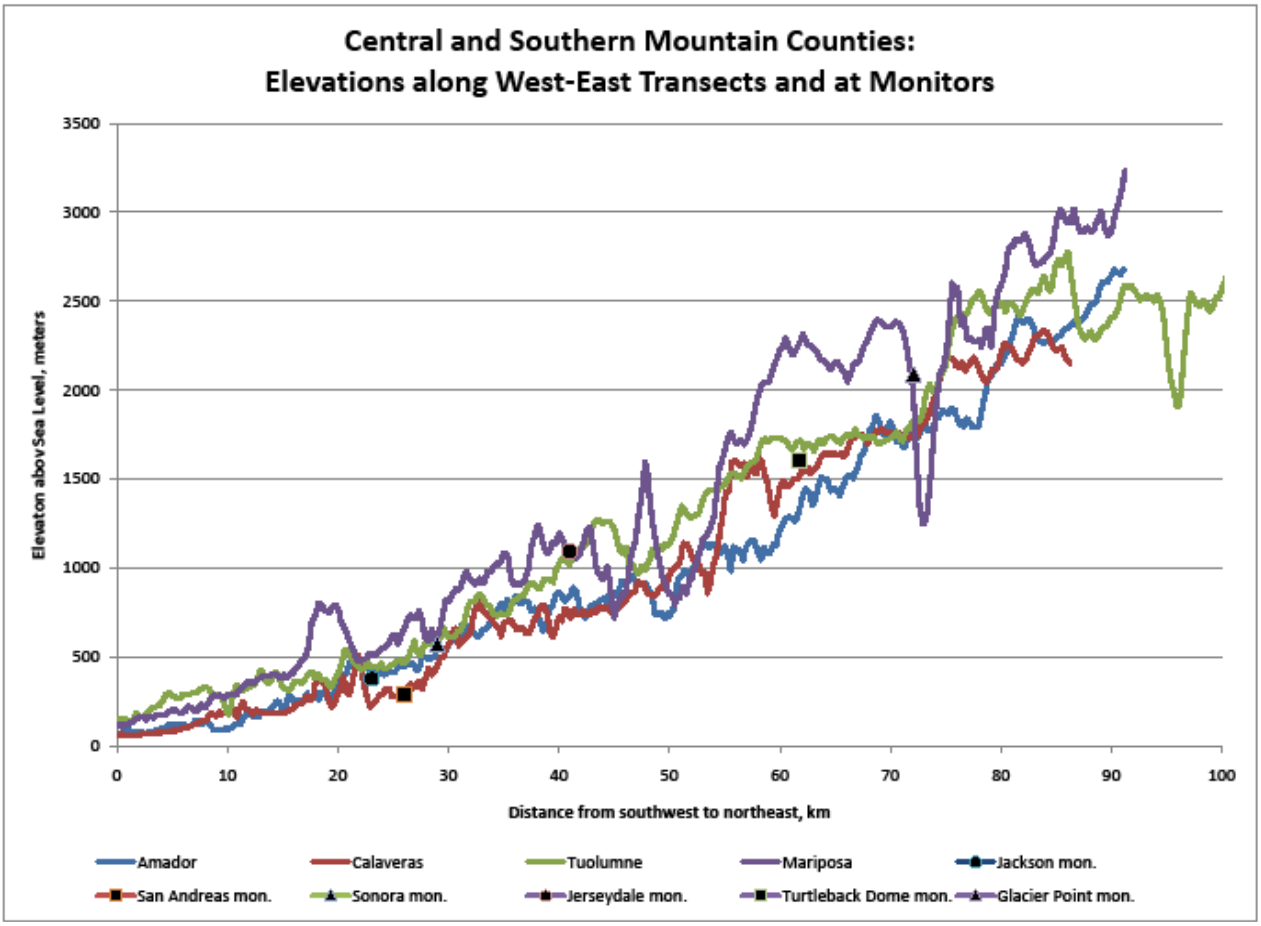


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Figure 5

Flow in the west-east direction is relatively unimpeded along the river valleys, which extend well east into the interior of the counties. Eastward transport of pollutants from the more urbanized areas to the west is thus possible during conditions of upslope flow. Conversely, westward transport of locally generated pollution is possible.

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, Indian country boundaries, 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 Central Mountain Counties nonattainment area has previously-established boundaries associated with the 1997 8-hour ozone NAAQS. EPA had proposed in December 2003 that these counties, along with two other violating mountain counties, be designated as part of the San Joaquin Valley nonattainment area for the 1997 ozone standard. EPA believed then, as we still believe, that the strongest contribution to the violations in the mountain counties comes from the San Joaquin Valley. However, the state requested grouping Amador and Calaveras counties as one nonattainment area, citing existing inter-county coordination, similarities in pollution transport paths, and support from the other factors analyzed. EPA accepted the state's recommendations, and in 2004, designated Amador and Calaveras counties as one multi-jurisdictional nonattainment area (Central Mountain Counties). In 2009, the state recommended the same nonattainment area for the 2008 standard. Both counties had violating monitors at the time. Now that certified, quality-assured 2011 data indicate that Amador County is attaining the 2008 ozone NAAQS based on its 2009-2011 DV, the state is requesting that we designate only Calaveras County as nonattainment. This recommendation follows the county and air district boundaries, but deviates from the existing Central Mountain Counties nonattainment area boundary, by excluding Amador County.

Amador and Calaveras counties are not grouped together to form a Core Based Statistical Area (CBSA) or a Combined Statistical Area (CSA). The Amador County boundary is also the boundary for the jurisdiction of the Amador County Air Pollution Control District. Likewise, the Calaveras County boundary is the jurisdictional boundary for the Calaveras County Air Pollution Control District. CARB's February 23, 2012 letter includes an attachment providing the state's justification for excluding Amador County from the nonattainment area under consideration. (See ARB's "Enclosure 1, Information to Support Area Designation Boundary Recommendations for the 2008 Federal 8-Hour Ozone Standard: Amador, Calaveras, Tuolumne, and Mariposa Counties.) The state's justification with respect to jurisdictional boundaries is that, although both Amador and Calaveras counties are in the Mountain Counties Air Basin, as defined by the state, each county has its own air agency:

> "Air quality in each county is managed at the local level through land use and development planning practices, and the local APCD [Air Pollution Control District] is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and State air quality laws. With respect to nonattainment planning, it is most efficient to have the nonattainment boundary coincide with the jurisdictional boundary of the area(s) that experience or contribute to violations of the standard." (Enclosure 1, page 2)

Attainment in the Calaveras County nonattainment area will be affected by reductions in nearby nonattainment areas, including the San Joaquin Valley and Sacramento Metro nonattainment areas. The San Joaquin Valley and Sacramento APCD's will be making emission reductions to achieve attainment with the 2008 ozone NAAQS in their nonattainment areas. As part of nonattainment area planning throughout the state, ARB has and will continue to make reductions to mobile source and consumer product emissions. Air quality planning for Calaveras County will be performed by the Calaveras County APCD.

Conclusion

Based on the assessment of factors described above, EPA has concluded that Calaveras County should be included in the Calaveras County, CA nonattainment area because it is violating the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Certified air quality data (Factor 1) for 2009-2011 indicate that the monitor in Calaveras County violates the 2008 8-hour ozone standard. The monitor in Amador County indicates that Amador County is attaining the 2008 ozone standard based on 2011 data.

Emissions and emission-related data (Factor 2) show that total emissions of ozone precursors from Amador and Calaveras counties are very small compared to ozone precursor emissions from the counties in the San Joaquin Valley and Sacramento Metro nonattainment areas. Emissions and emission- related data further show, although most of the stationary sources of ozone precursor emissions are located in Amador County, Calaveras County has slightly higher emissions of VOC than Amador County and the two counties have similar levels of NO_x emissions. Additionally, the road that sees the heaviest truck and non-truck traffic is located in Amador County; however, VMT in Calaveras County is higher than Amador County. Calaveras County has a slightly larger population and showed greater population growth over 2000-2010, while Amador has a slightly higher population density.

Meteorology and weather or transport patterns (Factor 3) show that the dominant wind direction, from the south-southwest, is indicative of transport from the San Joaquin Valley nonattainment area, but there may be some transport of pollutants between Amador and Calaveras counties. EPA notes that 2011 was anomalously cool, potentially creating localized ozone patterns that are not representative of expected normal conditions or ongoing trends.

Geography and topography (Factor 4) shows that Amador and Calaveras counties contain complex terrain. Air flow in the west-east direction is relatively unimpeded along the river valleys, which extend well east into the interior of each county. Eastward transport of pollutants from the more urbanized areas to the west such as the Sacramento Metro area is thus possible during conditions of upslope flow. Conversely, westward transport of locally generated pollution is possible.

In considering jurisdictional boundaries (Factor 5), EPA notes that Amador and Calaveras counties were designated nonattainment as the Central Mountain Counties nonattainment area for the 1997 ozone NAAQS in 2004. Now that certified and quality-assured 2011 data indicate that Amador is attaining the NAAQS, the state is requesting that we designate only Calaveras County as nonattainment and that we designate Amador County as attainment for the 2008 standard. The state's multi-factor analysis highlights that Amador and Calaveras are separate air pollution control districts with separate jurisdictional boards and authorities.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. The violating monitor is in Calaveras County. Our analysis of the Meteorology and Geography factors suggest that occasional transport of ozone and/or ozone precursors between Amador and Calaveras counties is possible. However, EPA cannot conclusively determine that Amador County contributes to nonattainment in Calaveras County. The relatively low ozone precursor emissions from both counties compared to the counties in the San Joaquin Valley and

Sacramento Metro nonattainment areas, along with the region's meteorology and geography is most suggestive that the violations in Calaveras are attributable primarily to contributions from the broader valley areas. Also, Calaveras County is a separate jurisdictional air pollution district. Therefore, EPA is concluding that it is appropriate to designate only Calaveras County, CA as nonattainment for the 2008 ozone NAAQS. The San Joaquin Valley and Sacramento Metro areas are separately designated as "nonattainment."

California
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Technical Analysis for Chico (Butte County)

Figure 1 is a map of the Chico (Butte County), 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 for Butte County. Also shown is the boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

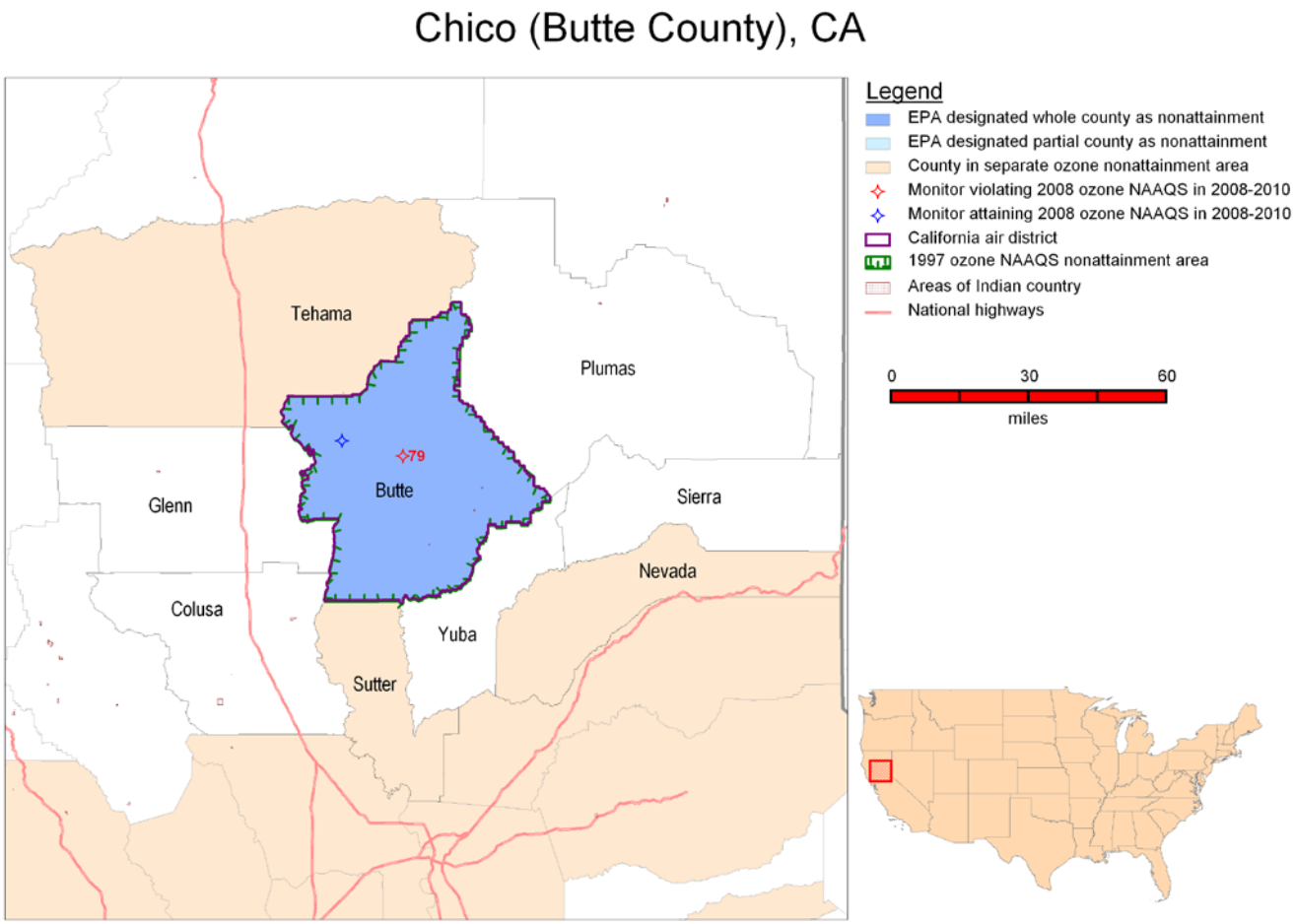


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2008-2010 (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entirety of Butte County. Several areas of Indian country of federally recognized tribes were included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same county be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 Butte County. These 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 Chico (Butte County), California, and areas of Indian country (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as part of the Butte County 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 Chico (Butte County).

Butte County	State or Tribe-Recommended Nonattainment Counties or Areas of Indian Country	EPA's Nonattainment Counties or Areas of Indian Country
Butte County, CA	Butte County	Butte County
Berry Creek Rancheria of Maidu Indians of California	N/A	Berry Creek Rancheria of Maidu Indians of California
Enterprise Rancheria of Maidu Indians of California	N/A	Enterprise Rancheria of Maidu Indians of California
Mechoopda Indian Tribe of Chico Rancheria	N/A	Mechoopda Indian Tribe of Chico Rancheria
Mooretown Rancheria of Maidu Indians of California	N/A	Mooretown Rancheria of Maidu Indians of California

N/A = Tribe did not submit a recommendation

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Butte County 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 Butte County nonattainment area comprises Butte County (see Map 2a in Appendix 2). The 2010 DV for the ozone NAAQS for Butte County is shown in Table 2.

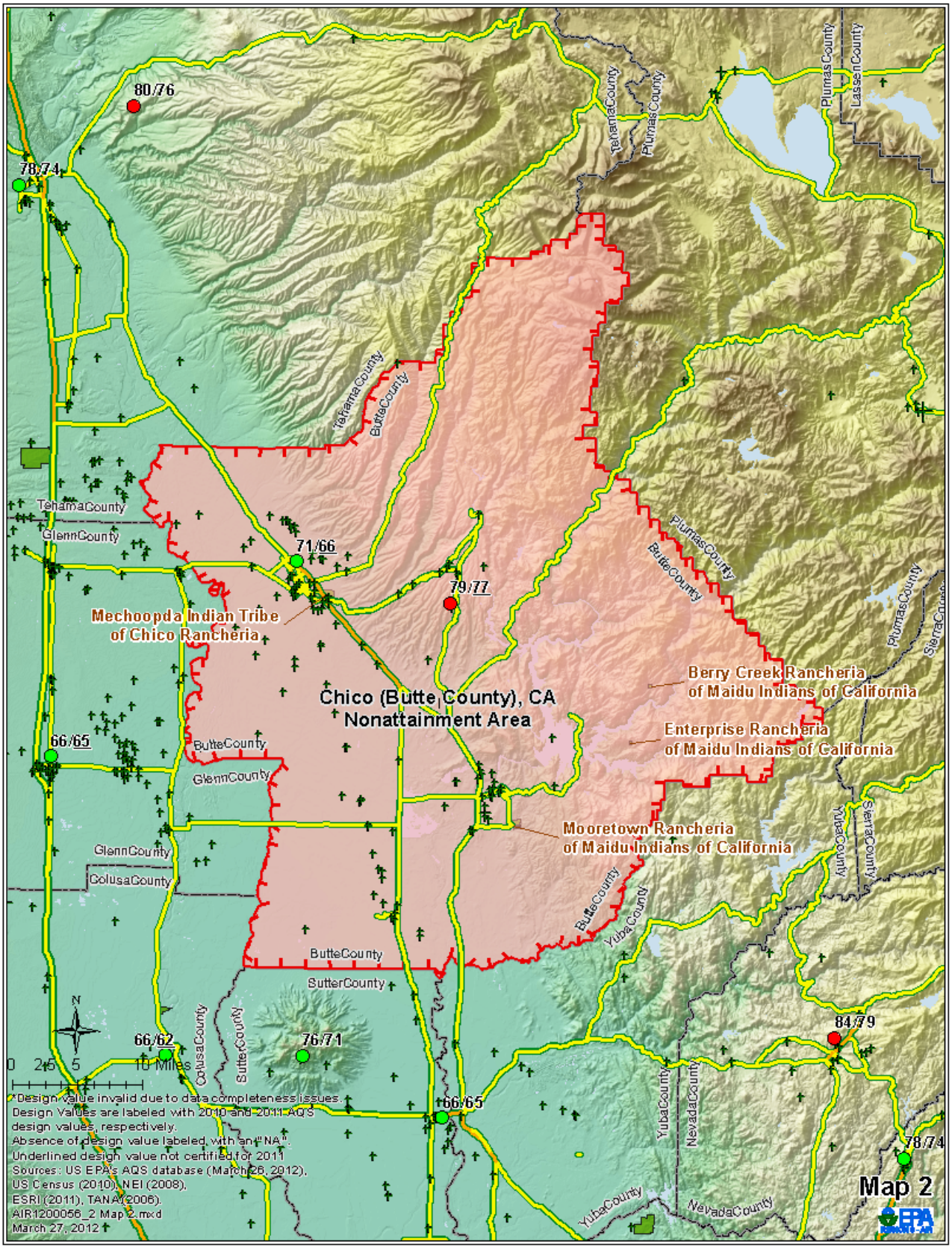
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Butte, CA	Yes	79

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Butte County nonattainment area are shown in Appendix 1, Map 2. 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 2 in Appendix 1 includes preliminary 2011 DVs for the existing Butte County 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 Butte County 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.

A monitor in Butte County shows a violation of the 2008 8-hour ozone standard based on 2008-2010 ambient air quality monitoring data. Therefore, this area is included in the Chico (Butte County) 2008 ozone NAAQS nonattainment area (as listed in Table 1, above).



From Appendix 1, Map 2: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of the ozone precursors NO_x and VOC (given in tons per year) for Butte County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Butte, CA	Yes	8,640	7,581
	Areawide:	8,640	7,581

Stationary sources are generally located along the major roadway running north-northwest through Butte County, generally clustered in the two denser population centers (see Maps 2 and 2a in Appendices 1 and 2).

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 NO_x and VOC emissions that may contribute to ozone formation in an area of interest. Rapid population 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 Butte County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Butte, CA	Yes	220,000	0.13	16,093	+8%
	Areawide:	220,000	0.13	16,093	+8%

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)

Although the county has experienced population growth in terms of a percentage, the actual number of people in the county is low. The population is centered in several urban areas that are well within the county boundaries (Chico and Paradise, for example). Maps 2 and 2a in Appendices 1 and 2, respectively, show population in the 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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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 for Butte County.

Table 5. Traffic (VMT) data

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Butte, CA	Yes	1,925
	Areawide:	1,925

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

Map 2 in Appendix 1 shows non-truck traffic volumes through Butte County. Heaviest non-truck traffic volumes occur over a 15-mile stretch of Highway 99 that runs through Butte County from the northwest to southeast. Roadways that link Butte County with the neighboring counties of Plumas, Yuba, Sutter, Glenn, and Tehama show lower annual average daily non-truck traffic volumes than the 15-mile stretch of Highway 99 through Butte County.

Factor 3: Meteorology (weather/transport patterns)

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

The western portion of Butte County is in the broad, flat, Sacramento Valley, and shares the valley's hot and dry summer conditions. This is conducive to ozone formation, although the relatively small emissions inventory numbers suggests there may also be ozone transport from the more populous areas to the west and south.

Butte County air flow is most frequently from the south-southwest according to the 30-year average direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (Figure 2). This is consistent with the orientation of the river valleys and ridges in the moutainous eastern portion of the county, and with flow northward in the Central Valley of California. There is also a north-northwest component, which may reflect along-valley flow in the flatter western portion of the county.

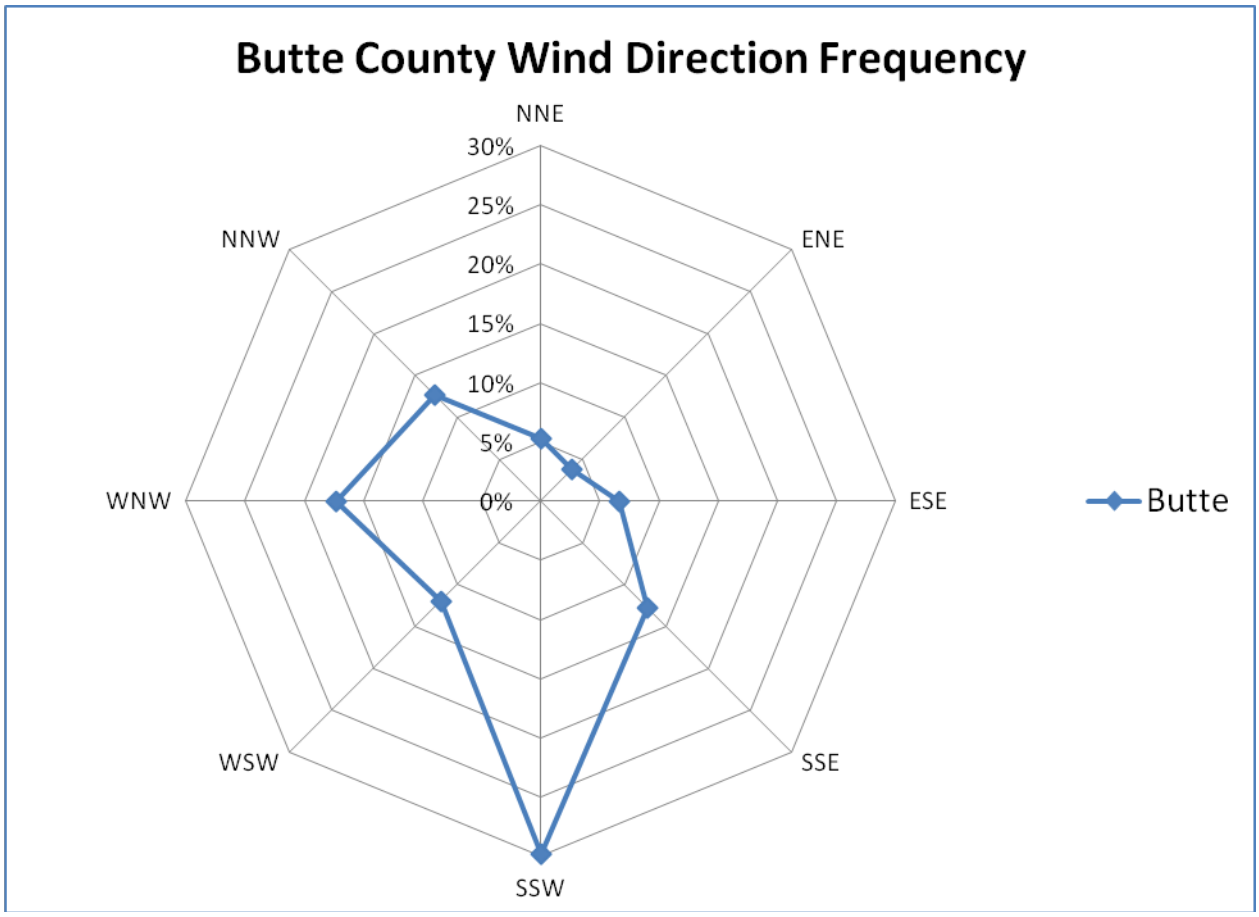


Figure 2

The western portion of the county is likely subject to the meteorology conditions of, and flow from, the neighboring Sacramento Valley to the west and south. Previous assessments of pollution transport found that the broader Sacramento area (which is about the same as the non-mountainous portions of the Sacramento Metropolitan ozone nonattainment area) can have an overwhelming impact on counties of the Upper Sacramento Valley, including Butte County.[1] However, the middle and eastern portions of the county are within the foothills of the Sierra Nevada mountain range, rather than in the flats of Sacramento Valley. These portions would tend to be more dominated by upslope and downslope flows of the strongly sloped landscape, as well as enhanced dispersion due to turbulence in the rough terrain.

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 Butte County area does not have any geographical or topographical barriers that would prevent air pollution transport within its airshed. Therefore, this factor did not play a substantial role in this evaluation.

[1] "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California." California Environmental Protection Agency, Air Resources Board, March 2001, p.7.
http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm

The western portion of Butte County is part of the broad, flat Sacramento Valley, which is the northern half of California's Central Valley. Other than distance, in this western portion there is little barrier to the transport of pollutants from areas farther south. The eastern portion of Butte County is characterized by river valleys running roughly east-northeast to west-southwest, separated by mountain ridges. This tends to inhibit north-south flow, but allow east-west upslope and downslope flow. The increasing elevations eastward are likely a partial barrier to transport of pollutants to the less-populated eastern part of the county.

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 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.

Butte County has previously-established nonattainment boundaries associated with the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS. The state's recommended nonattainment area boundary is the County boundary, as well as the jurisdictional boundary for the local air planning agency, the Butte County Air Quality Management District. This boundary also represents the jurisdictional boundary of the local transportation planning agency, the Butte County Association of Governments (BCAG). The County also represents the entirety of the Chico metropolitan statistical area (MSA), named after its most populous city, Chico. The MSA is not associated with a larger CSA. As noted in Factor 1 above, Butte County is part of the Sacramento Valley Air Basin.

Butte County also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries.

Conclusion

Based on the assessment of factors described above, EPA is designating Chico (Butte County), CA and all areas of Indian country located in Butte County, nonattainment because it is violating the 2008 ozone NAAQS. This area includes Indian country of four tribes: Berry Creek Rancheria of Maidu Indians of California, Enterprise Rancheria of Maidu Indians of California, Mechoopda Indian Tribe of Chico Rancheria, and Mooretown Rancheria of Maidu Indians of California.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that Butte County is

violating the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, based on Factor 1, this area should be designated nonattainment.

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5) support the nonattainment boundaries recommended by the state. The Chico (Butte County), CA nonattainment area has previously established nonattainment boundaries associated with the 1997 8-hour ozone NAAQS, based on the Butte County boundary. The state has recommended the same boundary for the 2008 ozone NAAQS. Given the preceding analysis, EPA concurs with the state's recommendation to designate the same area as nonattainment for the 2008 ozone NAAQS that is currently nonattainment for the 1997 ozone NAAQS.

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Technical Analysis for Imperial County

Figure 1 is a map of the Imperial County, 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 for Imperial County. Also shown is the boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

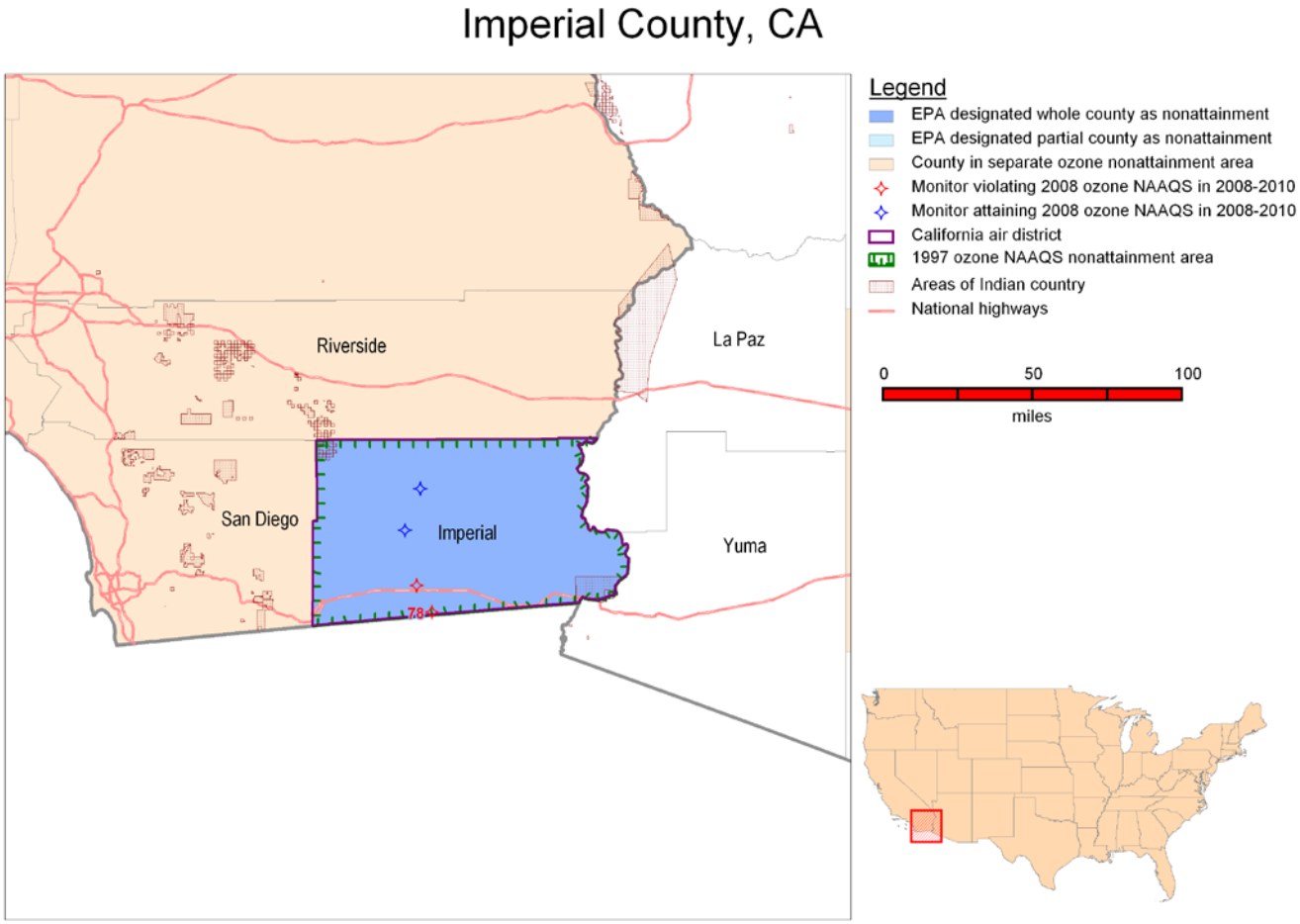


Figure 1

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entirety of Imperial County. Several areas of Indian country of federally recognized tribes were included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same county be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 Imperial County. These 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 Imperial County in California and all the areas of Indian country in Imperial County (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as part of the Imperial County 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 Imperial County.

Imperial County	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country
Imperial County, CA	Imperial County	Imperial County
Quechan Tribe of the Fort Yuma Indian Reservation[1]	N/A	Quechan Tribe of the Fort Yuma Indian Reservation (p)
Torres Martinez Desert Cahuilla Indians [2]	N/A	Torres Martinez Desert Cahuilla Indians

p = partial
N/A = Tribe did not submit recommendation.
[1] The Quechan Tribe of the Fort Yuma Indian Reservation (Quechan) has lands in both the Imperial County nonattainment area and Yuma County, Arizona. Non-contiguous lands of Quechan are being designated with the surrounding areas. This technical analysis addresses only those areas of Indian country within the Imperial County nonattainment area.
[2] The Torres Martinez Desert Cahuilla Indians (Torres Martinez) have lands in both the Imperial County nonattainment area and the Riverside County (Coachella Valley) nonattainment area. Non-contiguous lands of Torres Martinez are being designated with the surrounding areas. This technical analysis addresses only those areas of Indian country within the Imperial County nonattainment area.

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Imperial County nonattainment area, based on data from the 2008-2010 (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.]

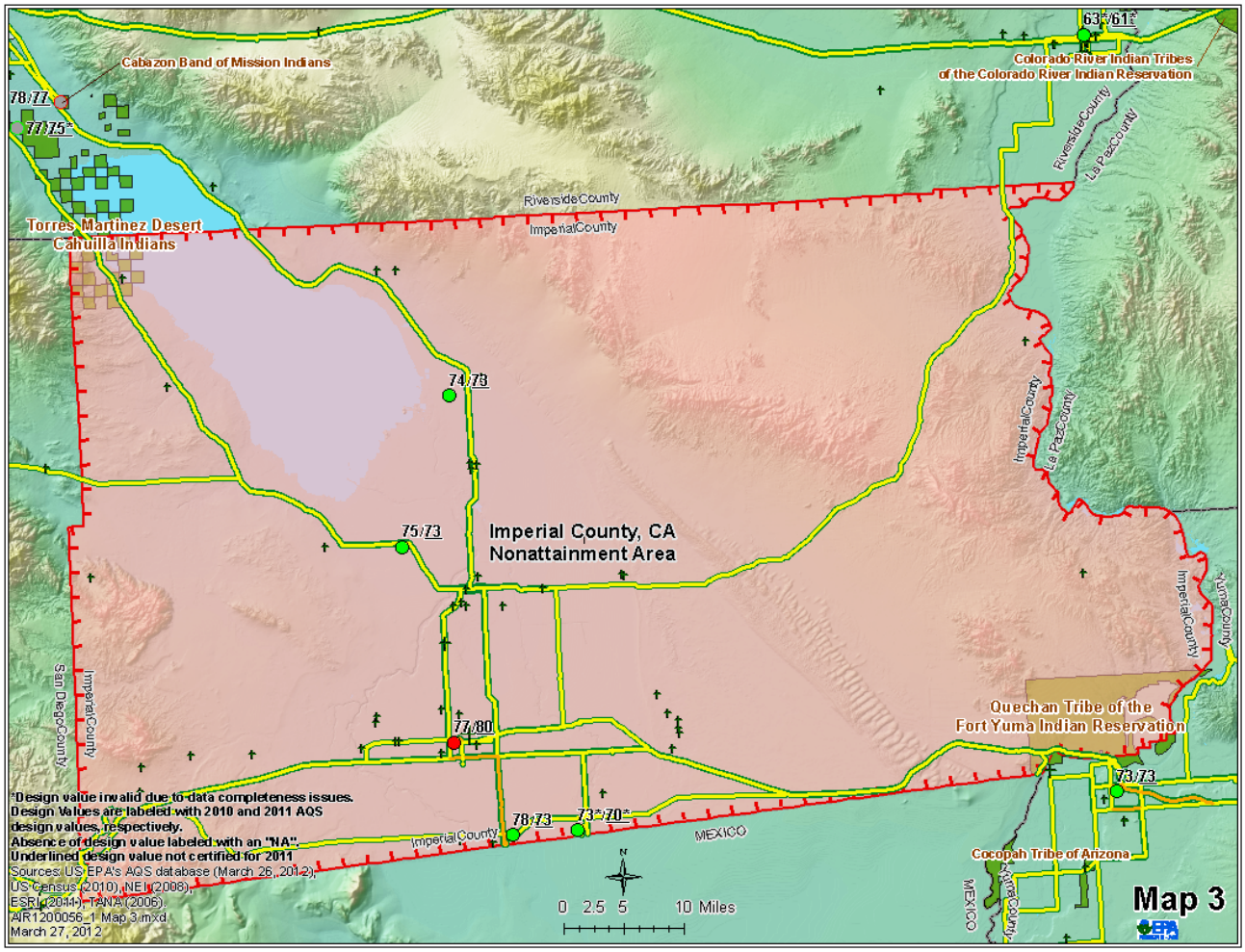
The existing Imperial County nonattainment area comprises Imperial County (see Map 3a in Appendix 2). The 2010 DV for the ozone NAAQS for Imperial County is shown in Table 2.

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Imperial, CA	Yes	78

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Imperial County nonattainment area are shown in Appendix 1, Map 3. 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 3 in Appendix 1 includes preliminary 2011 DVs for the existing Imperial County 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 Imperial County 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 3: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in Imperial County show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, this area is included in the Imperial County nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential

for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Imperial County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Imperial, CA	Yes	13,108	8,662
	Areawide:	13,108	8,662

Compared to neighboring counties, such as San Diego County to the west (greater than 50,000 tpy of NO_x and VOC) and Riverside County to the north (greater than 50,000 tpy NO_x and greater than 25,000 tpy VOC), Imperial County's emissions of ozone precursors are relatively low. As seen in Map 3 (Appendix 1), stationary sources in Imperial County are generally located along major roadways. EPA is designating upwind areas that also contribute to Imperial County monitored violations (for example, Los Angeles-South Coast Air Basin and Riverside County (Coachella Valley)) as separate nonattainment areas.

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 NO_x and VOC emissions, which contribute to ozone formation. Rapid population 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 Imperial County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Imperial, CA	Yes	174,528	0.04	32,117	+23%
	Areawide:	174,528	0.04	32,117	+23%

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 3 and 3a in Appendices 1 and 2, respectively, show population in the area. Imperial County's population is experiencing high growth on a percentage basis. However, the population is still comparatively small and focused on three small urban centers in the south-central and central portions of the county, near the international border with Mexico (see Map 3a of Appendix 2). Most of the central portion of the county is a wide valley with farmland, and most of the county has very low population.

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Imperial, CA	Yes	2,021
	Areawide:	2,021

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

Imperial County contains very few roadways that experience heavy non-truck traffic (see Map 3 in Appendix 1).

Factor 3: Meteorology (weather/transport patterns)

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

The "Staff Report - Analysis of the Imperial County 2009 1997 8-Hour Ozone Modified Air Quality Management Plan"[1] by California Air Resources Board discusses the meteorological conditions in Imperial County in the Salton Sea Air Basin (SSAB).

> "Imperial County is part of the Salton Sea Air Basin. Winters are mild and dry with daily average temperature ranges between 65 and 75ºF, although daily high temperatures of up to 80ºF are not uncommon. Summers are extremely hot with daily average temperature ranges between 104 and 115ºF and daily high temperatures of up to 120ºF. The County has an annual rainfall of approximately 3 inches, occurring mostly from late summer to midwinter."

The South Coast Air Quality Management District's "Final 2007 Air Quality Management Plan" also discusses transport to the Salton Sea Air Basin, including the Riverside County portion of the basin and the desert areas further inland:

> "Ozone in the atmosphere of the Riverside county portion of SSAB is both directly transported from the Basin and formed principally from precursors emitted upwind. These precursors are emitted in greatest quantity in the coastal

[1] "STAFF REPORT Analysis of the Imperial County 2009 1997 8-Hour Ozone Modified Air Quality Management Plan and Reasonably Available Control Technology Plan" November 18, 2010, California Air Resources Board. http://www.arb.ca.gov/planning/sip/planarea/imperial/ozone_staffrep.pdf

and central Los Angeles county areas of the Basin. The Basin's prevailing sea breeze causes polluted air to be transported inland. As the air is being transported inland, ozone is formed, with peak concentrations occurring in the inland valleys of the Basin in an area extending from eastern San Fernando Valley through the San Gabriel Valley into the Riverside-San Bernardino area and the adjacent mountains. As the air is transported still further inland into the desert areas, ozone concentrations decrease due to dilution."[2]

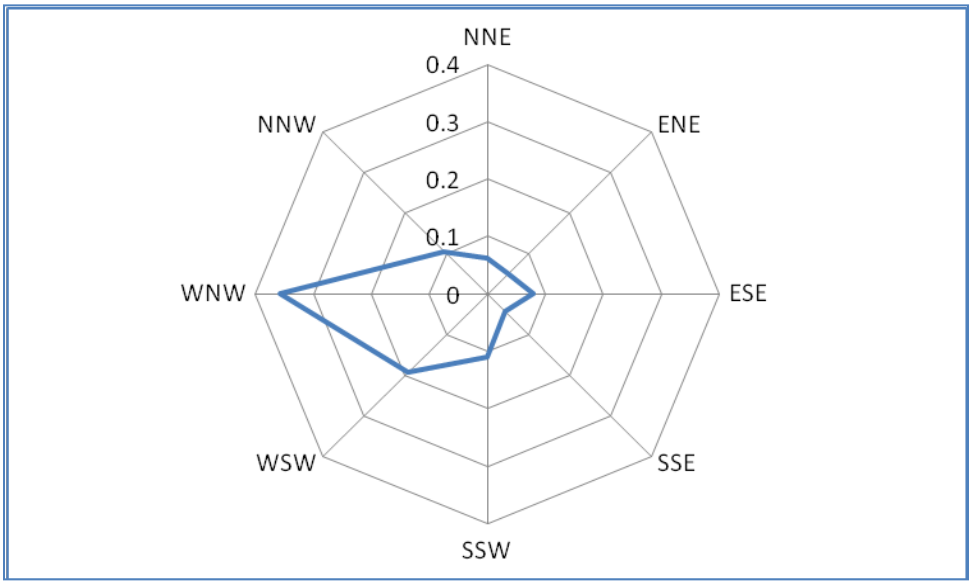


Figure 2: Imperial County – Summer Wind Frequency Distribution

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

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 Imperial County area is shown in Appendix 1, Map 3a.

The "Staff Report - Analysis of the Imperial County 2009 1997 8-Hour Ozone Modified Air Quality Management Plan"[3] states:

> "Imperial County is part of the Salton Sea Air Basin. The Imperial County Ozone Nonattainment Area consists of the entire county, and is under the jurisdiction of the Imperial County Air Pollution Control District (District). Imperial County

[2] "Final 2007 Air Quality Management Plan", Appendix II

[3] "STAFF REPORT Analysis of the Imperial County 2009 1997 8-Hour Ozone Modified Air Quality Management Plan and Reasonably Available Control Technology Plan", November 18, 2010, California Air Resources Board. http://www.arb.ca.gov/planning/sip/planarea/imperial/ozone_staffrep.pdf

covers 4,482 square miles of mostly arid lands in the southeastern corner of California.[4] It is bordered by Mexico to the south, Arizona on the east, San Diego County on the west, and Riverside County on the north. Imperial County's elevation ranges from more than 2,800 feet on the mountain summits to the east to 230 feet below sea level in the Salton Sea."

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 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.

Imperial County has previously established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. The entire county falls under the air quality management jurisdiction of the Imperial County Air Pollution Control District. Transportation planning in the county is performed by the Imperial Valley Association of Governments, which has jurisdiction throughout the county. The entirety of Imperial County comprises the El Centro metropolitan statistical area (MSA). To the south, the county line is also the international U.S.-Mexico border.

The Imperial County area also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries.

Torres Martinez Desert Cahuilla Indians (Torres Martinez) is a federally recognized tribe that has non-contiguous lands in both Imperial County and Riverside County. These portions of Indian country and the surrounding nonattainment areas are shown in Map 3a in Appendix 2. Due to the non-contiguous nature of these lands, the portions of Torres Martinez in Imperial County will be designated as part of the Imperial County nonattainment area.

The Quechan Tribe of the Fort Yuma Indian Reservation (Quechan) is a federally recognized tribe that has contiguous lands spanning Imperial County, California and Yuma County, Arizona. This portion of Indian country and the surrounding nonattainment areas is shown in Map 3a in Appendix 2. Because the

[4] "STAFF REPORT Analysis of the Imperial County 2009 1997 8-Hour Ozone Modified Air Quality Management Plan and Reasonably Available Control Technology Plan", November 18, 2010, California Air Resources Board. http://www.arb.ca.gov/planning/sip/planarea/imperial/ozone_staffrep.pdf

Tribe's area of Indian country crosses state boundaries, with the majority of the Tribe's land in Imperial County, the portions of Quechan in Imperial County will be designated as part of the Imperial County nonattainment area. The remainder of Quechan reservation land located in Yuma County, Arizona, is being designated as "unclassifiable/attainment" consistent with the surrounding area in Yuma County, Arizona.

Conclusion

Based on the assessment of factors described above, EPA is designating Imperial County, CA and all areas of Indian country located in Imperial County, nonattainment because the area violates the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in Imperial County show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, Factor 1 supports designating Imperial County as nonattainment.

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5) support the nonattainment boundaries recommended by the state. EPA notes that these boundaries are consistent with the boundaries from the 1-hour and the existing 1997 8-hour ozone nonattainment area, therefore EPA's conclusion is to concur with the state's recommendation.

EPA's boundary for Imperial County also includes two different tribes. Where practically possible, current EPA policy discourages splitting contiguous areas of Indian country between two separate nonattainment areas. However, due to the non-contiguous nature of the Torres Martinez areas of Indian country (in Riverside and Imperial Counties) and because Quechan's areas of Indian country straddle two states (in Imperial County and Yuma County, Arizona), EPA is designating only the portions of Torres Martinez and Quechan located in Imperial County as part of the Imperial County, CA nonattainment area. The portion of Torres Martinez located in Riverside County is being designated nonattainment with the Riverside County (Coachella Valley), CA nonattainment area, and the Yuma County, Arizona portion of Quechan is being designated "unclassifiable/attainment," consistent with the surrounding area in Yuma County, Arizona.

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

Technical Analysis for Kern County (Eastern Kern)

Figure 1 is a map of Kern County. The map provides relevant information including the locations and design values of air quality monitors, county names and boundaries, and indicates EPA's partial county nonattainment designation for Kern County (Eastern Kern), CA. See Map 4 in Appendix 1 (and included in Factor 1, below) for a detailed map of the partial county boundary that EPA is designating nonattainment.

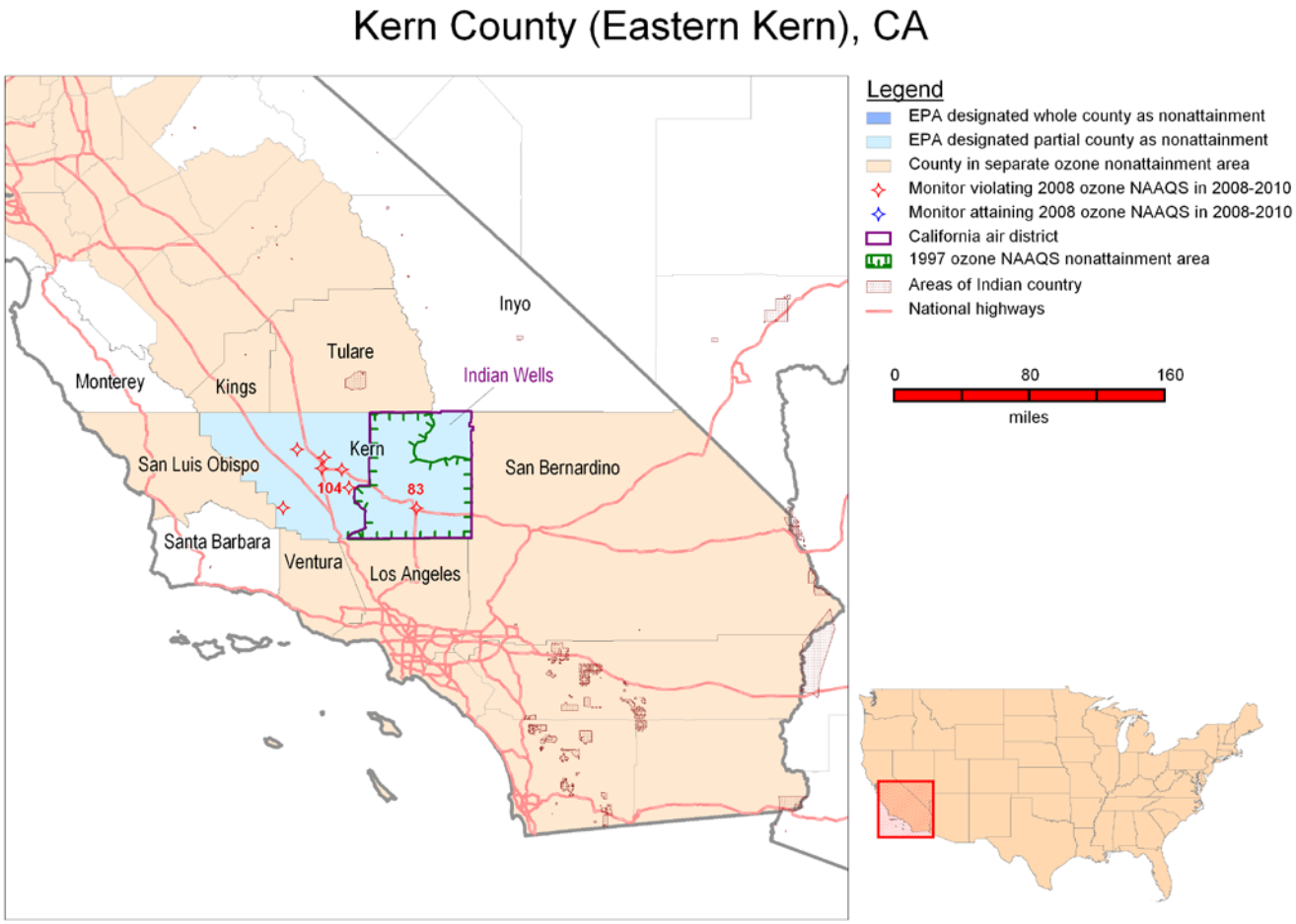


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2008-2010 (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the same eastern portion of Kern County.

In March 2009, California recommended a larger partial-county area be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data and revised its recommendation for Kern County. These 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).

In the 2009 recommendation, the state expanded the recommended area to include the northeast corner of the county, Indian Wells Valley. The state indicated that it had monitoring data from the Indian Wells Valley that exceeded the 2008 ozone NAAQS. The data came from a monitor in the China Lake portion of Indian Wells Valley at a monitor that is not reported to EPA. At the time, there was also a violating monitor to the east at Trona, in San Bernardino County, and to the north in Death Valley, in Inyo County. In the state's 2011 update to their recommendations, based on more recent air quality data, the state has asked EPA not to include the previously-recommended Indian Wells Valley and instead maintain the existing 1997 ozone NAAQS nonattainment area. Neither the Death Valley nor the Trona monitors are violating with 2008-2010 or preliminary 2009-2011 air quality data, and the state no longer recommends the areas around these monitors to be designated nonattainment.

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating Kern County (Eastern Kern), excluding Indian Wells Valley, in California (identified in Table 1 below) nonattainment for the 2008 ozone NAAQS as part of the Kern County (Eastern Kern) nonattainment area.

Table 1. State's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Kern County (Eastern Kern).

Eastern Kern	State-Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country
Kern County, CA	Kern County (p)	Kern County (p)
No areas of Indian country in the nonattainment area		

p = partial

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Eastern Kern nonattainment area, based on data from the 2008-2010 (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 Eastern Kern nonattainment area comprises the eastern portion of Kern County (see Map 4a in Appendix 2). The 2010 DV for the ozone NAAQS for the entirety of Kern County is shown in Table 2.

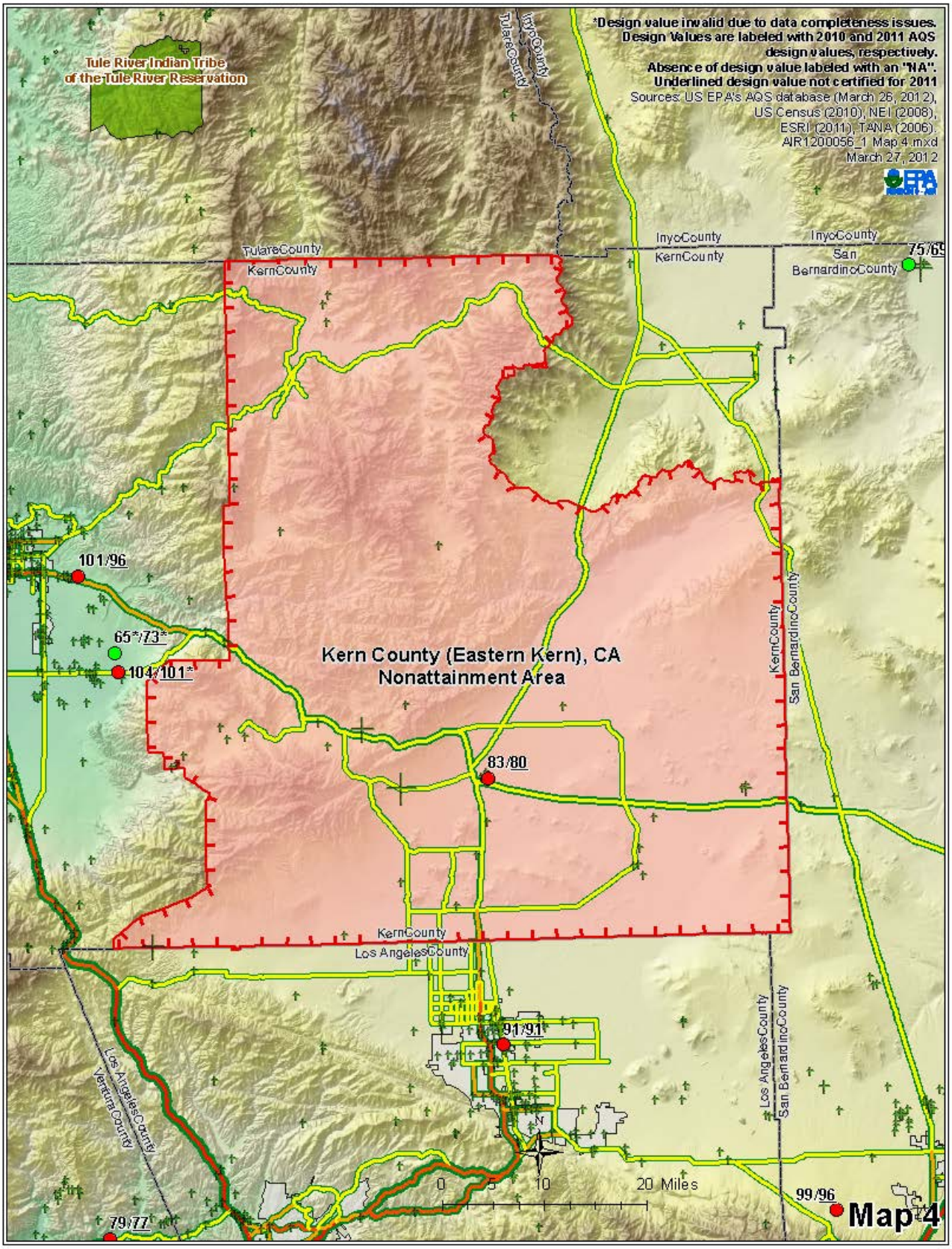
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Kern, CA	Yes (partial)	104

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Kern County (Eastern Kern) nonattainment area are shown in Appendix 1, Map 4 (inserted below). EPA is designating the western part of Kern County as part of the San Joaquin Valley nonattainment area. The design value shown in Table 2 is from a monitor located within this western portion of Kern County. As shown in Appendix 1, Map 4, there is one ozone monitor within the existing Eastern Kern nonattainment area with data in EPA's Air Quality System (AQS); this monitor has a 2010 DV of 83 ppb. The existing nonattainment area excludes the northeastern corner of Kern County, also known as the Indian Wells Valley. The closest monitor to this part of Kern County is the Trona monitor in San Bernardino. Located approximately 21 kilometers from Kern County, this monitor is attaining the standard based on 2008-2010 data. A monitor to the north, in Inyo County, is also attaining the standard based on 2008-2010 data.

California's ozone season encompasses the entire year. Certified, quality assured data are available in AQS for all areas through calendar year 2010. Map 4 in Appendix 1 includes preliminary 2011 DVs for the existing Kern County (Eastern Kern) 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 Kern County (Eastern Kern) 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 4: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1

The monitor in the existing Kern County (Eastern Kern) nonattainment area (which includes the eastern portion of Kern County and excludes the portion of Kern in the existing San Joaquin Valley nonattainment area and Indian Wells Valley) shows a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, this area is included in the Kern County (Eastern Kern) nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Kern County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Kern, CA	Yes (partial)	70,256	32,300
	Areawide:	70,256	32,300

Kern County is geographically large, covering over 8,000 square miles. Most of the stationary sources of ozone precursor emissions are located on the western side of Kern County within the San Joaquin Valley nonattainment area (see Map 13 in Appendix 1). In the eastern portion of Kern County, there are two very large sources of ozone precursors (greater than 500 tons per year), however, overall, there are very few stationary sources located in the eastern portion of Kern County compared to the western portion of Kern County (see Map 4 in Appendix 1 for Eastern Kern; see Map 13 in Appendix 1 for the western portion of Kern County).

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 NO_x and VOC emissions, which may contribute to ozone formation. Rapid population or vehicle miles traveled (VMT) growth (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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Kern, CA	Yes (partial)	839,631	0.10	176,121	+27%
	Areawide:	839,631	0.10	176,121	+27%

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 4 and 4a in Appendices 1 and 2, respectively, show population for the area. Overall, from 2000 - 2010, Kern County has experienced a high level of population growth. Its population is split between the western portion in the San Joaquin Valley and the eastern portion. In terms of population centers, Eastern Kern is distinct from the western portion of Kern County because it does not contain large population centers (see Map 4a of Appendix 2).

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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 for Kern County.

Table 5. Traffic (VMT) data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Kern, CA	Yes (partial)	8,578
	Areawide:	8,578

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

Kern County has a high VMT compared to other counties in the San Joaquin Valley (see Map 4 versus Map 14 of Appendix 1). Traffic volume in the eastern portion of Kern County is light compared to traffic in the western portion of Kern County.

Factor 3: Meteorology (weather/transport patterns)

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

The State has presented the following information for Eastern Kern County.[1]

> "Kern County is located in two different air basins: the San Joaquin Valley Air Basin and the Mojave Desert Air Basin. The eastern portion, located in the Mojave Desert Air Basin, falls under the jurisdiction of the Kern County Air Pollution Control District. Previous state implementation plans and transport studies 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 Non-attainment Area)" includes a discussion of the ozone formation and transport patterns in the Western Mojave Air Basin.[2] The "Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California" (California Air Resources Board, 1990)[3] and the second triennial update to that report (1996) also discuss transport to the Western Mojave Air Basin, including Eastern Kern County. Excerpts from these documents are presented below:

> "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 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)[4],[5]. 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."

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[1] "Recommended Area Designations for the 2008 Federal 8-Hour Ozone Standard Staff Report", State of California Air Resources Board, Revised: March 3, 2009.

[2] "Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area)", Adopted on: June 9, 2008 Mojave Desert Air Quality Management District.
http://www.arb.ca.gov/planning/sip/planarea/wmdaqmp/wmd2008ozone.pdf

[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.

[4] 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.

[5] Air Resources Board, 1996: "Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California (Revised)." ARB Staff Report prepared by the Technical Support Division, November 1996.

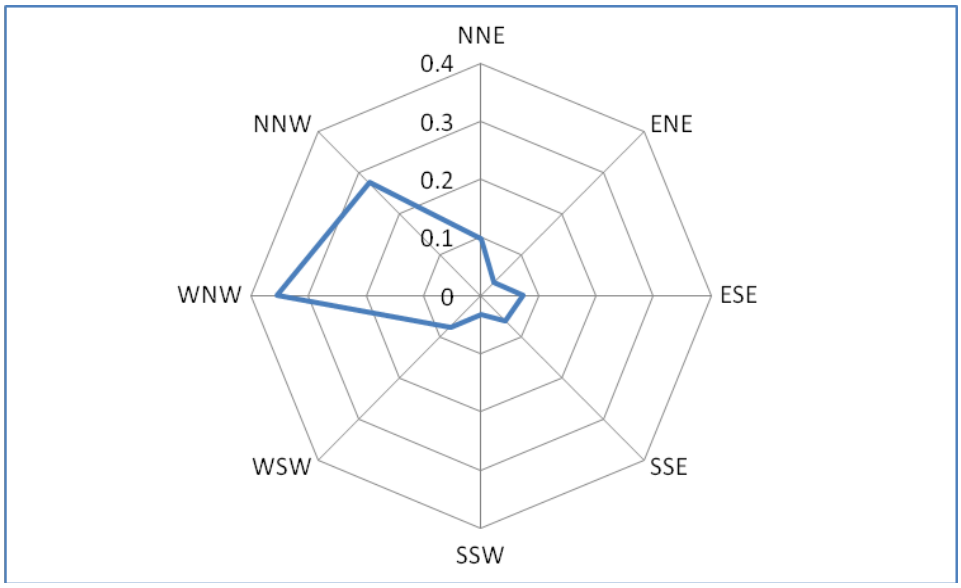


Figure 2: Eastern Kern County – Summer Wind Frequency Distribution

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 northwesterly component.

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 Kern County (Eastern Kern) nonattainment area is shown in Appendix 2, Map 4a.

The Tehachapi Mountains to the northwest, separate Kern County (Eastern Kern), part of the Western Mojave Air Basin, from the San Joaquin Valley Air Basin. The Tehachapi's crest varies in height from approximately 4,000–8,000 feet. Kern County (Eastern Kern) is bounded by Antelope Valley to the south and West Mojave Desert to the east.

The nonattainment area excludes the northeastern corner of Kern County, also known as the Indian Wells Valley. The Indian Wells Valley is separated from the rest of Kern County (Eastern Kern) by mountain ranges. These mountains ranges are to the west: the peaks of the eastern slopes of the Sierra Nevada mountains are 6,000 to 7,000 feet in elevation along the western boundary of Indian Wells Valley; to the south, the El Paso mountains which are approximately 4,000 to 5,000 feet in this area; and also the Rand mountains which rise above 4,000 feet. These mountain barriers form the north and east boundaries of the airshed of the violating Kern County (Eastern Kern) area.

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, Reservation boundaries, and 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 Kern County (Eastern Kern) area has previously-established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS as the existing boundary for the 1997 ozone NAAQS. Air quality is managed by the Eastern Kern Air Pollution Control District (APCD). The Eastern Kern APCD has jurisdiction over the eastern portion of the county, while the larger western portion of the county is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. The entirety of Kern County is defined by the Office of Management and Budget as the Bakersfield-Delano metropolitan statistical area (MSA). The MSA is not part of a larger combined statistical area (CSA). The majority of the population in the MSA is located in the San Joaquin Valley, on the other side of the Sierra Nevada mountains from the eastern portion of Kern County.

Conclusion

Based on the assessment of factors described above, EPA is designating the eastern part of Kern County as the Kern County (Eastern Kern), CA nonattainment area because it is violating the 2008 ozone NAAQS.

The monitor within the existing Kern County (Eastern Kern) nonattainment area shows a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, based on air quality data (Factor 1), the eastern portion of Kern County should be designated nonattainment. The closest monitor to Indian Wells Valley is attaining the standard based on 2008-2010 data.

Evaluation of emissions and emission sources (Factor 2) shows that sources of ozone precursor emissions are concentrated on the western side of Kern County, which EPA is designating nonattainment as part of the San Joaquin Valley nonattainment area. The eastern portion of Kern County is distinguished from the western portion in its relatively few stationary sources and population centers, and lower volumes of non-truck traffic. Therefore, Factor 2 supports the state's recommendation.

Meteorology and weather or transport patterns (Factor 3) and geography and topography (Factor 4) show potential pollution transport from neighboring areas, which EPA is designating as separate nonattainment areas. The eastern portion of Kern County is separated from the western portion by a mountain range. EPA is designating the western portion of the county as part of the San Joaquin Valley nonattainment area. Topography also supports separating Indian Wells Valley from the nonattainment area.

In considering jurisdictional boundaries (Factor 5), EPA notes that the Eastern Kern APCD has air quality planning jurisdiction over the eastern portion of the county, while the larger western portion of

the county is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. EPA's boundary for the Kern County (Eastern Kern) nonattainment area is the same as the 2008 8-hour ozone NAAQS boundary recommended by the state, as well as the 1997 8-hour ozone nonattainment boundary.

Because Kern County (Eastern Kern) has a violating monitor, is an existing nonattainment area under the 1997 8-hour ozone NAAQS with its own air pollution control district, and based on the emission sources and air pollutant transport patterns, EPA's is concurring with the state's recommendation and is designating the eastern portion of Kern County, excluding Indian Wells Valley, as the Kern County (Eastern Kern), CA nonattainment for the 2008 ozone NAAQS.

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.

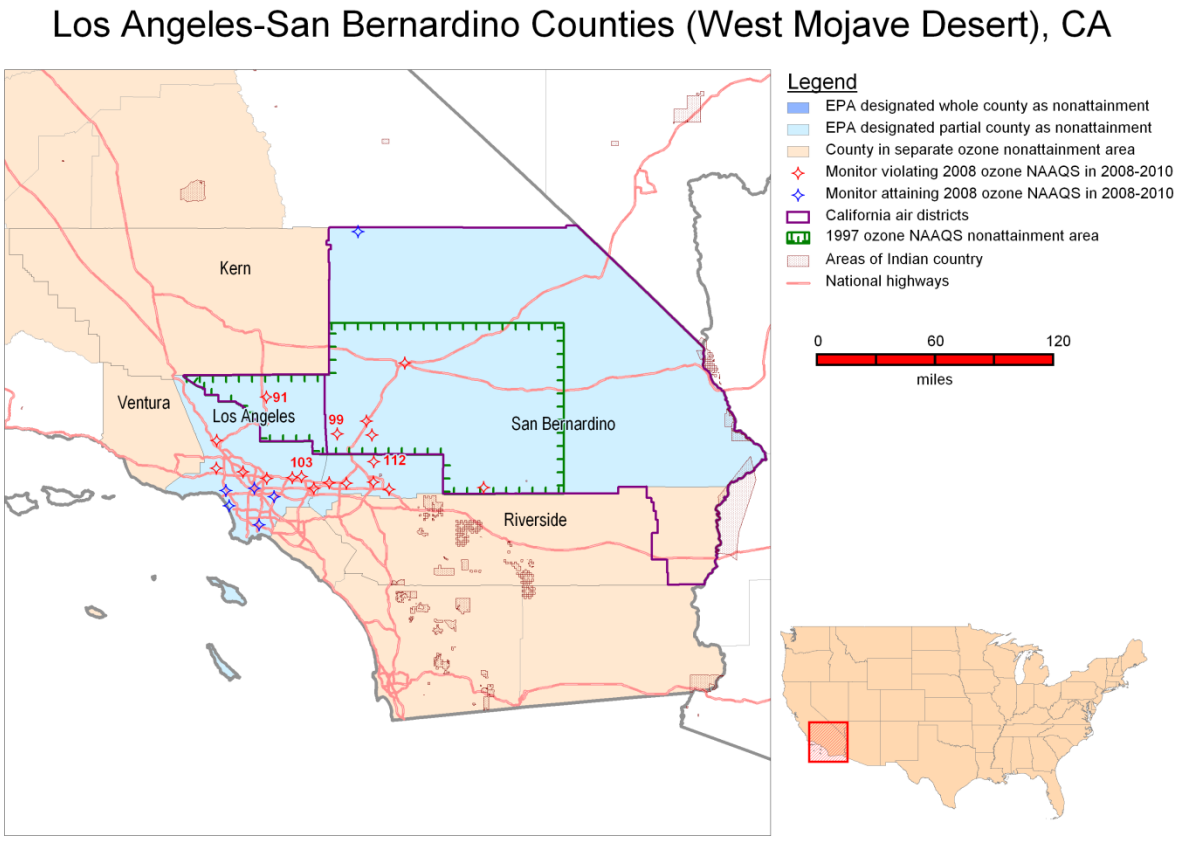


Figure 1

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).

Los Angeles-San Bernardino Counties (West Mojave Desert), CA	State or Tribe Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country [1]
Los Angeles County	Los Angeles County [1]	**Los Angeles County**
San Bernardino County	San Bernardino County (p) [1]	**San Bernardino County (p)**
Twenty-Nine Palms Band of Mission Indians of California[2]	N/A	Twenty-Nine Palms Band of Mission Indians of California

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.

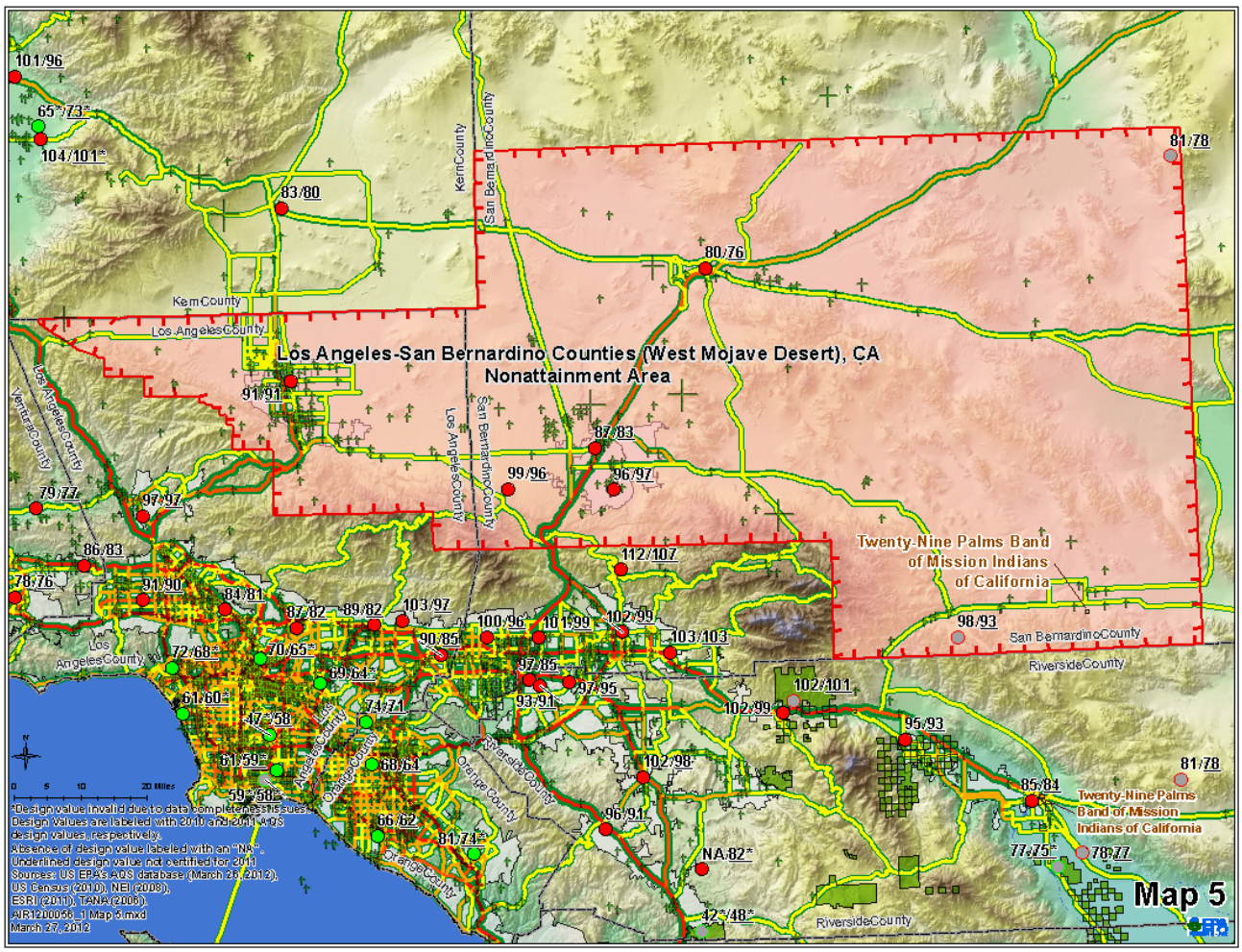
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Los Angeles, CA	Yes	103
San Bernardino, CA	Yes (partial)	112

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 (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of 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 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Los Angeles, CA	Yes	219,340	124,133
San Bernardino, CA	Yes (partial)	99,779	43,359
	Areawide:	319,119	167,492

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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Los Angeles, CA	Yes	9,818,605	2.40	274,493	+3%
San Bernardino, CA	Yes (partial)	2,035,210	0.10	316,535	+18%
	Areawide:	11,853,815	0.49	591,028	+5%

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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Los Angeles, CA	Yes	78,315
San Bernardino, CA	Yes (partial)	20,229
	Areawide:	98,544

*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.[1] The "Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California" (California Air Resources Board (ARB), 1990)[2] 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

[1] Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-attainment Area) Adopted on: June 9, 2008, Mojave Desert Air Quality Management District. http://www.arb.ca.gov/planning/sip/planarea/wmdaqmp/wmd2008ozone.pdf

[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

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."

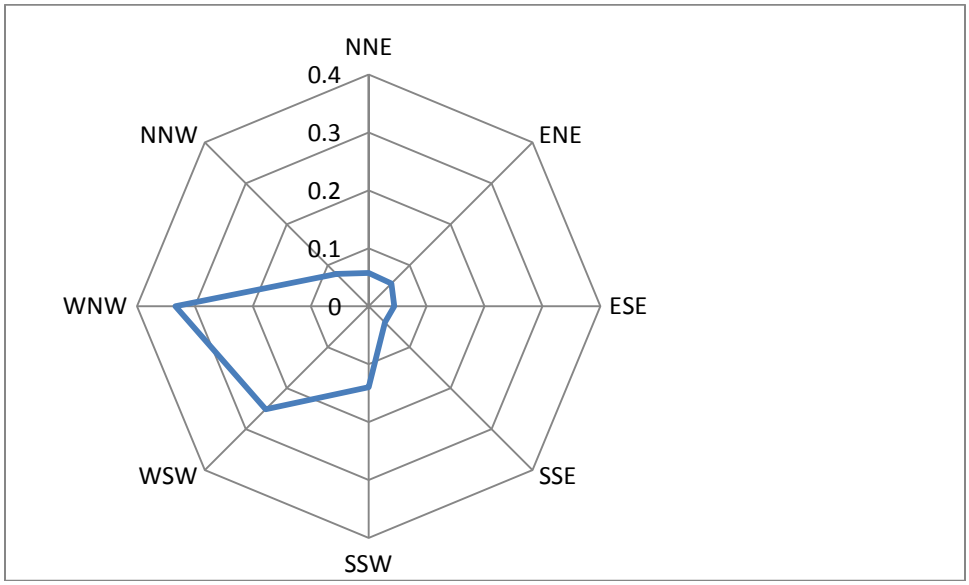


Figure 2: San Bernardino County – Summer Wind Frequency Distribution

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.

[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

[4] Air Resources Board, 1996: Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California (Revised). ARB Staff Report prepared by the Technical Support Division, November 1996.

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.

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

Technical Analysis for Los Angeles-South Coast Air Basin

Figure 1 is a map of the Los Angeles-South Coast Air Basin, 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

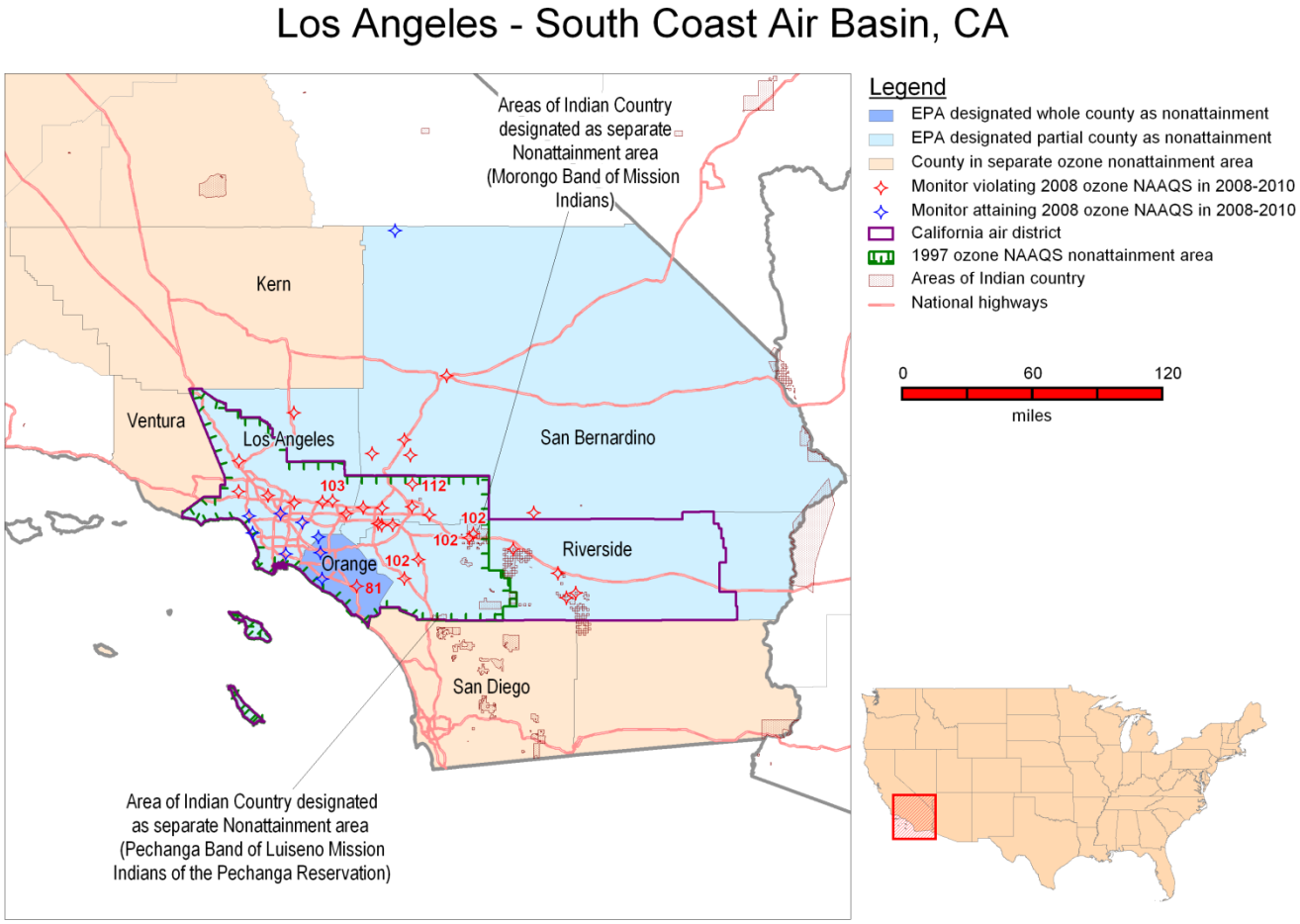


Figure 1

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entirety of Orange County, parts of Los Angeles, San Bernardino and Riverside counties, and areas of Indian country of federally recognized tribes.

In March 2009, California recommended that the same counties or parts of counties be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008. (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 the 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 Los Angeles-South Coast Air Basin. 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 one county, three partial counties, and four areas of Indian country (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as part of the Los Angeles-South Coast Air Basin multi-jurisdictional nonattainment area.

Table 1. State or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Los Angeles-South Coast Air Basin

Los Angeles-South Coast Air Basin, CA	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country[1]	EPA's Nonattainment Counties or Areas of Indian country
Los Angeles County	Los Angeles County	Los Angeles County
Orange County	Orange County	Orange County
San Bernardino County	San Bernardino County (p)	San Bernardino County (p)
Riverside County	Riverside County (p)	Riverside County (p)
Cahuilla Band of Mission Indians of the Cahuilla Reservation	N/A	Cahuilla Band of Mission Indians of the Cahuilla Reservation
Ramona Band of Cahuilla	N/A	Ramona Band of Cahuilla
San Manuel Band of Mission Indians	N/A	San Manuel Band of Mission Indians
Soboba Band of Luiseno Indians	N/A	Soboba Band of Luiseno Indians

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

[1] While the nonattainment area boundary for the 2008 ozone NAAQS is very similar to the existing 1997 ozone NAAQS nonattainment boundary for the Los Angeles-South Coast Air Basin, the 2008 ozone NAAQS boundary differs in the following ways: EPA is designating the Morongo Band of Mission Indians (Morongo) and the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga) as separate nonattainment areas, the Morongo Band of Mission Indians nonattainment area (Morongo Tribe nonattainment area) and the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area (Pechanga Tribe nonattainment area); and the Santa Rosa Band of Cahuilla Indians (Santa Rosa Cahuilla) is included only in the Riverside County (Coachella Valley) nonattainment area. For more information, see the Technical Analysis sections for the Morongo Tribe nonattainment area, Pechanga Tribe nonattainment area, and Riverside County (Coachella Valley) in the Technical Support Document for California.

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 Los Angeles-South Coast Air Basin 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.]

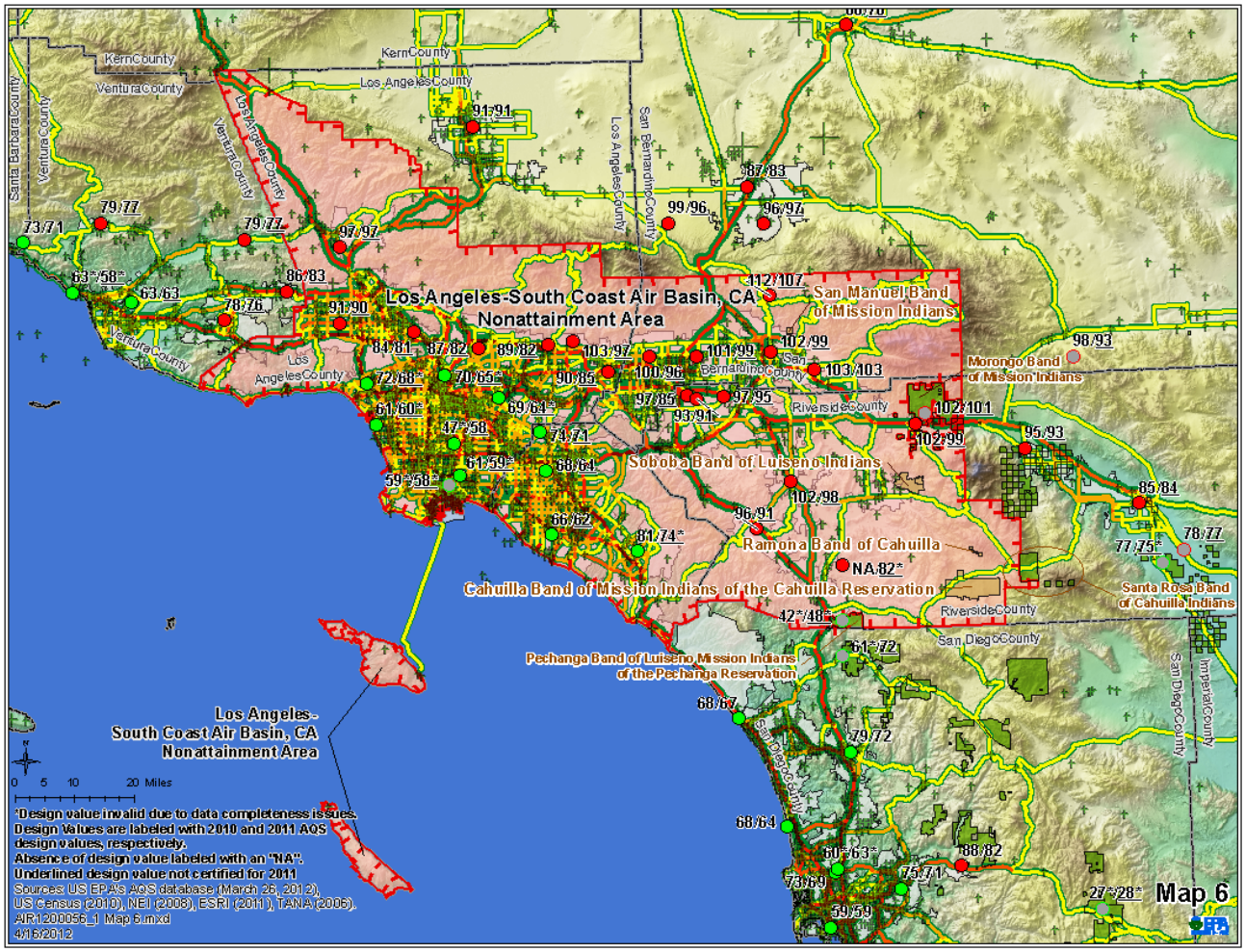
The existing Los Angeles-South Coast Air Basin nonattainment area comprises the entirety of Orange County, the southwestern portion of Los Angeles County, the southwest portion of San Bernardino County, and the western portion of Riverside County (see Map 6a in Appendix 2). The 2010 DVs for the ozone NAAQS for counties in the existing Los Angeles-South Coast Air Basin nonattainment area are shown in Table 2.

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Los Angeles, CA	Yes	103
Orange, CA	Yes	81
Riverside, CA	Yes (partial)	102
San Bernardino, CA	Yes (partial)	112

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Los Angeles-South Coast Air Basin nonattainment area are shown in Appendix 1, Map 6. 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 6 in Appendix 1 includes preliminary 2011 DVs for the existing Los Angeles-South Coast Air Basin 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-South Coast Air Basin 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 6: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in the existing Los Angeles-South Coast Air Basin nonattainment area (which includes the counties listed in Table 1 above) show violations of the 2008 8-hour ozone standard based on 2008-2010 data. Based on 2008-2010 data, each of the counties or partial counties included in the existing Los Angeles-South Coast Air Basin nonattainment area has one or more violating monitors. Therefore, these areas are included in the 2008 ozone NAAQS Los Angeles-South Coast Air Basin nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) from stationary sources for violating and nearby counties that we considered for inclusion in the Los Angeles-South Coast Air Basin area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Los Angeles, CA	Yes	219,340	124,133
Orange, CA	Yes	50,397	45,390
Riverside, CA	Yes (partial)	54,727	28,934
San Bernardino, CA	Yes (partial)	99,779	43,359
	Areawide:	424,243	241,815

The ozone precursor emissions listed for the four counties that EPA is designating nonattainment (either in whole or in part) are clearly at elevated levels and are contributing to monitored violations in the South Coast Air Basin.

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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Los Angeles	Yes	9,818,605	2.40	274,493	+3%
Orange	Yes	3,010,232	3.76	153,314	+5%
Riverside	Yes (partial)	2,189,641	0.30	630,364	+40%
San Bernardino	Yes (partial)	2,035,210	0.10	316,535	+18%
	Areawide:	17,053,688	0.53	1,374,706	+9%

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)

All four counties are highly populated, among the highest populated counties in the nation. In addition, the populations of all four counties are growing. Riverside and San Bernardino counties are among the fastest growing counties in the nation.

Maps 6 and 6a in Appendices 1 and 2, respectively, show the population in the nonattainment area. The largest population centers are included within the nonattainment area. The area is part of a larger combined statistical area (CSA) (see Factor 5). Other portions of the CSA are largely nonattainment and a discussion of each individual area can be found in this California TSD, under the technical analyses sections for the Ventura County, Los Angeles-San Bernardino Counties (West Mojave Desert) and Riverside County (Coachella Valley) nonattainment areas.

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 and/or a high number of commuters 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 and Commuting Patterns.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Los Angeles	Yes	78,315
Orange	Yes	22,681
Riverside	Yes (partial)	21,704
San Bernardino	Yes (partial)	20,229
	Areawide:	142,929

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

As shown in Table 5, Los Angeles County has the highest levels of VMT, while VMT levels from Orange, Riverside, and San Bernardino Counties are similar.

Factor 3: Meteorology (weather/transport patterns)

EPA evaluated available meteorological data to help determine how meteorological conditions, such as weather, transport patterns and stagnation conditions, would affect the fate and transport of precursor emissions contributing to ozone formation. EPA reviewed the "Final 2007 Air Quality Management Plan" for the South Coast Air Basin, the modeling protocol for that plan, and the wind frequency distribution of wind direction data based on an average of 30 years of National Weather Service information for the months of June, July, and August.

The "Final 2007 Air Quality Management Plan" provides a general discussion of how meteorological conditions would affect the fate and transport of precursor emissions contributing to ozone formation. This discussion is included below:[2]

> "The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation. Furthermore, sunlight triggers the photochemical reactions which produce ozone. The region experiences more days of sunlight than any other major urban area in the nation except Phoenix.
>
> The Basin's severe air pollution problem is a consequence of the combination of emissions from the nation's second largest urban area and meteorological conditions which are adverse to the dispersion of those emissions.[3] The average wind speed for Los Angeles is the lowest of the nation's ten largest urban areas. In addition, the summertime maximum mixing height (an index of how well pollutants can be dispersed vertically in the atmosphere) in Southern California averages the lowest in the U.S. The Southern California area is also an area with abundant sunshine, which drives the photochemical reactions which form pollutants such as ozone. In the Basin, high concentrations of ozone are normally recorded during the spring and summer months."

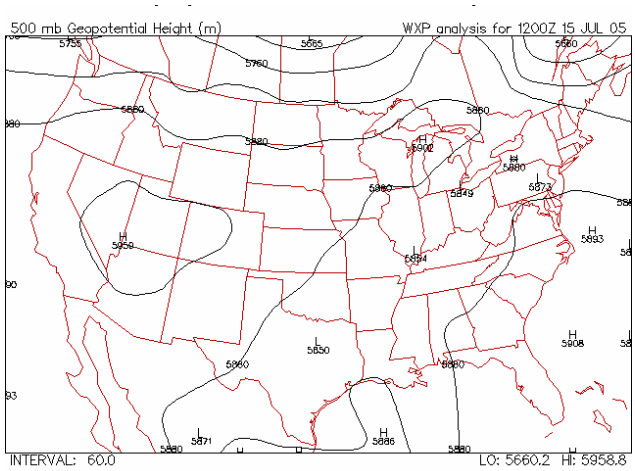
[2] P. 1-3 "Final 2007 Air Quality Management Plan." South Coast Air Quality Management District, June 2007. http://www.aqmd.gov/aqmp/07aqmp/aqmp/Chapter_1.pdf

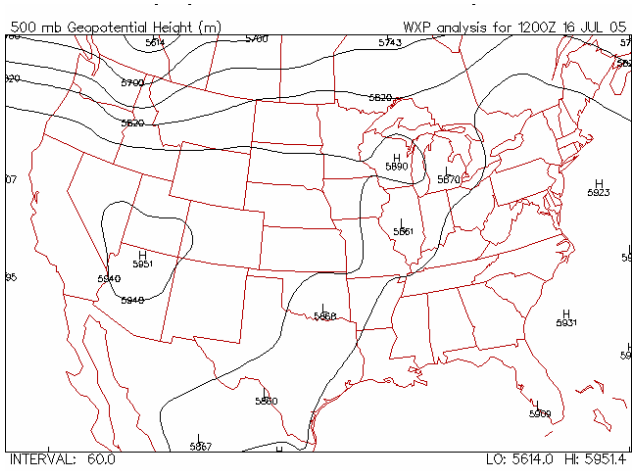
[3] P. 2-3, Final 2007 Air Quality Management Plan. South Coast Air Quality ManagementDistrict. http://www.aqmd.gov/aqmp/07aqmp/index.html

The meteorological conditions that would affect the fate and transport of precursor emissions contributing to ozone formation are discussed in greater detail in the "Final 2007 Air Quality Management Plan," Appendix V, Modeling and Attainment Demonstrations, which provides a conceptual model of an eight-hour ozone episode. [4]

> "Conceptual Model of an 8-Hour Ozone Episode
>
> In general, elevated concentrations of ozone (both 1- and 8-hour average) occur under a west coast or Four Corners ridge of high pressure aloft. Typically, the 500 mb [millibars] pressure surface heights above mean sea level (msl) exceed 5880 m and generate a strong low level subsidence inversion (10^{o} C in strength or higher). The surface pressure gradient (i.e. wind forcing) typically is less than 5 mb between the coast and the desert (approximately 200 km in distance) and days often begin with a deck of morning coastal stratus that extends into the near valleys then burns off in the late morning hours. The more severe episodes tend to have neutral to slightly off shore pressure gradient forcing and clear skies.
>
> Figure V-4-3 illustrates the 500 mb upper air structure over the west coast during the July 2005 meteorological episode. Figure V-4-4 provides the 1200 UTC (4:00 am PST) temperature profile for July 16, 2005.

[4] V-4-12-14, Final 2007 Air Quality Management Plan, Appendix V: Modeling And Attainment Demonstrations. South Coast Air Quality Management District. http://www.aqmd.gov/aqmp/07aqmp/index.html





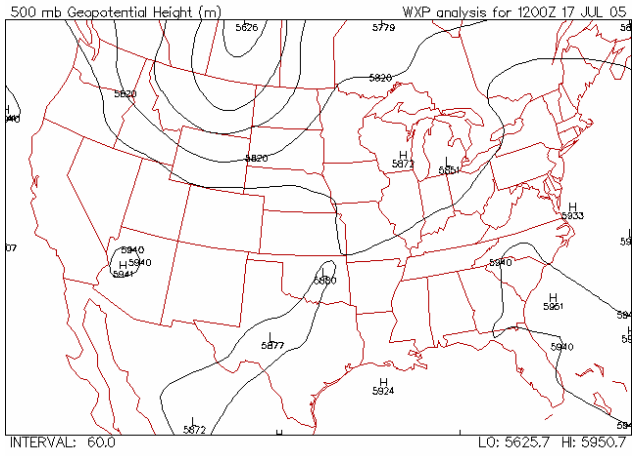


Figure 2**:** From FIGURE V-4-3[5] : 500 mb Upper Air Structure: July 2005 Meteorological Episode

[5] P. V-4-13 Final 2007 Air Quality Management Plan, Appendix V: Modeling And Attainment Demonstrations. South Coast Air Quality Management District. http://www.aqmd.gov/aqmp/07aqmp/index.html

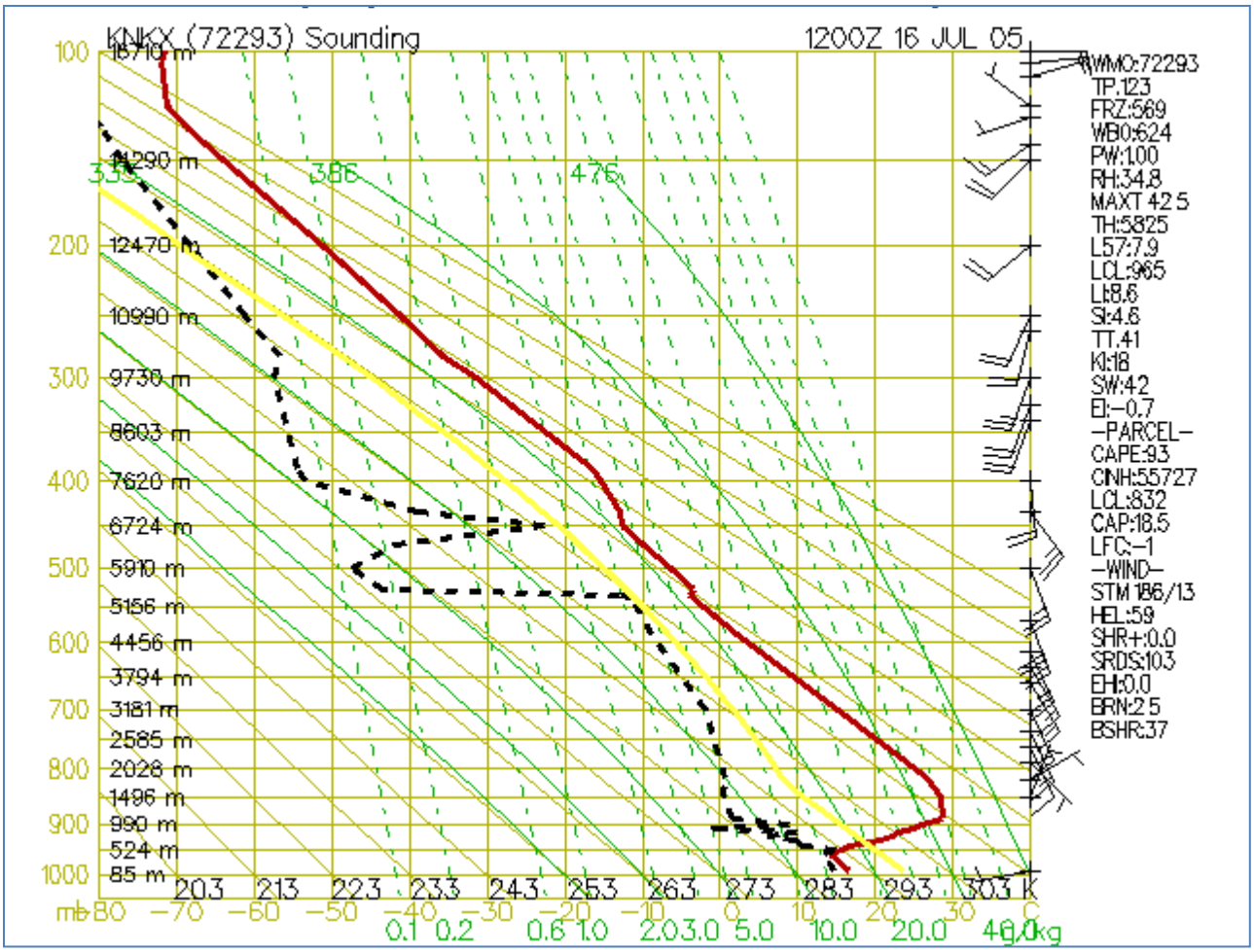


Figure 3: From FIGURE V-4-4 [6]
1200 UTC Upper Air Sounding at Miramar MCAS (San Diego, CA) July 16, 2005

[6] P. V-4-14 Final 2007 Air Quality Management Plan, Appendix V: Modeling And Attainment Demonstrations. South Coast Air Quality Management District. http://www.aqmd.gov/aqmp/07aqmp/index.html

Synoptic forcing and mesoscale flow characteristics can sometimes result in eddy circulations. In the SCOS97 domain two key eddy features are prevalent: the Catalina Eddy (named since its center is often near Santa Catalina Island), and the Gaviota Eddy in the Santa Barbara Channel (Smith, et. al., 1984).[7] Both eddy circulations are important transport mechanisms; they are capable of transporting precursors and aged ozone concentrations onshore and northward to Santa Clarita and sometimes Ventura and Santa Barbara Counties. Exceedances of the ozone standards are often observed with the presence of an eddy circulation and the deep [*sic*] of the marine layer that accompanies a mature coastal eddy can end an ozone episode. The timing of the onset, persistence, and spatial extent of eddy circulations, are a critical part of the windfield validation.

Land/sea breeze circulations are another important flow feature. The sea breeze is one method whereby pollutants generated in the Los Angeles Basin are transported eastward. That is, the strength of the sea breeze will determine how far precursors and ozone generated near the coast will be transported inland."

In addition, EPA reviewed the wind frequency distribution of wind direction data in Figure 4, below. The figure 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.

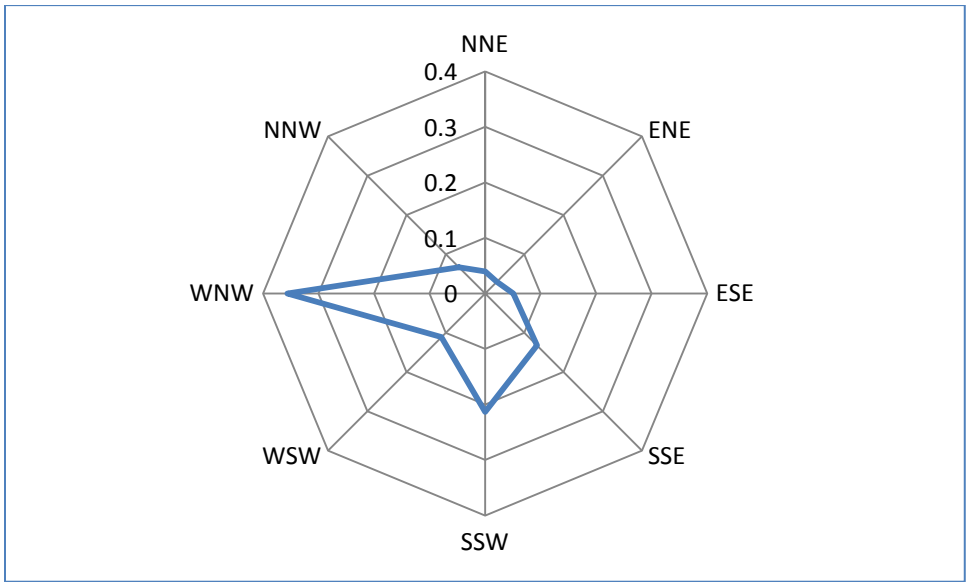


Figure 4: South Coast - Summer Wind Frequency Distribution

[7] P. 53, *Draft* Modeling Protocol For Ozone And Particulate Matter Modeling In Support Of The South Coast Air Quality Management District 2007 Air Quality Management Plan Update, *Draft Report* ,May 9, 2006.

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 Los Angeles County, South Coast Air Basin Area is shown in Appendix 1, Map 6a.

South Coast Air Quality Management District's (SCAQMD's) "Final 2007 Air Quality Management Plan" provides a description of the South Coast Air Basin.[8]

> "The Basin, which is a subregion of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. It includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties."

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, Reservation boundaries, and 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-South Coast Air Basin area ("South Coast") has previously established nonattainment boundaries associated with both the 1-hour and 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. For the 1-hour ozone NAAQS, South Coast was nonattainment. For the 1997 ozone NAAQS, South Coast was designated nonattainment in 2004. For the 2008 ozone NAAQS, EPA is designating the same area as the Los Angeles-South Coast nonattainment area.

South Coast comprises a large western portion of the larger Los Angeles-Long Beach-Riverside combined statistical area (CSA). The CSA includes the entirety of Los Angeles, Orange, San Bernardino and Riverside counties, while the South Coast nonattainment area includes only portions of these counties. However, the adjacent portions of these counties are also being designated as separate nonattainment areas for the 2008 ozone NAAQS (Riverside County (Coachella Valley) and Los Angeles-San Bernardino (West Mojave Desert)). Ventura County is also part of the CSA. EPA is designating Ventura County (continental portion) as a separate nonattainment.

The South Coast Air Quality Management District has jurisdiction over air quality planning in the Los Angeles-South Coast Air Basin nonattainment area. The district also has jurisdiction over the adjacent Coachella Valley (the Riverside County portion of the Salton Sea Air Basin). Transportation planning is performed by the South Coast Association of Governments (SCAG), whose jurisdictional coverage is equal to the CSA.

[8] P. 1-2 Final 2007 Air Quality Management Plan.

The Los Angeles-South Coast Air Basin nonattainment area also includes portions 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 tribes into account in establishing appropriate nonattainment area boundaries.

Conclusion

Based on the assessment of factors described above, EPA is designating the following counties and partial counties as part of the Los Angeles-South Coast Air Basin, CA nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Orange County, San Bernardino County (partial), Riverside County (partial), and Los Angeles County (partial). This nonattainment area also includes areas of Indian country of four federally recognized tribes.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in the Los Angeles-South Coast Air Basin nonattainment area (which includes the counties listed in Table 1 above) show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, Factor 1 supports designating these counties or partial counties as nonattainment.

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5) support the nonattainment boundaries recommended by the state. EPA concurs with the state's recommendation and notes that these boundaries are consistent with the boundaries from the existing 1997 8-hour ozone nonattainment area. Neighboring areas that may receive pollutant transport from the Los Angeles-South Coast Air Basin are also being designated separate nonattainment areas.

EPA is including areas of Indian country of the following tribes as part of the Los Angeles-South Coast Air Basin, CA nonattainment area for the 2008 ozone NAAQS: Cahuilla Band of Mission Indians of the Cahuilla Reservation, Ramona Band of Cahuilla, San Manuel Band of Mission Indians, and Soboba Band of Luiseno Indians. This nonattainment area previously included all or part of the Morongo Band of Mission Indians (Morongo), the Pechanga Band of Luiseño Mission Indians (Pechanga), and the Santa Rosa Band of Cahuilla Indians (Santa Rosa Cahuilla). For the 2008 ozone NAAQS, EPA is designating Morongo and Pechanga as separate nonattainment areas, the Morongo Band of Mission Indians nonattainment area (Morongo Tribe nonattainment area) and the Pechanga Band of Luiseño Mission Indians nonattainment area (Pechanga Tribe nonattainment area); Santa Rosa Cahuilla is included only in the Riverside County (Coachella Valley) nonattainment area. For more information, see the Technical Analysis sections for Morongo, Pechanga, and Riverside County (Coachella Valley) within the Technical Support Document for California.

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

Technical Analysis for Mariposa County, CA

Figure 1 is a map of the Mariposa County, 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

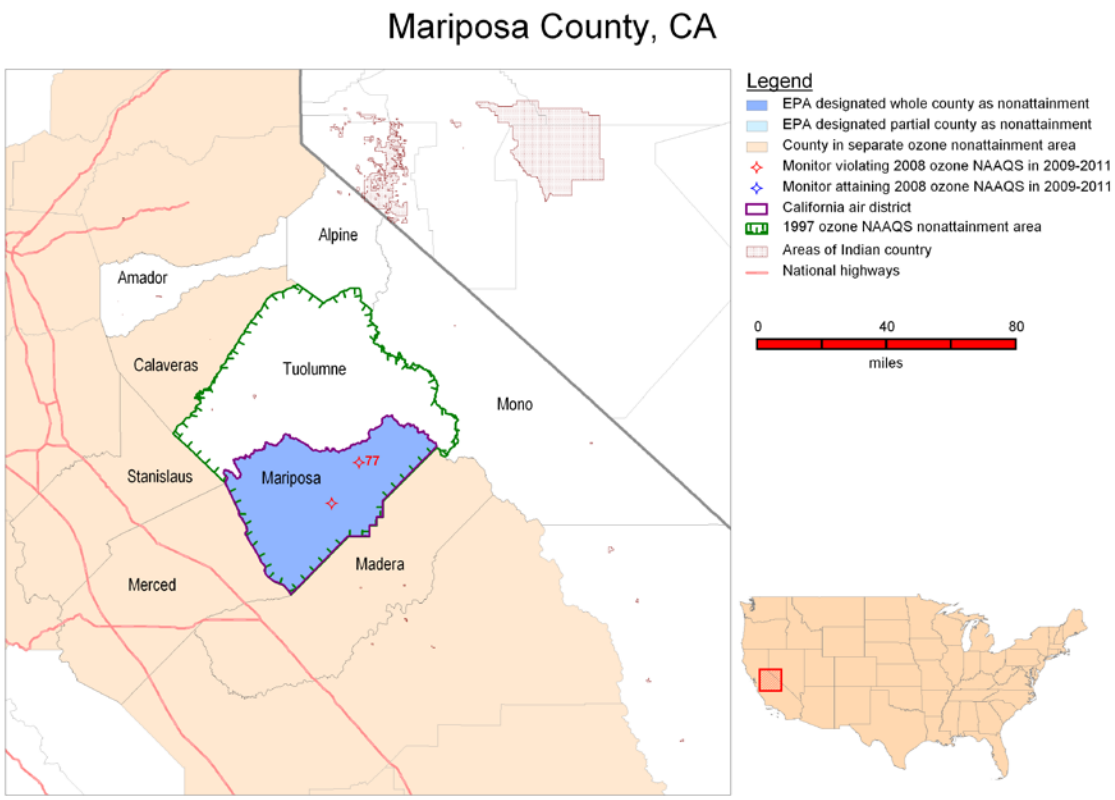


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from the 2009-2011 period (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

The Southern Mountain Counties nonattainment area was designated nonattainment for the 1997 ozone NAAQS in 2004. Although these counties were designated as a separate nonattainment area for the 1997 ozone NAAQS, EPA believed, as we still believe, that the strongest contribution to the violations in the mountain counties comes from the San Joaquin Valley. However, for the 1997 ozone NAAQS, the state requested grouping Mariposa and Tuolumne counties as one nonattainment area, separate from

the San Joaquin Valley areas, citing existing inter-county coordination, similarities in pollution transport paths, and support from the other factors analyzed. EPA accepted the state's recommendations and in 2004 designated Mariposa and Tuolumne counties as one multi-jurisdictional nonattainment area (Southern Mountain Counties).

In March 2009, California recommended that the Mariposa and Tuolumne counties be designated as a nonattainment area for the 2008 ozone NAAQS based on air quality data from 2006-2008. (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations. Based on preliminary 2011 air quality data, California revised its recommendation for the existing Southern Mountain Counties nonattainment area to include only Mariposa County and to exclude Tuolumne 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).

In December 2011, EPA sent California a letter conveying our preliminary intention to designate Mariposa and Tuolumne counties as the Southern Mountain Counties nonattainment area for the 2008 ozone NAAQS and informing California that it would need to submit certified, quality-assured data to EPA by February 29, 2012 in order for EPA to consider 2011 data in our final decisions. The letter also conveyed that the state should further provide a multi-factor analysis justifying the exclusion of Tuolumne County from the designated nonattainment area for the 2008 ozone NAAQS if it continued to support that recommendation. (Letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Edmund G. Brown, Jr., Governor of California, dated December 9, 2011.) EPA received certified, quality-assured 2011 data before February 29, 2012 for Mariposa and Tuolumne counties, as well as a multi-factor analysis justifying the exclusion of Tuolumne County from the designated nonattainment area for the 2008 ozone NAAQS. (Letter from James Goldstene, Executive Officer, California Air Resources Board, to Jared Blumenfeld, Regional Administrator, Region IX, U.S. EPA, dated February 23, 2012.) Because of the State's timely submittal of the certified air quality data, we are basing our final designation decision on 2009-2011 data for these counties.

After considering the State's recommendations and based on EPA's technical analysis described below, EPA is designating Mariposa County (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as the Mariposa County nonattainment area and Tuolumne County as "unclassifiable/attainment".

Table 1. State's Recommended and EPA's 2008 Ozone NAAQS Nonattainment Counties or Areas of Indian Country for Mariposa County.

Southern Mountain Counties	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA's Designated Nonattainment Counties or Areas of Indian Country
Mariposa County, CA	Mariposa County	Mariposa County
No areas of Indian country in the nonattainment area		

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Southern Mountain Counties nonattainment area, based on data from the most recent three-year period for which we had timely submitted certified air quality data. For Mariposa and Tuolumne counties, the state of California submitted certified air quality data for 2011 before February 29, 2012; thus, for purposes of the final designations, we are considering air quality data from the 2009-2011 period (i.e., the 2011 DV). 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.]

Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year, but some ozone monitors in the existing Southern Mountain Counties nonattainment area have been approved to operate on a seasonal schedule per 40 CFR part 58, Appendix D, section 4.1(i). Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. California Air Resources Board (ARB) certified 2011 data by February 29, 2012 for Tuolumne and Mariposa counties. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that Tuolumne County is attaining the 2008 NAAQS (DV is 74 ppb) and Mariposa County is violating the 2008 ozone NAAQS (DV is 76 ppb). Tuolumne County's 2010 DV was 82 ppb and Mariposa County's 2010 DV was 80 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Southern Mountain Counties nonattainment area are shown in Appendix 1.

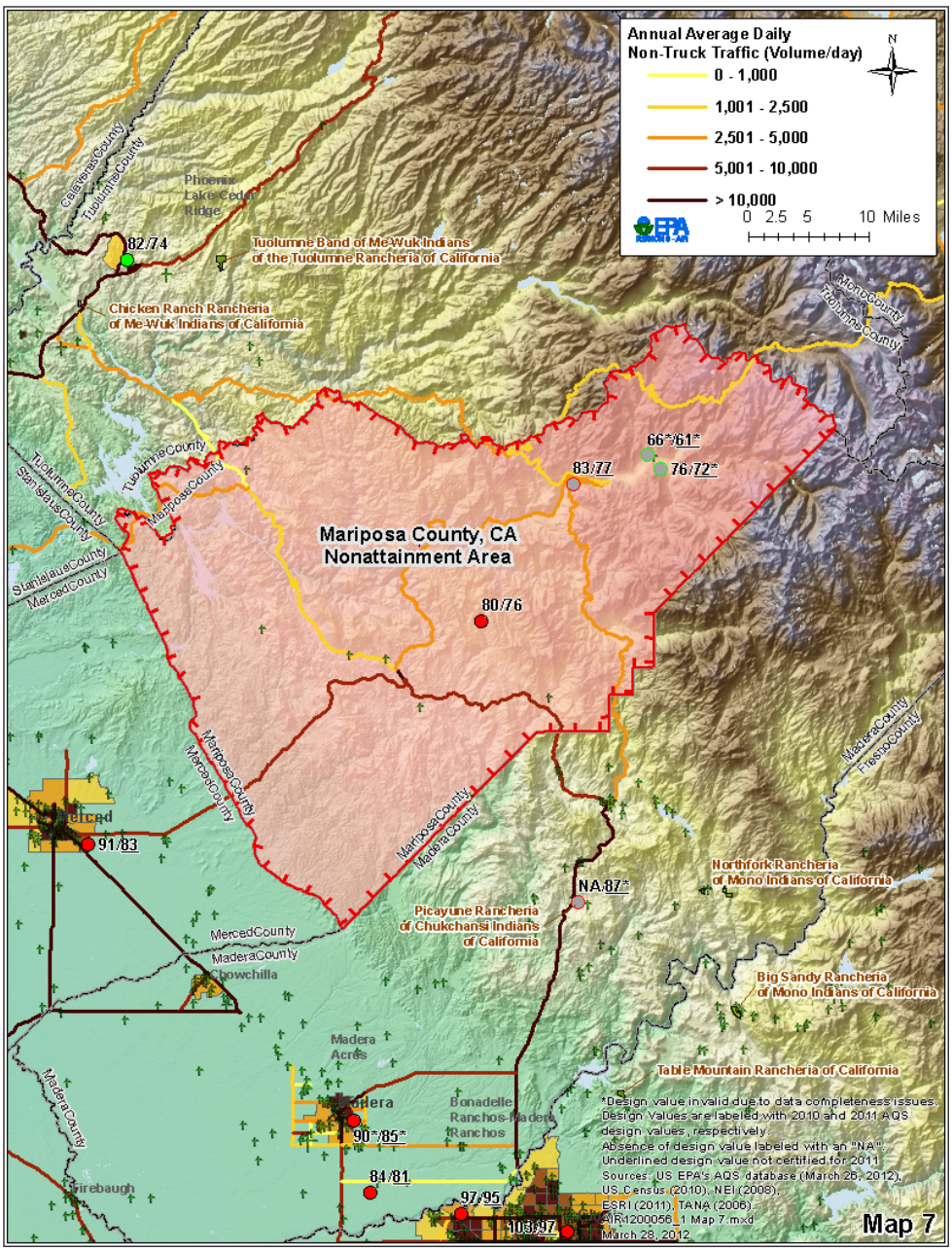
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
Mariposa, CA	Yes	76
Tuolumne, CA	No	74

Maps contained in Appendix 1 show the geographic distribution of monitors. Maps 7 and 7b show monitor locations for Tuolumne and Mariposa counties. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designations) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x". Design Values in grey typeface indicate secondary data sources.

Appendix 3 lists 2009-2011 DVs for Mariposa and Tuolumne counties. 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.

Based on 2009-2011 data, monitors in Mariposa County show that the area is violating the 2008 standard while the monitor in Tuolumne County is attaining. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation. The sparse monitoring network in these two topographically-complex counties makes it difficult to determine solely from air quality data whether Tuolumne County is contributing to ozone levels in Mariposa County. EPA notes that portions of both counties are in the Sierra Nevada Mountain Range and ozone concentrations often increase with elevation. Therefore, the observed difference in ozone concentrations may be due in part to the fact that the monitor in Tuolumne County is at a vastly lower elevation than the two monitors with complete data in Mariposa County (571 meters versus 1,135 and 1,605 meters, respectively).



From Appendix 1, Map 7: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Table 3 shows emissions of NO_x and VOC (given in tons per year) for violating and nearby counties that we considered for inclusion in the Mariposa County nonattainment area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Mariposa, CA	Yes	675	2,140
Tuolumne, CA	No	3,013	5,400
	Areawide:	3,688	7,540

Both NO_x and VOC are precursors to formation of ozone in ambient air. Most of the stationary sources of ozone precursors in the existing 1997 8-hour ozone Southern Mountain Counties nonattainment area are located in Tuolumne County (see Map 7 in Appendix 1). Additionally, Tuolumne County contributes nearly 4.5 times more NO_x and 2.5 times more VOC emissions than Mariposa County. However, emissions of ozone precursors in the neighboring counties in the San Joaquin Valley bordering Tuolumne and Mariposa counties (Stanislaus, Merced, and Madera Counties) are significantly greater than emissions from Tuolumne and Mariposa Counties. In comparison, emissions of NO_x and VOC in Stanislaus County in 2008 were approximately 17,000 tpy of NO_x and more than 15,000 tpy of VOC; in Merced County emissions were approximately 18,000 tpy of NO_x and more than 10,000 tpy of VOC; and emissions in Madera County were more than 10,000 tpy of NO_x and 6,000 tpy of VOC.

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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Mariposa, CA	Yes	18,251	0.01	1,107	+6%
Tuolumne, CA	No	55,365	0.02	714	+1%
	Areawide:	73,616	0.02	1,821	+3%

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 7 and 7a in Appendices 1 and 2, respectively, show population for the area. Mariposa and Tuolumne counties are both sparsely populated, but the total 2010 population of Tuolumne County is three times larger than the population of Mariposa County. Both counties have very low population density. As shown in Map 7a in Appendix 2, Tuolumne County contains a population center in the western portion of the county, whereas Mariposa County contains no discrete population centers. For ozone, population is an indicator of ozone precursor emissions. During the period from 2000 to 2010, both counties showed population growth, however, absolute change and percent changes in population in Mariposa County was larger than Tuolumne County.

Traffic (VMT) data

EPA evaluated the total VMT for each county in the area. 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 and 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 for counties within the area.

Table 5. Traffic (VMT) Data

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Mariposa, CA	Yes	290
Tuolumne, CA	No	777
	Areawide:	1,068

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

In 2008, VMT in Tuolumne County was nearly three times higher than in Mariposa County, but was approximately two to five times lower than VMT in the neighboring counties of Madera, Merced, and Stanislaus, located within the San Joaquin Valley nonattainment area. Maps 7 and 7b in Appendix 1 show annual average daily non-truck and truck traffic volumes. Highest truck traffic volume in the existing Southern Mountain Counties nonattainment area generally occurred in Tuolumne County, on roads linking the Tuolumne population center, in the western portion of the county, with Stanislaus County to the west and Calaveras County to the northwest. Heaviest non-truck traffic also occurs in Tuolumne County on the same roadways as the heavy truck traffic, but also occurs on the roadway that runs through Tuolumne County to the north-northeast. Relatively heavy non-truck traffic also occurs in the southern portion of Mariposa County, between Merced County to the west and Madera County to the southeast.

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.

Mariposa and Tuolumne counties are the southernmost counties in the "Mountain Counties Air Basin" as defined by ARB[1]. Summers are generally fairly warm and dry, but there can be periods of quite cool weather. Depending on the meteorological station, in summer months, normal low temperatures range from 43 to 55 degrees Fahrenheit (6 to 13 degrees Celsius), and normal highs range from 62 to 94 degrees Fahrenheit (17 to 34 degrees Celsius). Winds are generally daytime upslope and nighttime downslope flows, caused by the differential heating or cooling of air near mountain ground surfaces relative to air at the same height over land at lower elevations. These flows generally follow the east-northeast and west-southwest orientation of the river valleys, described in Factor 4. This is generally consistent with the west-northwest to south-southwest flow in Mariposa and Tuolumne counties seen in the 30-year average direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (Figure 2). However, it should be noted that this diagram combines flows from multiple meteorological stations, from parts of the counties that do not have the same valley orientation.

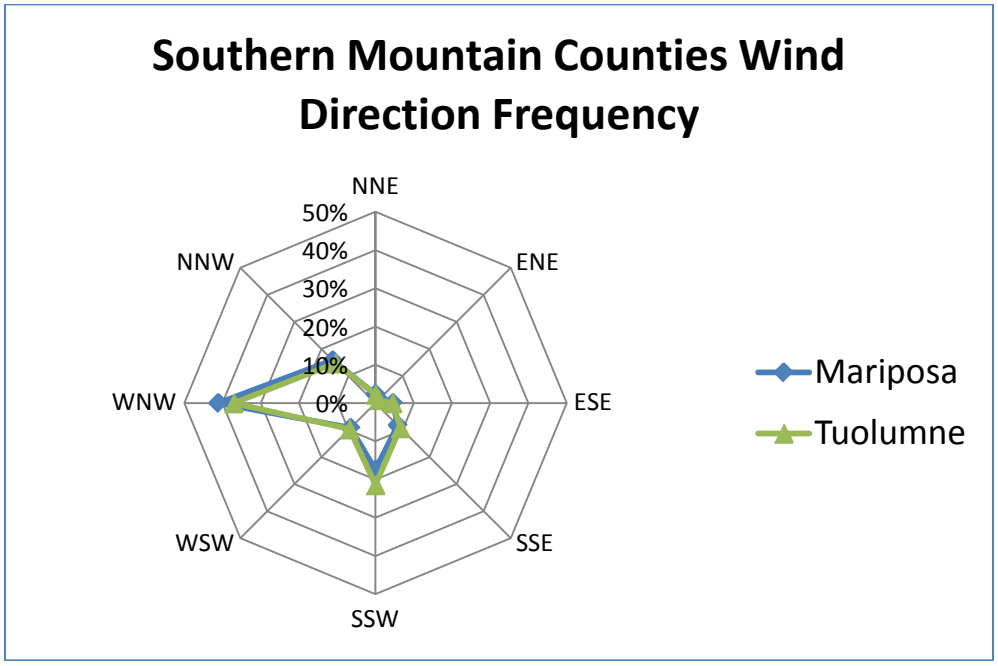


Figure 2

Neighboring San Joaquin Valley can have temperature inversions from 2,000 to 2,500 feet (600 to 750 meters) above the valley floor, or even as high as 5,000 feet (1,500 meters). Ozone produced in the San Joaquin Valley and trapped under this inversion can reach fairly high into the mountain counties, or be advected there by daytime upslope flows. Previous assessments of transport by ARB[2] have found a strong potential for ozone transport from the Sacramento and San Joaquin valleys up into the mountain counties. Nighttime drainage flows reverse this, so some of this pollution, in combination with pollution generated in the mountain counties themselves, could be transported back into the valley, with the potential for some carryover into subsequent days. EPA is designating both the Sacramento Metro area and San Joaquin Valley as their own nonattainment areas for the 2008 ozone NAAQS.

[1] http://www.arb.ca.gov/ei/maps/statemap/abmap.htm
[2] "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California". California Environmental Protection Agency, Air Resources Board, March 2001. http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm

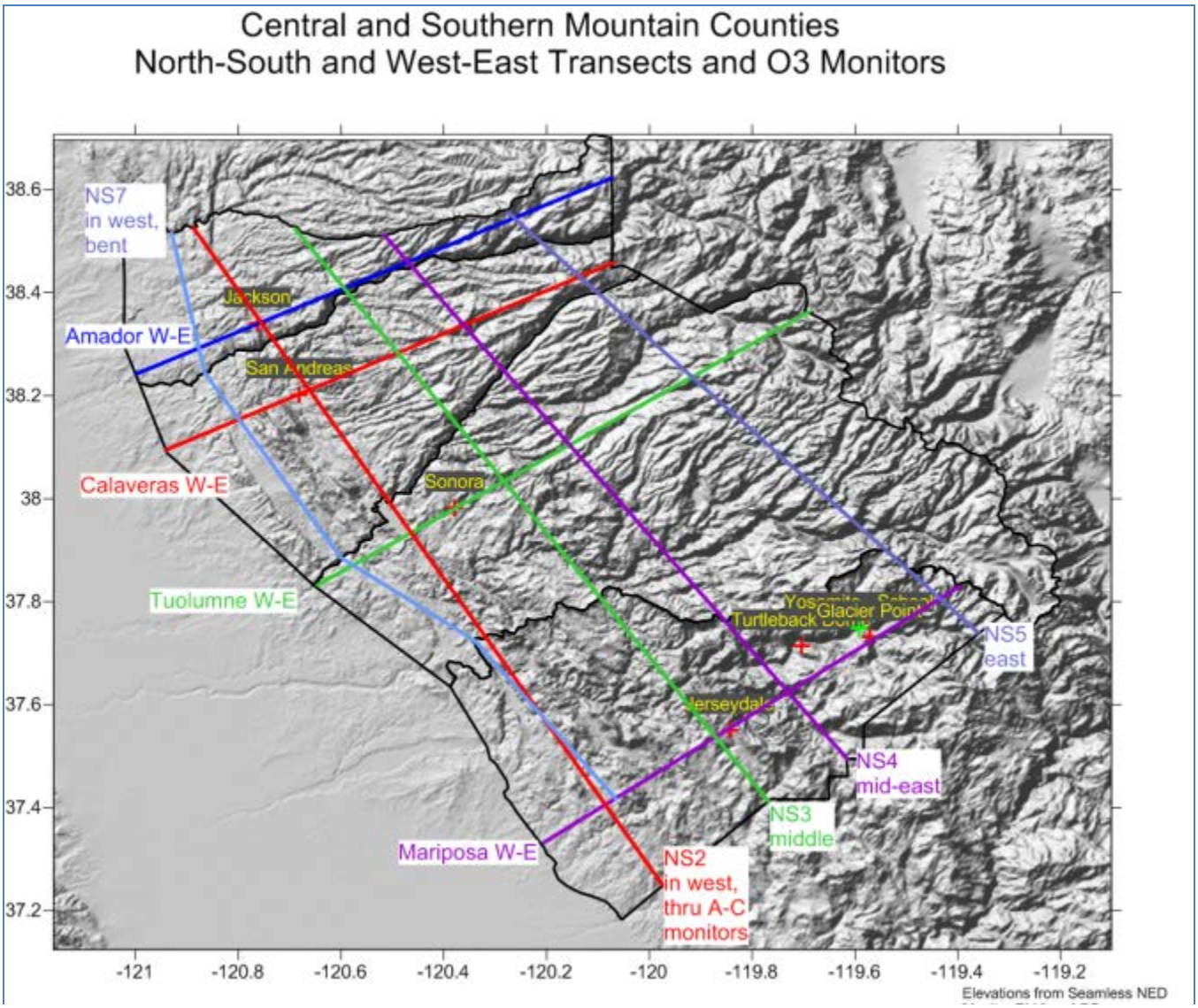
North-south flow between Tuolumne and Mariposa counties is possible as there are fewer barriers to this transport pattern due to the weaker topographic relief in the western portion of both counties. There is likely some transport of pollutants between the two counties, as well as transport from the Sacramento Metro and San Joaquin nonattainment areas. Additionally, EPA notes that 2011 was anomalously cool, potentially creating localized ozone patterns that are not representative of expected normal conditions or ongoing trends.

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.

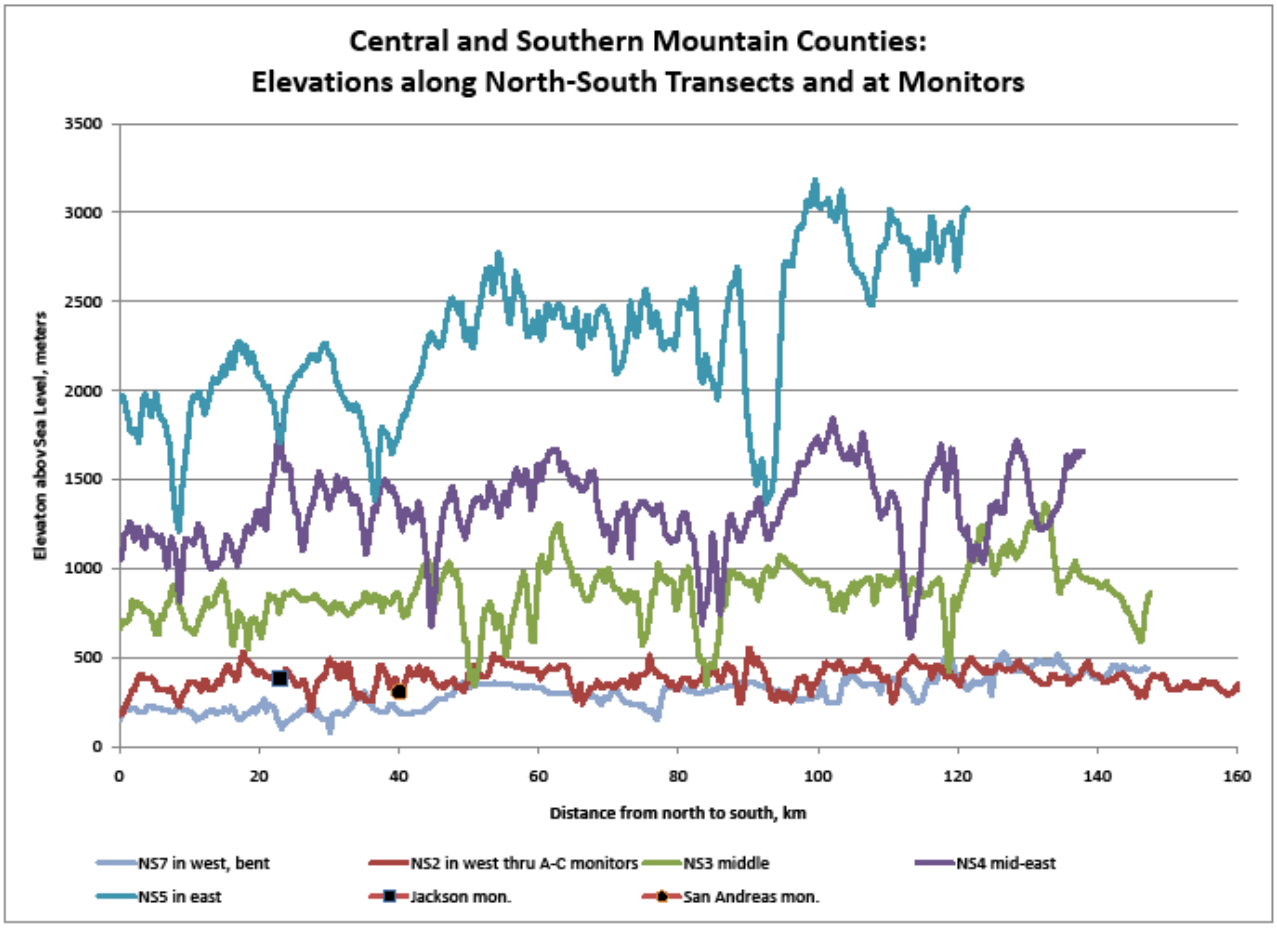
Mariposa and Tuolumne counties are the southernmost counties of the "Mountain Counties Air Basin" as defined by ARB. This is not a "basin" in the sense of a single watershed or an area that is more or less surrounded by high terrain. Rather, they are a group of rural and largely mountainous counties that are similar in their better air quality, more pronounced topography, and rural character as compared to the more polluted, flatter, and more populous areas to the west (i.e., the broad Sacramento and San Joaquin valleys of central California). Both counties are in the foothills and mountains of the Sierra Nevada mountain range. Elevations increase from about 200 feet (67 meters) above mean sea level (MSL) in the west to over 12,000 feet (3,500 meters) in the east. The counties are characterized by river valleys running roughly east-northeast to west-southwest, separated by mountains. The largest rivers are the Stanislaus River along the Tuolumne northern border, the Tuolumne River within Tuolumne County, and the Merced River, Bear Creek, and Mariposa Creek within Mariposa County. These rivers and their various forks and tributaries divide the counties into deep valleys. The strong relief of the terrain may be seen in Appendix 1, Map 7.

The eastern and western portions of the counties are different. The variation of elevation along a 20 kilometer (km) north-south transect is 500 meters (m) and more in the east, decreasing to about 100 - 200 m in the west. In the west, there are even some valleys with relatively low ridges oriented northwest-southeast, roughly perpendicular to the orientation of the valleys in the east. Thus, in the eastern portion, the mountains separating the valleys pose a strong barrier to south-north air flow, but in the western portion the topography is a much weaker barrier to the south-north transport of air, and thus to transport of pollution between the two counties (see Figures 3 - 5).



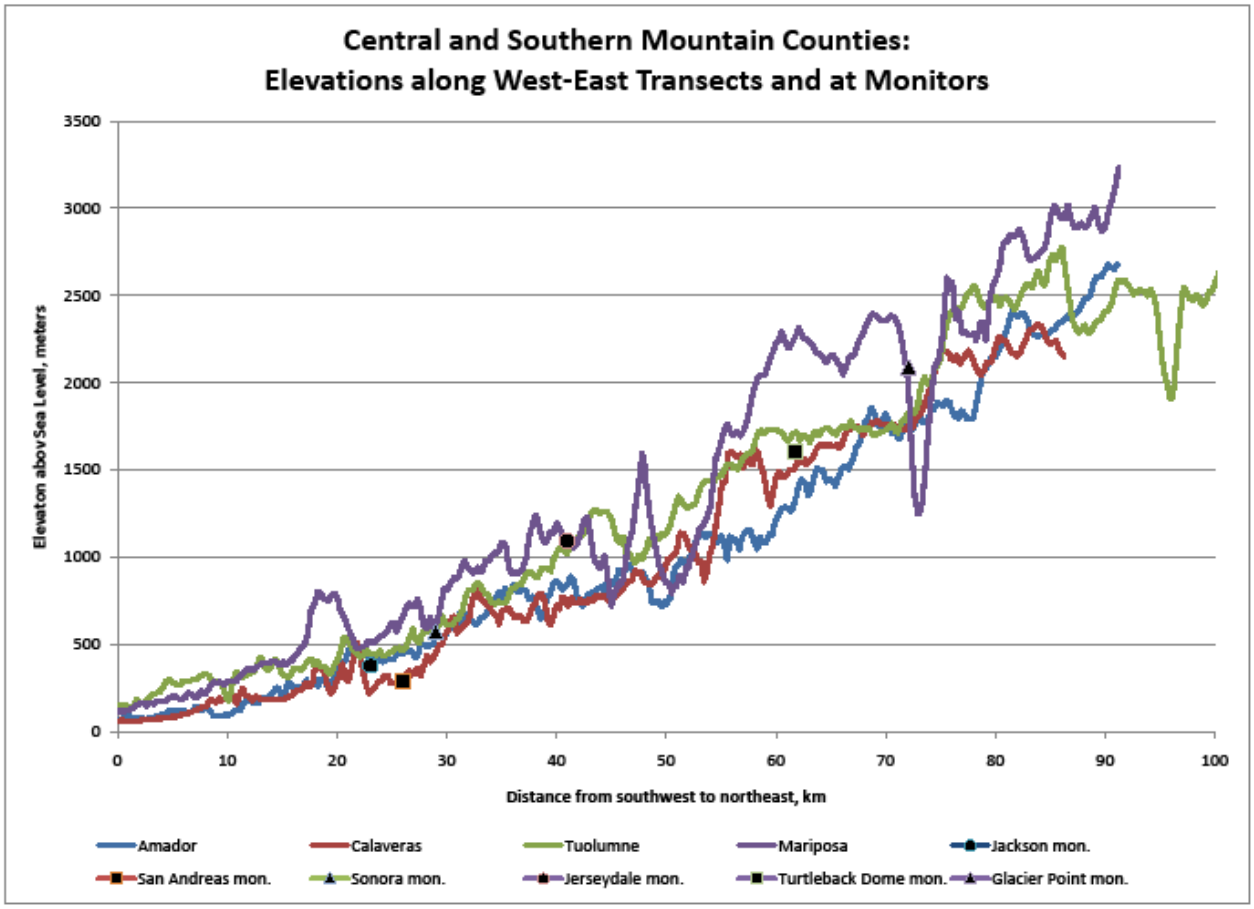
2011 DVs: Jackson-Clinton Road (Amador County): 71; San Andreas-Gold Strike Road (Calaveras County): 77; Sonora-Barretta Street (Tuolumne County): 74; Jerseydale (Mariposa County): 76; Yosemite National Park-Turtleback Dome (Mariposa County, CASTNET monitor): 77; Yosemite National Park-Glacier Point (Mariposa County, National Park Service monitor/non-regulatory): 72*. * = DV does not meet data completeness requirements.

Figure 3



*2011 DVs: Jackson-Clinton Road (Amador County): 71; San Andreas-Gold Strike Road (Calaveras County): 77.

Figure 4



* 2011 DVs: Jackson-Clinton Road (Amador County): 71; San Andreas-Gold Strike Road (Calaveras County): 77; Sonora-Barretta Street (Tuolumne County): 74*; Jerseydale (Mariposa County): 76; Yosemite National Park-Turtleback Dome (Mariposa County, CASTNET monitor): 77; Yosemite National Park-Glacier Point (Mariposa County, National Park Service monitor/non-regulatory): 72*. * = DV does not meet data completeness requirements.

Figure 5

Air flow in the west-east direction is relatively unimpeded along the river valleys, which extend well east into the interior of the counties. Eastward transport of pollutants from the more urbanized areas to the west is thus possible during conditions of upslope flow. Conversely, westward transport of locally generated pollution is possible.

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 Southern Mountain Counties nonattainment area has previously established boundaries associated with the 1997 8-hour ozone NAAQS. In December 2003, EPA indicated its intent to designate these counties, along with two other violating mountain counties (Amador and Calaveras), as part of the San Joaquin Valley nonattainment area. EPA believed, as we still believe, that the strongest contribution to the violations in the mountain counties comes from the San Joaquin Valley. However, for the 1997 8-hour ozone standard, the state requested grouping Mariposa and Tuolumne counties as one nonattainment area, citing existing inter-county coordination, similarities in pollution transport paths, and support from the other factors analyzed. EPA accepted the state's recommendations and in 2004 designated Mariposa and Tuolumne counties as one multi-jurisdictional nonattainment area (Southern Mountain Counties). In 2009, the state recommended the same nonattainment area for the 2008 ozone standard. Both counties had violating monitors at the time. Now that certified and quality-assured 2011 data indicate that Tuolumne County is attaining the 2008 ozone NAAQS based on its 2009-2011 DV, the state is requesting that we only designate Mariposa County as nonattainment. This recommendation follows the county and air district boundaries, but deviates from the existing Southern Mountain Counties nonattainment area boundary, by excluding Tuolumne County.

Tuolumne County represents the Phoenix Lake-Cedar Ridge micropolitan Core Based Statistical Area (CBSA)[3]. This CBSA is not part of a larger Combined Statistical Area (CSA). Mariposa County is not included as part of the Phoenix Lake-Cedar Ridge CBSA, nor is it defined as its own CBSA or CSA. The Mariposa County boundary is also the boundary for the jurisdiction of the Mariposa County Air Pollution Control District. Likewise, the Tuolumne County boundary is the jurisdictional boundary for the Tuolumne County Air Pollution Control District. ARB's February 23, 2012 letter includes an attachment providing the state's justification for excluding Tuolumne County from the nonattainment area under consideration. (See ARB's "Enclosure 1, Information to Support Area Designation Boundary Recommendations for the 2008 Federal 8-Hour Ozone Standard: Amador, Calaveras, Tuolumne, and Mariposa Counties.) The state's justification with respect to jurisdictional boundaries is that, although both Mariposa and Tuolumne counties are in the Mountain Counties Air Basin, as defined by the state, each county has its own air agency:

> "Air quality in each county is managed at the local level through land use and development planning practices, and the local APCD [Air Pollution Control District] is responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and State air quality laws. With respect to nonattainment planning, it is most efficient to have the nonattainment boundary coincide with the jurisdictional boundary of the area(s) that experience or contribute to violations of the standard." (Enclosure 1, page E1-12)

Attainment in the Mariposa County nonattainment area will be affected by reductions in nearby nonattainment areas, including the San Joaquin Valley. The San Joaquin Valley APCD will be making emission reductions to achieve attainment with the 2008 ozone NAAQS in the valley. As part of

[3] The Office of Management and Budget (OMB) defines metropolitan (metro) and micropolitan (micro) statistical areas based on census information. A metro statistical area contains a core urban area of 50,000 or more in population, and a micro statistical area contains an urban core of at least 10,000 but less than 50,000 in population. A Core Based Statistical Area (CBSA) is a collective term for both metro and micro areas. OMB may further define a combined statistical area (CSA) as an aggregate of adjacent metro or micro statistical areas that are linked by commuting ties.

nonattainment area planning throughout the state, ARB has and will continue to make reductions to mobile source and consumer product emissions. Air quality planning for Mariposa County will be performed by the Mariposa County APCD.

Conclusion

Based on the assessment of factors described above, EPA has concluded that Mariposa County should be included in the Mariposa County, CA nonattainment area because it is violating the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Certified air quality data (Factor 1) for 2009-2011 indicate that the monitor in Mariposa County violates the 2008 8-hour ozone standard. The monitor in Tuolumne County indicates that Tuolumne County is attaining the 2008 ozone standard based on 2011 data.

Emissions and emission-related data (Factor 2) show that although most of the stationary sources of ozone precursor emissions are located in Tuolumne County, VOC emissions from three neighboring counties (Madera, Merced, and Stanislaus counties) that are located upwind of Tuolumne and Mariposa counties in the San Joaquin Valley nonattainment area are nearly six times higher than VOC emissions from Tuolumne County, and NO_x emissions from the three upwind neighboring counties are fifteen times higher than NO_x emissions from Tuolumne County. Mariposa and Tuolumne counties are both sparsely populated. Highest truck and non-truck traffic volumes generally occur in Tuolumne County, and although VMT in this county is also nearly three times higher than VMT in Mariposa County, it is approximately two to five times lower than VMT compared to Madera, Merced, and Stanislaus counties. Total emissions of ozone precursors from Mariposa and Tuolumne counties are very small compared to ozone precursor emissions from the counties in the San Joaquin Valley nonattainment area.

Meteorology and weather or transport patterns (Factor 3) show that the dominant wind direction, from the west-northwest, is indicative of transport from the San Joaquin Valley nonattainment area, but there may be some transport of pollutants between Tuolumne and Mariposa counties. EPA notes that 2011 was anomalously cool, potentially creating localized ozone patterns that are not representative of expected normal conditions or ongoing trends.

Geography and topography (Factor 4) shows that Tuolumne and Mariposa counties contain complex terrain. As discussed in Factor 1, EPA notes that portions of both counties are in the Sierra Nevada Mountain Range and ozone concentrations often increase with elevation. Therefore, the observed difference in ozone concentrations may be due in part to the fact that the monitor in Tuolumne County is at a lower elevation than the two monitors with complete data in Mariposa County (571 meters versus 1,135 meters and 1,605 meters). Air flow in the west-east direction is relatively unimpeded along the river valleys, which extend well east into the interior of each county. Eastward transport of pollutants from the more urbanized areas to the west is thus possible during conditions of upslope flow. Conversely, westward transport of locally generated pollution is possible.

In considering jurisdictional boundaries (Factor 5), EPA notes that Mariposa and Tuolumne counties were designated as the Southern Mountain Counties nonattainment area for the 1997 ozone NAAQS in 2004. Now that certified and quality-assured 2011 data indicate that Tuolumne is attaining the NAAQS,

the state is requesting that we designate only Mariposa County as nonattainment and Tuolumne County as attainment. The state's multi-factor analysis highlights that Mariposa and Tuolumne counties are separate air pollution control districts with separate jurisdictional boards and authorities.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or contributes to a violation in a nearby area. The violating monitor is in Mariposa County. Our analysis of the Meteorology and Geography factors suggest that occasional transport of ozone and/or ozone precursors between Mariposa and Tuolumne counties is possible. However, EPA cannot conclusively determine that Tuolumne County contributes to nonattainment in Mariposa County. The relatively low ozone precursor emissions from both counties compared to the counties in the San Joaquin Valley nonattainment area, along with region's meteorology and geography suggests that the violations in Mariposa are attributable primarily to contributions from the broader valley area. Also, Mariposa County is a separate jurisdictional air pollution district. Therefore, EPA is concluding that it is appropriate to designate only Mariposa County, CA as nonattainment for the 2008 ozone NAAQS. The San Joaquin Valley is separately designated nonattainment.

California
Area Designations for the
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Technical Analysis for Nevada County (Western part)

Figure 1 is a map of the Nevada County (Western part), 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

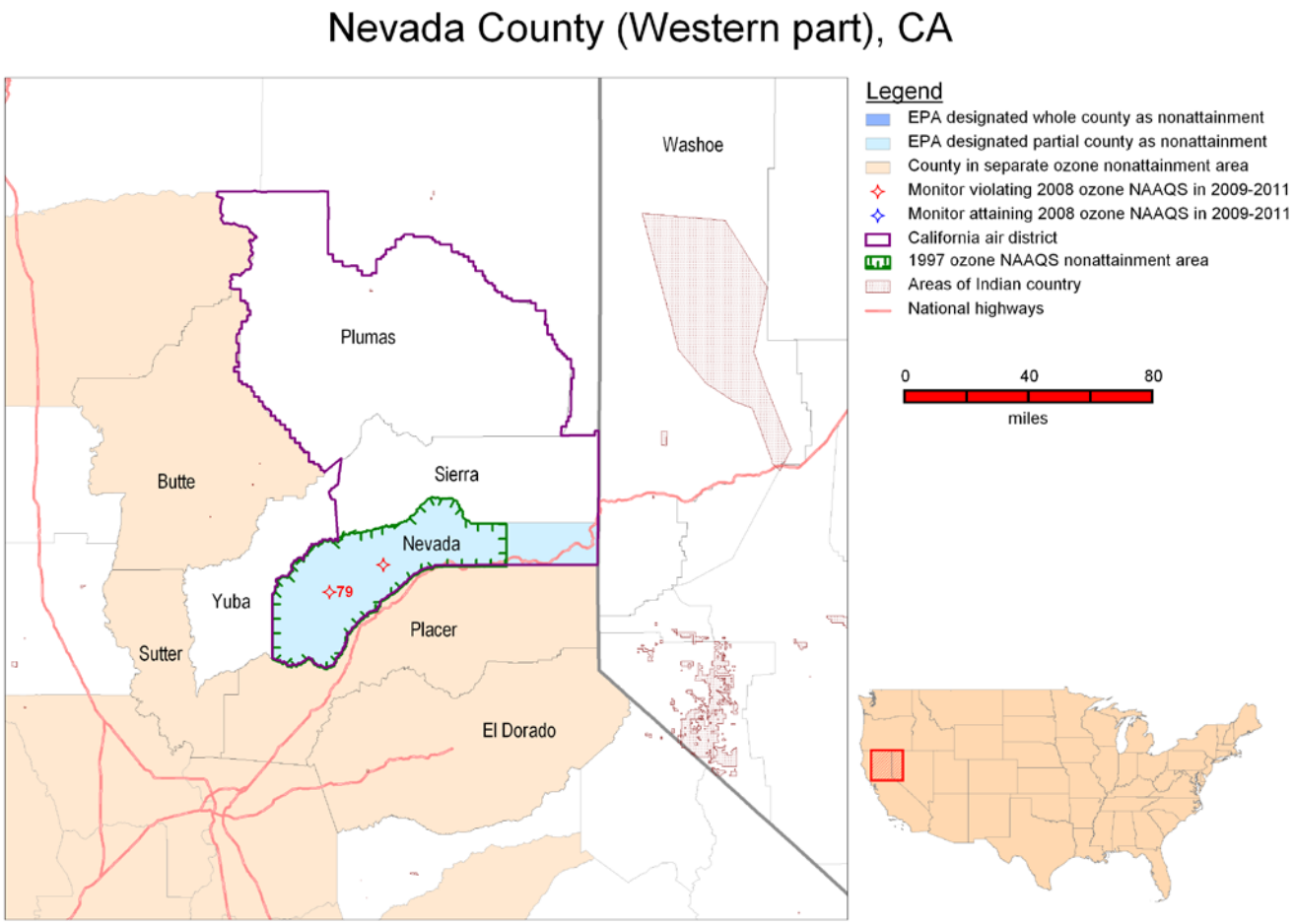


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2009-2011 (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the same western portion of Nevada County.

In March 2009, California recommended that the same partial-county area be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data, and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations, but did not change its recommendation for Nevada County. These 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 western Nevada County, California (identified in Table 1 below) nonattainment for the 2008 ozone NAAQS.

Table 1. State's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Nevada County (Western part).

Nevada County (Western part)	State-Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country
Nevada County, CA	Nevada County (p)	Nevada County (p)
No areas of Indian country in nonattainment area		

p = partial

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 Nevada County nonattainment area, based on data from the most recent three-year period for which we had timely submitted certified air quality data. Northern Sierra Air Quality Management District (AQMD) and California Air Resources Board (ARB) submitted certified air quality data for 2011 before February 29, 2012 for this area; thus, for purposes of the final designations, we are considering air quality from the 2009-2011 period (i.e., the 2011 DV) for this area. 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.]

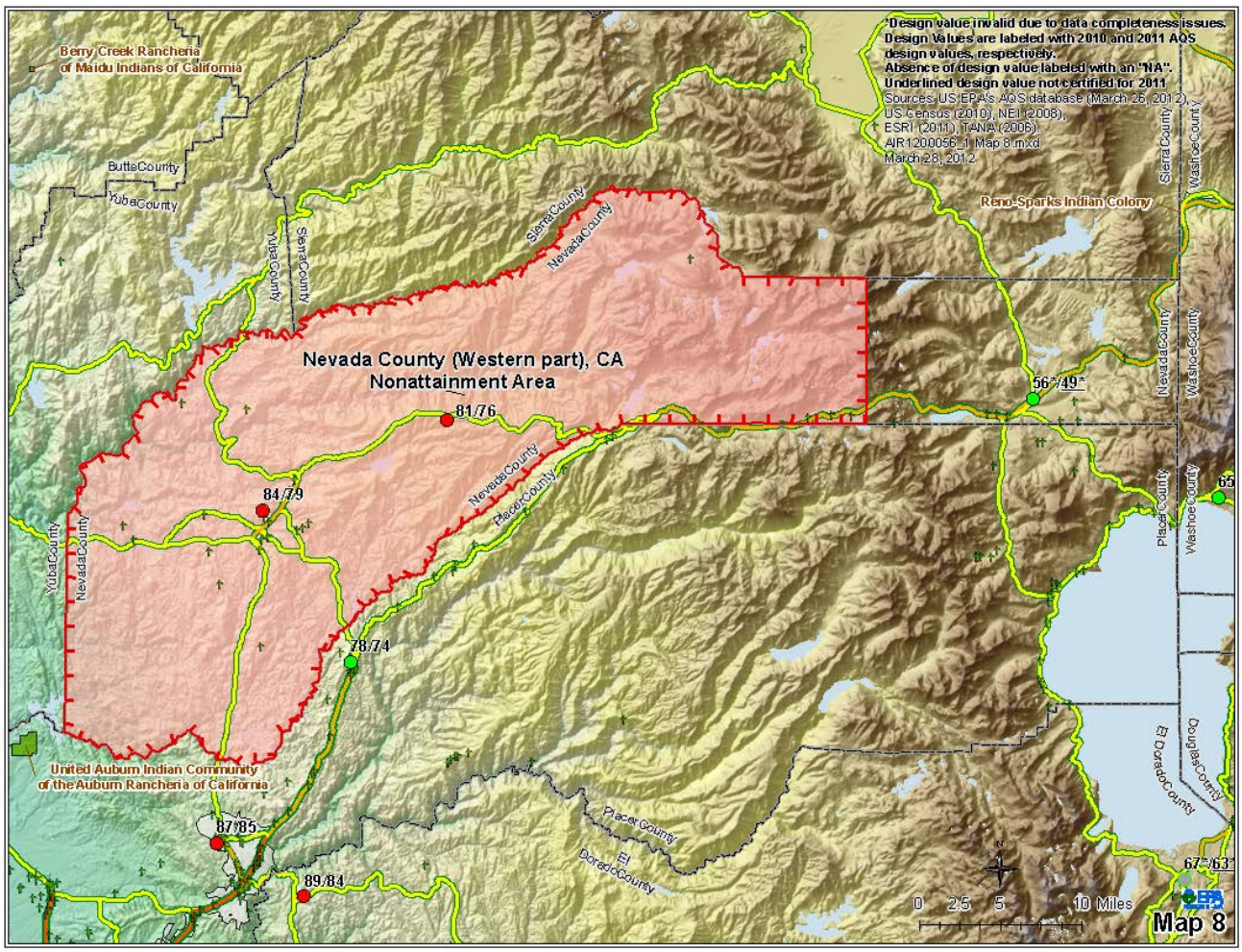
Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year, but some ozone monitors in the Nevada County nonattainment area have been approved to operate on a seasonal schedule per 40 CFR part 58, Appendix D, section 4.1(i). Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify data by May 1st of the following year. Northern Sierra AQMD and ARB certified 2011 data by February 29, 2012 for Nevada County. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that Nevada County is violating the 2008 ozone NAAQS. Nevada County's 2010 DV was 84 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Nevada County nonattainment area are shown in Appendix 1, Map 8 (also inserted below).

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
Nevada, CA	Yes (partial)	79

Maps contained in Appendix 1 show the geographic distribution of monitors. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designation) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists 2009-2011 DVs for Nevada County. 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 8: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1

Monitors in the existing Nevada County nonattainment area (which includes the western part of Nevada County) show a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, this area is included in the Nevada County (Western part) nonattainment area.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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.) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Nevada County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Nevada County, CA	Yes (partial)	3,761	4,626
	Areawide:	3,761	4,626

Nevada County has a low level of ozone precursor emissions relative to the larger Sacramento Metro area to the south-southwest. EPA is designating the Sacramento Metro area as a separate nonattainment for the 2008 ozone NAAQS.

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 NO_x and VOC emissions, which contribute to ozone formation. Rapid population or vehicle miles traveled (VMT) growth (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 Nevada County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Nevada County, CA	Yes (partial)	136,484	0.17	11,946	+10%
	Areawide:	136,484	0.17	11,946	+10%

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 8 and 8a in Appendices 1 and 2, respectively show population for this area. Nevada County has experienced growth, yet overall it has a small population relative to the rest of the Sacramento Metro area, to the south-southwest.

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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 for Nevada County.

Table 5. Traffic (VMT) data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Nevada, CA	Yes (partial)	1,374
	Areawide:	1,374

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

Map 8 in Appendix 1 shows that annual average daily non-truck traffic in Nevada County is light (less than 25,000 non-truck vehicles per day), with a five-mile stretch of roadway that experiences comparatively heavier traffic (25,000 - 50,000 non-truck vehicles per day).

Factor 3: Meteorology (weather/transport patterns)

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

Previous assessments of pollution transport found that the broader Sacramento area (roughly equivalent to the non-mountainous portions of the Sacramento Metropolitan ozone nonattainment area) can have an overwhelming impact on counties of the Mountain Counties Air Basin, including Nevada County.[1]

The Nevada County air flow is most frequently from the south-southwest according to the 30-year average direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (Figure 2). This is consistent with the orientation of the river valleys and ridges in Nevada County, and with the shape of the western portion of the county itself. See Map 8, Appendix 1.

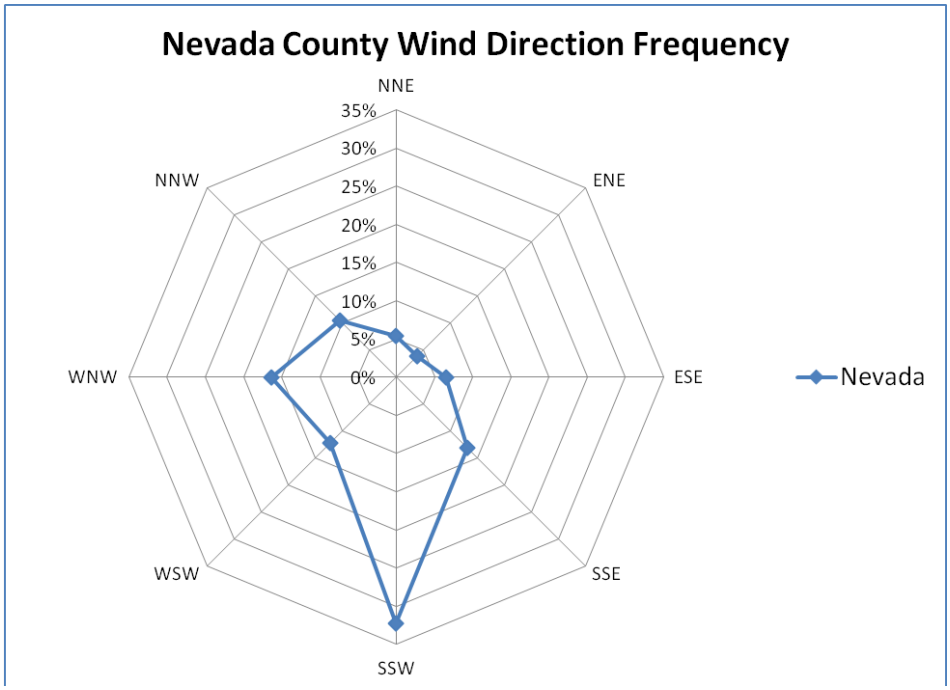


Figure 2

[1] "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California". California Environmental Protection Agency, Air Resources Board, March 2001. http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm

The western portion of the county is likely also subject to the meteorology conditions of, and flow from, the neighboring Sacramento Valley to the south-southwest, such as from the Sacramento Metro area. See Map 10, Appendix 1. However, even at its western end the county is within the foothills of the Sierra Nevada mountain range, rather than in the flats of Sacramento Valley, and on the whole the county is more rural and largely mountainous. In contrast to the Sacramento Valley, it is more dominated by upslope and downslope flows of the strongly sloped landscape, as well as enhanced dispersion due to turbulence in the rough terrain. The eastern portion of the county is not expected to be subject to conditions in or transport from the Sacramento Valley, since it is on the eastern side of the crest of the Sierra Nevada mountain range (4,200 meters or 14,000 feet high).

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.

Nevada County is in the north central portion of the "Mountain Counties Air Basin" as defined by California Air Resources Board (ARB)[2]. This is not a "basin" in the sense of a single watershed or an area that is more or less surrounded by high terrain. Rather, it is a group of rural and largely mountainous counties that are similar in their better air quality, more pronounced topography, and rural character as compared to the more polluted, flatter, and more populous areas to the west--the broad Sacramento and San Joaquin valleys of central California. Nevada County is in the foothills and mountains proper of the Sierra Nevada mountain range. Elevations increase from roughly 300 feet above mean sea level (MSL) in the west to over 1,400 feet in the east, at the Sierra crest (100 meters to over 4,200 meters).

Nevada County is characterized by river valleys running roughly east-northeast to west-southwest, separated by mountain ridges. This tends to inhibit north-south air flow, but allow east-west upslope and downslope flow. The eastern portion of the county would not be expected to be influenced by conditions in or transport from the Sacramento Valley or even the western portion of Nevada County itself, since it is on the other side of the crest of the Sierra Nevada mountain range (14,000 feet or 4,200 meters high).

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 urban growth boundaries. 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 Nevada County (Western part) area has previously established nonattainment boundaries associated with the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS. The western portion of the county is defined as the area that lies to the west of the crest of the Sierra Nevada mountain range. This ridgeline also represents the hydrographic boundary between

[2] http://www.arb.ca.gov/ei/maps/statemap/abmap.htm

the Lake Tahoe watershed and the watersheds to the west. The entire county is under the air quality management jurisdiction of the Northern Sierra AQMD, along with Plumas and Sierra Counties to the north of Nevada County. Nevada County is a micropolitan statistical area within the Sacramento–Arden-Arcade–Yuba City Combined Statistical Area or CSA.

Nevada County is not part of the Sacramento Area Council of Governments (SACOG) transportation planning agency and MPO (metropolitan planning organization) that has jurisdiction within the Sacramento Metro area. As such, Nevada County is in a different regulatory regime with respect to transportation planning. The county does not have its own MPO. This fact formed part of the basis for EPA accepting the state's request to exclude the west Nevada County area from the Sacramento Metro area in our designations for the 1997 ozone NAAQS. We believe this jurisdictional difference is still relevant to our current ozone designations for the Sacramento Metro and Nevada County (Western part) nonattainment areas.

Conclusion

Based on the assessment of factors described above, EPA is designating the western part of Nevada County as the Nevada County (Western part), CA nonattainment area because it is violating the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in the western part of Nevada County show a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, Factor 1 supports designating the western part of Nevada County as "nonattainment."

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), and geography and topography (Factor 4), show a distinction between the western and eastern parts of the county in terms of sources of ozone precursor emissions as well as meteorology resulting from topography (Sierra Nevada mountain range).

In considering jurisdictional boundaries (Factor 5), EPA believes that although there is justification to include western Nevada County in the Sacramento Metro nonattainment area, based on the county's inclusion in the Sacramento–Arden-Arcade–Yuba City CSA and the degree of economic interconnectedness indicated by such inclusion, we nonetheless believe that the state's recommendation to make this area a separate nonattainment area is reasonable. All areas that are violating and any nearby contributing areas are being designated nonattainment.

Based on the preceding discussion, EPA concurs with the state's recommendation and is designating Nevada County (Western part), CA nonattainment for the 2008 ozone NAAQS.

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Area Designations for the
2008 Ozone National Ambient Air Quality Standards

Technical Analysis for Riverside County (Coachella Valley)

Figure 1 is a map of the Riverside County (Coachella Valley), 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 for Riverside County (Coachella Valley). Also shown is the boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

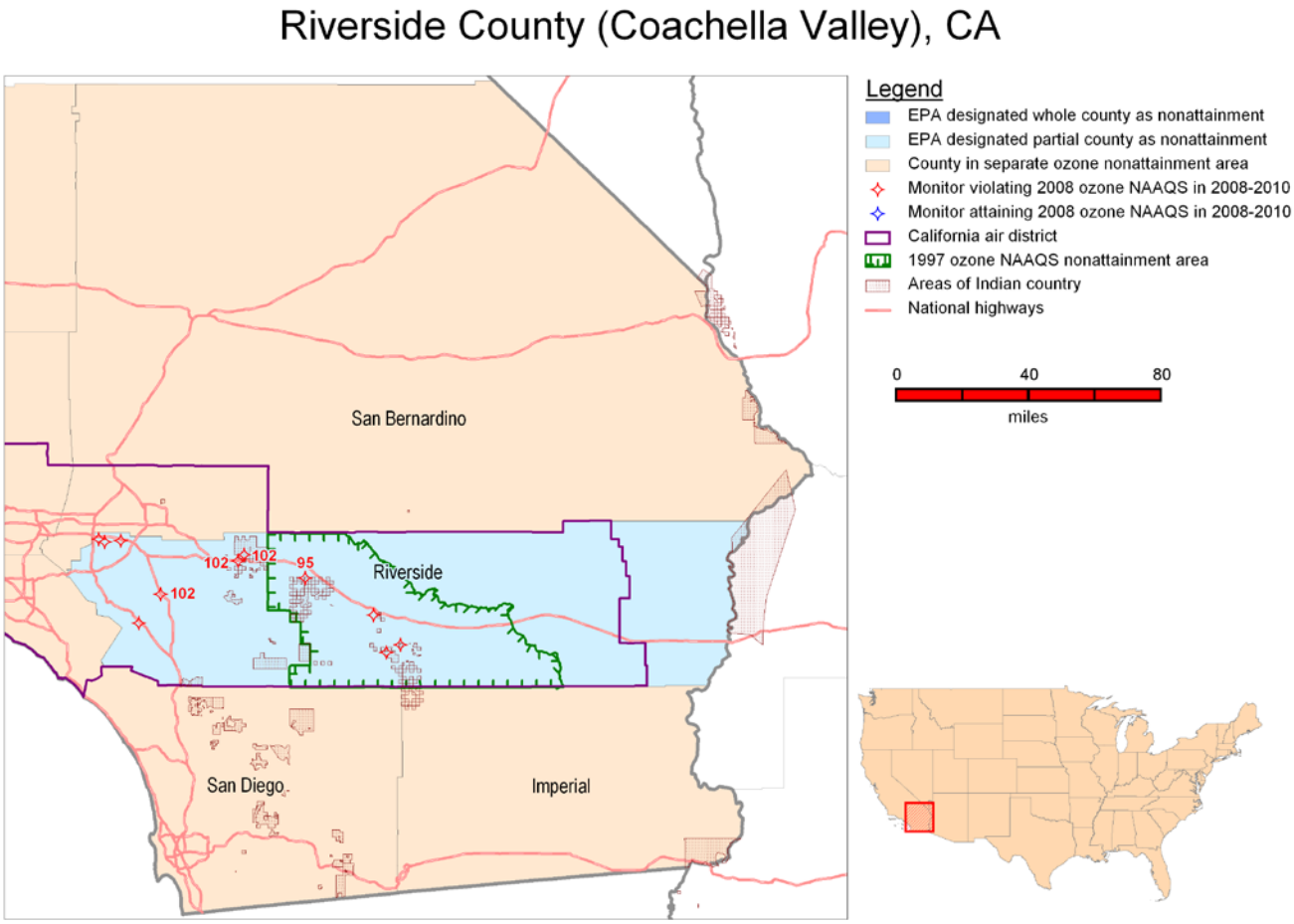


Figure 1

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the same portion of central Riverside County. Areas of Indian country of several federally recognized tribes were included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same partial-county area be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 Riverside County (Coachella Valley). These 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 the Salton Sea Air Basin portion of Riverside County in California and areas of Indian country in the Salton Sea Air Basin portion of Riverside County as "nonattainment" for the 2008 ozone NAAQS as part of the Riverside County (Coachella Valley) multi-jurisdictional nonattainment area.

Table 1. State's or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas in Indian country for Riverside County (Coachella Valley).

Coachella Valley	State or Tribe-Recommended Nonattainment Counties or Areas in Indian country	EPA's Nonattainment Counties or Areas in Indian country
Riverside County, CA	Riverside County (p)	Riverside County (p)
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation	N/A	Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
Augustine Band of Cahuilla Indians	N/A	Augustine Band of Cahuilla Indians
Cabazon Band of Mission Indians	N/A	Cabazon Band of Mission Indians
Santa Rosa Band of Cahuilla Indians [1]	N/A	Santa Rosa Band of Cahuilla Indians
Torres Martinez Desert Cahuilla Indians [2]	N/A	Torres Martinez Desert Cahuilla Indians
Twenty-Nine Palms Band of Mission Indians of California[3]	N/A	Twenty-Nine Palms Band of Mission Indians of California

p = partial
N/A = Tribe did not submit recommendation.
[1] The Santa Rosa Band of Cahuilla Indians (Santa Rosa Cahuilla) has contiguous areas of Indian country in both the Los Angeles-South Coast Air Basin nonattainment area and in the Riverside County (Coachella Valley) nonattainment area. All of Santa Rosa Cahuilla is being designated with the Riverside County (Coachella Valley) nonattainment area.
[2] The Torres Martinez Desert Cahuilla Indians (Torres Martinez) has non-contiguous areas of Indian country in both the Imperial County and the Riverside County (Coachella Valley) nonattainment areas. Non-contiguous lands of the Torres Martinez are being designated with the surrounding nonattainment areas. This technical analysis addresses only those areas of Indian country within the Riverside County (Coachella Valley) nonattainment area.
[3] The Twenty-Nine Palms Band of Mission Indians of California (Twenty-Nine Palms) has non-contiguous areas of Indian country in both the Los Angeles-South Coast Air Basin nonattainment area and the Riverside County (Coachella Valley) nonattainment area. Non-contiguous lands of the Twenty-

Nine Palms are being designated with the surrounding nonattainment areas. This technical analysis addresses only those areas of Indian country within the Riverside County (Coachella Valley) nonattainment area.

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in the existing Riverside County (Coachella Valley) 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 Riverside County (Coachella Valley) nonattainment area comprises the Salton Sea Air Basin portion of Riverside County (see Map 9a in Appendix 2). The 2010 DV for the ozone NAAQS for the entirety of Riverside County is shown in Table 2.

Table 2. Air Quality Data.

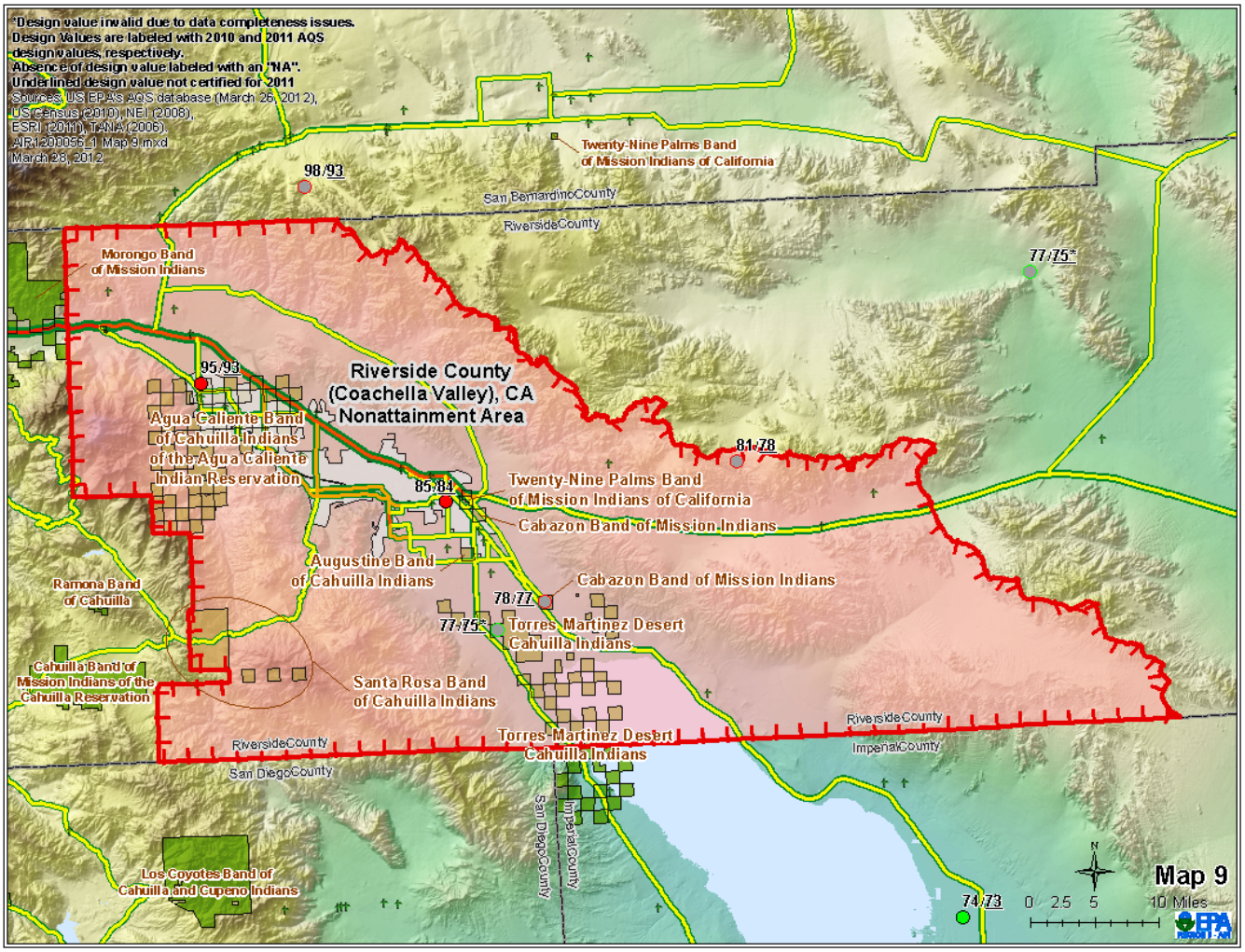
County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Riverside, CA	Yes (partial)	102

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing Riverside County (Coachella Valley) nonattainment area are shown in Appendix 1, Map 9 (inserted below). EPA is designating the western part of Riverside County as part of the Los Angeles-South Coast Air Basin nonattainment area. The design value shown in Table 2 is from a monitor located within this western portion of Riverside County. As shown in Appendix 1, Map 9, the existing Riverside County (Coachella Valley) nonattainment area has a DV of 95 ppb.

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 9 in Appendix 1 includes preliminary 2011 DVs for the existing Coachella Valley 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 Riverside County (Coachella Valley) 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 9: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1

Monitors within the Salton Sea Air Basin portion of Riverside County show violations of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, this area is included in the Riverside County (Coachella Valley) 2008 ozone NAAQS nonattainment area.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Riverside County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Riverside, CA	Yes (partial)	54,727	28,934
	Areawide:	54,727	28,934

Stationary source emissions in Riverside County are generally clustered in the western portion of Riverside County (designated with the Los Angeles-South Coast Air Basin nonattainment area), with fewer stationary sources in the eastern Coachella Valley nonattainment area portion of the county (see Maps 6 and 9 of Appendix 1). Although stationary source emissions of ozone precursors from Riverside County are quite high, based on the geographic distribution of stationary sources, the eastern portion of the county is expected to represent a relatively smaller fraction of total emissions from Riverside County.

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 NO_x 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 Riverside County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Riverside, CA	Yes (partial)	2,189,641	0.30	630,364	+40%
	Areawide:	2,189,641	0.30	630,364	+40%

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 9 and 9a in Appendices 1 and 2, respectively, show population in the area. The percent change in population in Riverside County indicates a high level of growth. Population centers in Riverside County are centered in the western portion of the county (see Maps 6a and 9a of Appendix 2). The eastern portion of the county is fairly unpopulated, mountainous terrain. The western and eastern portions of Riverside County are linked by the Banning Pass.

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Riverside, CA	Yes (partial)	21,704
	Areawide:	21,704

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

Riverside County exhibits high VMT. However, based on traffic patterns (see Maps 6 and 9 in Appendix 1), most of the non-truck traffic volume is centered in the western portion of Riverside County, with some heavy traffic in the eastern portion of the county limited to two major roadways.

Factor 3: Meteorology (weather/transport patterns)

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

The Final 2007 Air Quality Management Plan produced by South Coast Air Quality Management District (SCAQMD) discusses the transport patterns and stagnation conditions, and how these patterns

and conditions would affect the fate and transport of precursor emissions that contribute to ozone formation in the Salton Sea Air Basin (SSAB) portion of Riverside County.[1]

> "Ozone in the atmosphere of the Riverside county portion of SSAB is both directly transported from the Basin and formed principally from precursors emitted upwind. These precursors are emitted in greatest quantity in the coastal and central Los Angeles county areas of the Basin. The Basin's prevailing sea breeze causes polluted air to be transported inland. As the air is being transported inland, ozone is formed, with peak concentrations occurring in the inland valleys of the Basin in an area extending from eastern San Fernando Valley through the San Gabriel Valley into the Riverside-San Bernardino area and the adjacent mountains. As the air is transported still further inland into the desert areas, ozone concentrations decrease due to dilution."

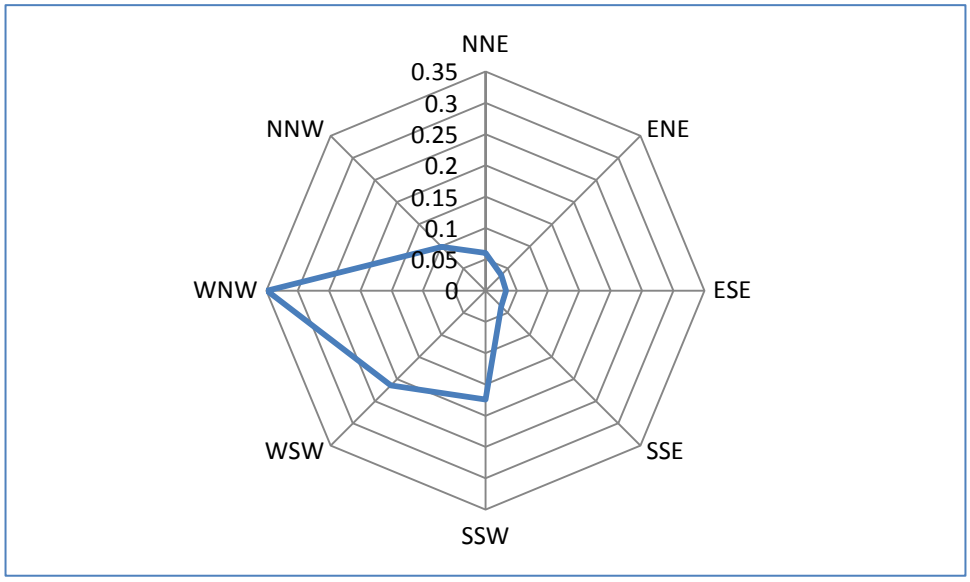


Figure 2: Riverside County - Summer Wind Frequency Distribution

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.

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 air basins in this area are shown in Appendix 2, Map 9a. The nonattainment area consists of the northern portion of the Salton Sea Air Basin. The remaining portion of the Salton Sea Air Basin consists of the entirety of Imperial County. EPA is designating a separate nonattainment area for

[1] South Coast Air Quality Management District, June 2007. Final 2007 Air Quality Management Plan, Appendix II. http://www.aqmd.gov/aqmp/07aqmp/aqmp/Appendix_II.pdf

Imperial County, consistent with the existing 1997 ozone nonattainment areas and consistent with the State's recommendations under the 2008 ozone NAAQS.

South Coast Air Quality Management District's Final 2007 Air Quality Management Plan provides a brief description of the Coachella Valley Planning Area.

> "The Riverside county portion of the SSAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. The federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of Riverside County and the Salton Sea Air Basin that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east.[2]"

The "Assessment and Mitigation of the Impacts of Transported Pollutants on Ozone Concentrations within California," produced by California Air Resources Board, also discusses the physical features of the land that might affect the airshed and distribution of ozone over the area [3]

> "There is only one major pass, San Gorgonio Pass, connecting the Los Angeles Basin and the Colorado (low) Desert. The northern wall of the pass is the foothills and lower ridges of the San Bernardino Mountains which build up to Mount San Gorgonio (11,502 ft MSL). The more imposing southern wall rises abruptly toward Mount San Jacinto (10,805 ft MSL) in the San Jacinto Mountains. The floor of the pass begins about two miles west of Banning (about 2,300 ft MSL) and slopes downward at about 80 feet per mile to its eastern end about two miles east of Whitewater (about 1000 ft MSL)."

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 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 Riverside County (Coachella Valley) area has previously established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS.

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[2] 1-2. Final 2007 Air Quality Management Plan. South Coast Air Quality Management District. http://www.aqmd.gov/aqmp/07aqmp/index.html

[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.

For the 1-hour ozone NAAQS, the Riverside County (Coachella Valley) nonattainment area was part of the Southeast Desert nonattainment area. For the 1997 ozone NAAQS, however, EPA designated Riverside County (Coachella Valley) as a separate nonattainment area. For the 2008 ozone NAAQS, EPA is designating Riverside County (Coachella Valley), consisting of the northern portion of the Salton Sea Air Basin, as nonattainment. The remaining portion of the Salton Sea Air Basin consists of the entirety of Imperial County. EPA is designating Imperial County as a separate nonattainment area, consistent with the existing 1997 ozone nonattainment areas and consistent with the State's recommendations under the 2008 ozone NAAQS. Imperial Valley has its own air district, and the Salton Sea Air Basin portion of Riverside County is under the air quality jurisdiction of the South Coast Air Quality Management District.

The Riverside County (Coachella Valley) area also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries.

The Santa Rosa Band of Cahuilla Indians (Santa Rosa Cahuilla) is a federally recognized tribe with reservation lands in Riverside County. The tribe's areas of Indian country, located in the Riverside County (Coachella Valley) 2008 ozone NAAQS nonattainment area are shown on Map 9a in Appendix 2. In 2004, EPA established the Los Angeles-South Coast Air Basin nonattainment boundaries for the 1997 ozone NAAQS. The Los Angeles-South Coast Air Basin nonattainment area included the entirety of Orange County, the southwestern portion of Los Angeles County, the southwest portion of San Bernardino County, and the western portion of Riverside County (see Map 6 in Appendix 1). In 2004, the western part of the Santa Rosa Cahuilla areas of Indian country in the southwestern portion of Riverside County were designated with the Los Angeles-South Coast Air Basin nonattainment area, while the eastern portion of the Santa Rosa Cahuilla areas of Indian country were designated as part of the Riverside County (Coachella Valley) nonattainment area. Consistent with current EPA policy that discourages splitting contiguous areas of Indian country between two separate nonattainment areas where practically possible, the Santa Rosa Cahuilla areas of Indian country, including those portions that were previously part of the existing Los Angeles-South Coast Air Basin nonattainment area, are being designated as part of the Riverside County (Coachella Valley) 2008 ozone NAAQS nonattainment area.

The Torres Martinez Desert Cahuilla Indians (Torrez Martinez) is a federally recognized tribe that has non-contiguous areas of Indian country in both Riverside County and Imperial County. These portions of Indian country and the surrounding nonattainment areas are shown on Map 9a in Appendix 2. Due to the non-contiguous nature of these lands, the portions of Torres Martinez in Riverside County are being designated as part of the Riverside County (Coachella Valley) nonattainment area. See the technical analysis for the Imperial County 2008 ozone NAAQS nonattainment area for discussion of the portions of Torres Martinez in Imperial County.

The Twenty-Nine Palms Band of Mission Indians of California (Twenty-Nine Palms) is a federally recognized tribe that has 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 on Map 9a in Appendix 2. Due to the non-contiguous nature of these lands, the portions of Twenty-Nine Palms in Riverside County are being designated as part of the Riverside County (Coachella Valley) 2008 ozone NAAQS nonattainment area. See the technical analysis for the Los Angeles-San Bernardino Counties (West Mojave Desert) nonattainment area for discussion of the portions of Torres Martinez in San Bernardino County.

Consistent with the nonattainment boundaries for the 1997 ozone standard, Morongo Band of Cahuilla Mission Indians lands is being included as part of the Los Angeles-South Coast Air Basin 2008 ozone NAAQS nonattainment area. See the technical analysis for the Los Angeles-South Coast Air Basin nonattainment area for further discussion.

Conclusion

Based on the assessment of factors described above, EPA is designating Riverside County (Coachella Valley), CA nonattainment because the area violates the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors within the Salton Sea Air Basin portion of Riverside County are violating the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, Factor 1 supports designating the Salton Sea Air Basin portion of Riverside County as nonattainment.

Evaluation of emissions and emission sources (Factor 2) shows that sources of ozone precursor emissions are concentrated on the western side of Riverside County, which EPA is designating nonattainment as part of the Los Angeles-South Coast Air Basin nonattainment area. The central, Salton Sea Air Basin, portion of Riverside County is distinguished from the western (South Coast Air Basin) portion by its lower design values, fewer stationary sources and population centers, and lower volumes of non-truck traffic. Therefore, Factor 2 supports the state's recommendation.

Meteorology and weather or transport patterns (Factor 3) and geography and topography (Factor 4) show that within Riverside County, Coachella Valley is distinguished by mountain ranges to the east and west. The only topographical link of Coachella Valley to other parts of southern California are the Banning Pass to the northwest, with the Los Angeles-South Coast Air Basin nonattainment area on the west side of the pass, and to the south, the remainder of the Salton Sea Air Basin, comprising all of Imperial County. Consistent with the state's recommendation, EPA is designating these areas as separate nonattainment areas.

In considering jurisdictional boundaries (Factor 5), EPA notes that the boundary for the Riverside County (Coachella Valley) nonattainment area is the same as the 1997 8-hour ozone nonattainment boundary and the state's recommended boundary, and is under the jurisdiction of SCAQMD, but in a separate air basin from the Los Angeles-South Coast area.

EPA agrees with the state's recommendation and is designating Riverside County (Coachella Valley) in California and areas of Indian country in Riverside County (Coachella Valley) as "nonattainment" for the 2008 ozone NAAQS as part of the Riverside County (Coachella Valley) multi-jurisdictional nonattainment area.

EPA's boundary for Coachella Valley also includes six tribes' areas of Indian country: the Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation, the Augustine Band of

Cahuilla Indians, and the Cabazon Band of Mission Indians areas of Indian country are located wholly within the Riverside County (Coachella Valley) nonattainment area. Three other tribes have land within different nonattainment area boundaries. Where practically possible, current EPA policy discourages splitting contiguous areas of Indian country between two separate nonattainment areas. For the Santa Rosa Band of Cahuilla Indians, EPA is designating all portions, specifically including those areas of Indian country previously included in the Los Angeles-South Coast Air Basin nonattainment area and areas of Indian country within Coachella Valley, as part of the Riverside County (Coachella Valley) nonattainment area. However, due to the nature of the non-contiguous lands of Torres Martinez (in Riverside and Imperial counties) and Twenty-Nine Palms (in Riverside and San Bernardino counties), EPA is designating only the areas of Indian country of Torres Martinez and Twenty-Nine Palms located in Riverside County as part of the Riverside County (Coachella Valley), CA ozone nonattainment area.

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

Technical Analysis for Sacramento Metro

Figure 1 is a map of the Sacramento Metro, 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

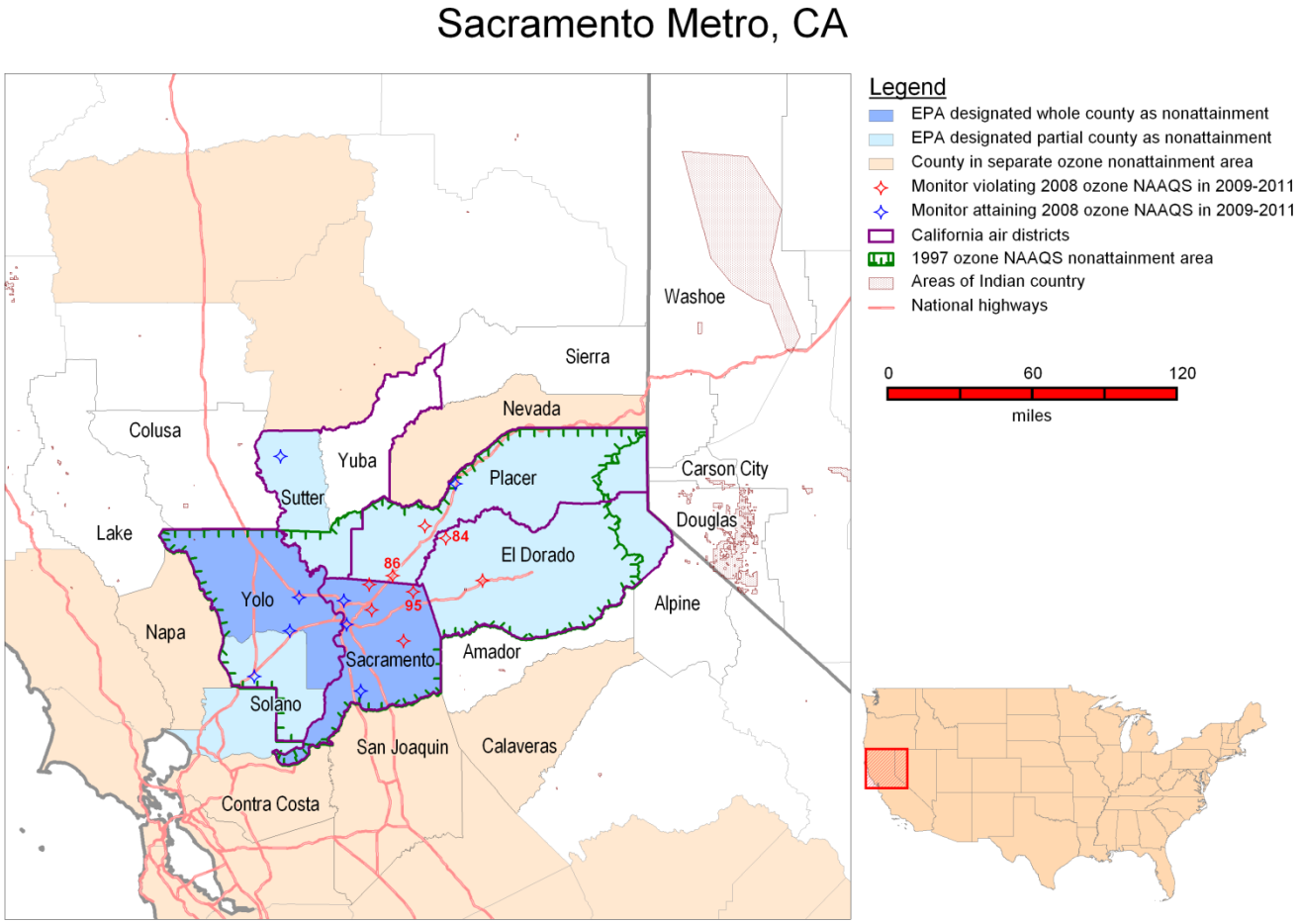


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2009-2011 (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entirety of Sacramento and Yolo counties and parts of Solano, Sutter, Placer and El Dorado counties. Areas of Indian country of three federally recognized tribes are included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same counties or parts of counties be designated as nonattainment for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations, but did not revise its recommendation for the Sacramento Metro area. These 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). Because of the State's timely submittal of the certified air quality data, we are basing our final designation decision on 2009-2011 data for this area.

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating two counties and four partial counties in California and areas of Indian country (identified in Table 1 below) as nonattainment for the 2008 ozone NAAQS as part of the Sacramento Metro multi-jurisdictional nonattainment area.

Table 1. State and Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian Country for Sacramento Metro.

Sacramento Metro, CA	State and Tribe-Recommended Nonattainment Counties or Areas of Indian Country	EPA's Nonattainment Counties or Areas of Indian Country
Sacramento County	Sacramento County	Sacramento County
Yolo County	Yolo County	Yolo County
Solano County	Solano County	Solano County
Sutter County	Sutter County (p)	Sutter County (p)
El Dorado County	El Dorado County (p)	El Dorado County (p)
Placer County	Placer County (p)	Placer County (p)
Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract)	N/A	Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract)
United Auburn Indian Community of the Auburn Rancheria of California	N/A	United Auburn Indian Community of the Auburn Rancheria of California
Yocha Dehe Wintun Nation	N/A	Yocha Dehe Wintun Nation

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

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 Sacramento Metro nonattainment area, based on data from the most recent three-year period for which we had timely submitted certified air quality data. The state of California submitted certified air quality data for 2011 before February 29, 2012 for this area; thus, for purposes of the final designations, we are considering air quality from the 2009-2011 period (i.e., the 2011 DV) for this area. 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.]

Certified, quality assured air quality data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year, but some ozone monitors in the Sacramento Metro nonattainment area have been approved to operate on a seasonal schedule per 40 CFR part 58, Appendix D, section 4.1(i). Preliminary non-certified data from calendar year 2011 are available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. The California Air Resources Board (ARB) certified data by February 29, 2012 for the counties in the existing Sacramento Metro nonattainment area. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate the counties in the existing Sacramento Metro nonattainment area are violating the 2008 ozone NAAQS. The Sacramento Metro 2010 DV was 102 ppb. The existing Sacramento Metro nonattainment area comprises Sacramento and Yolo counties, the eastern portion of Solano County, the southern portion of Sutter County and the western portions of Placer and El Dorado counties (see Map 10a in Appendix 2). The 2011 DVs for the ozone NAAQS for counties in the existing Sacramento Metro nonattainment area are shown in Table 2.

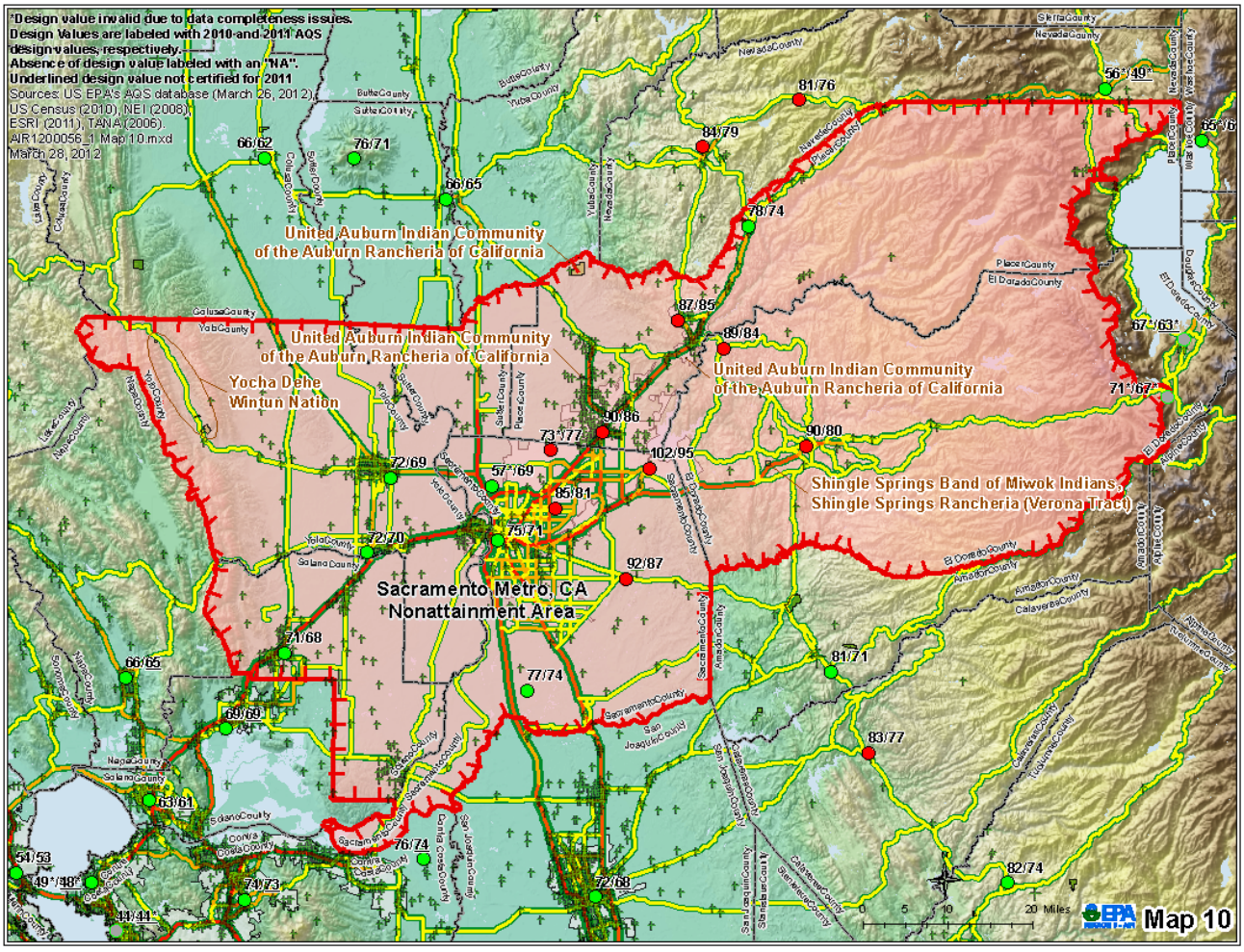
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
El Dorado, CA	Yes (partial)	84
Placer, CA	Yes (partial)	86
Sacramento, CA	Yes	95
Solano, CA	Yes	68
Sutter, CA	Yes (partial)	71
Yolo, CA	Yes	70

The DV for Sutter County is based on a monitor outside of the existing Sacramento Metro nonattainment area. All other DVs listed in Table 2 are from monitors within the existing Sacramento Metro nonattainment area.

Maps contained in Appendix 1 show the geographic distribution of monitors. Map 10 shows the monitor locations for the counties in the Sacramento Metro nonattainment area. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designation) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists the DVs for monitors in the existing Sacramento Metro 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 10: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in Sacramento, Placer, and El Dorado counties show a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, these areas are included in the Sacramento Metro nonattainment area. As shown on Map 10 in Appendix 1, the Sacramento Metro area shows violations using 2011 data.

A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. We will also consider any additional information we receive on changes to emissions levels that are not reflected in recent inventories. These changes include emissions reductions due to permanent and enforceable emissions controls that will be in place before final designations are issued and emissions increases due to new sources.

Table 3 shows emissions of NO_x and VOC (given in tons per year) for violating and nearby counties that we considered for inclusion in the Sacramento Metro area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
El Dorado, CA	Yes (partial)	3,501	6,238
Placer, CA	Yes (partial)	11,191	9,920
Sacramento, CA	Yes	27,118	21,536
Solano, CA	Yes	15,361	11,339
Sutter, CA	Yes (partial)	6,273	3,338
Yolo, CA	Yes	7,135	4,448
	Areawide:	70,578	56,819

Sacramento County represents 38% of the NO_x emissions and 38% of VOC emissions from the area. However, all counties in the Sacramento Metro nonattainment area contribute to emissions of ozone precursors in the 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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
El Dorado, CA	Yes (partial)	181,058	0.10	23,930	+15%
Placer, CA	Yes (partial)	348,432	0.23	97,177	+39%
Sacramento, CA	Yes	1,418,788	1.43	188,541	+15%
Solano, CA	Yes	413,344	0.47	16,373	+4%
Sutter, CA	Yes (partial)	94,737	0.16	15,610	+20%
Yolo, CA	Yes	200,849	0.20	30,979	+18%
	Areawide:	2,657,208	0.39	372,610	+16%

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 10 and 10a in Appendices 1 and 2, respectively, show population for the area. Population growth has been strong throughout the area. Population in this area represents a large source of emissions for the area, as it is linked to traffic and commuting patterns (see next section). Sacramento County has the largest population in the area, the highest population density and has experienced the largest absolute change in population, although Placer County had higher population growth on a percentage basis.

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 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 for violating and nearby counties that we considered for inclusion in the Sacramento Metro area.

Table 5. Traffic (VMT) data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
El Dorado, CA	Yes (partial)	2,299
Placer, CA	Yes (partial)	2,939
Sacramento, CA	Yes	9,578
Solano, CA	Yes	3,280
Sutter, CA	Yes (partial)	701
Yolo, CA	Yes	1,621
	Areawide:	20,417

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

Traffic data in Table 5 show that VMT is highest in Sacramento County, and Map 10 in Appendix 1 shows that El Dorado, Placer, Solano, Sutter, and Yolo counties all contain major roadways that lead to the major urban area in Sacramento County.

Factor 3: Meteorology (weather/transport patterns)

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

Conditions in the Sacramento Metro area are generally hot and dry in the summer, with conditions conducive to ozone formation. This is mitigated somewhat by periodic flow of marine air from the Pacific Ocean (via the Golden Gate at the mouth of San Francisco Bay). This sea breeze may occur daily and lead to cooler and more turbulent conditions and lower ozone, but there can also be extended periods where this pattern breaks down and hot, stagnant conditions occur. Even then the flow tends to be toward the northeast, and together with upslope results in high ozone concentrations being transported up the valleys in the foothills to the east, such as to Auburn.

The air flow in the Sacramento Metro area counties is most frequently from the south-southwest according to the 30-year average direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (Figure 2). This is consistent with the position of the area with respect to the Golden Gate, the key route for air flow between the Pacific Ocean and the Central Valley of California (the northern half of which is the Sacramento Valley, which includes the Sacramento Metro area and areas farther north). It is also consistent with the orientation of the river valleys extending northeast of Sacramento into the foothills and ranges of the Sierra Nevada mountain range.

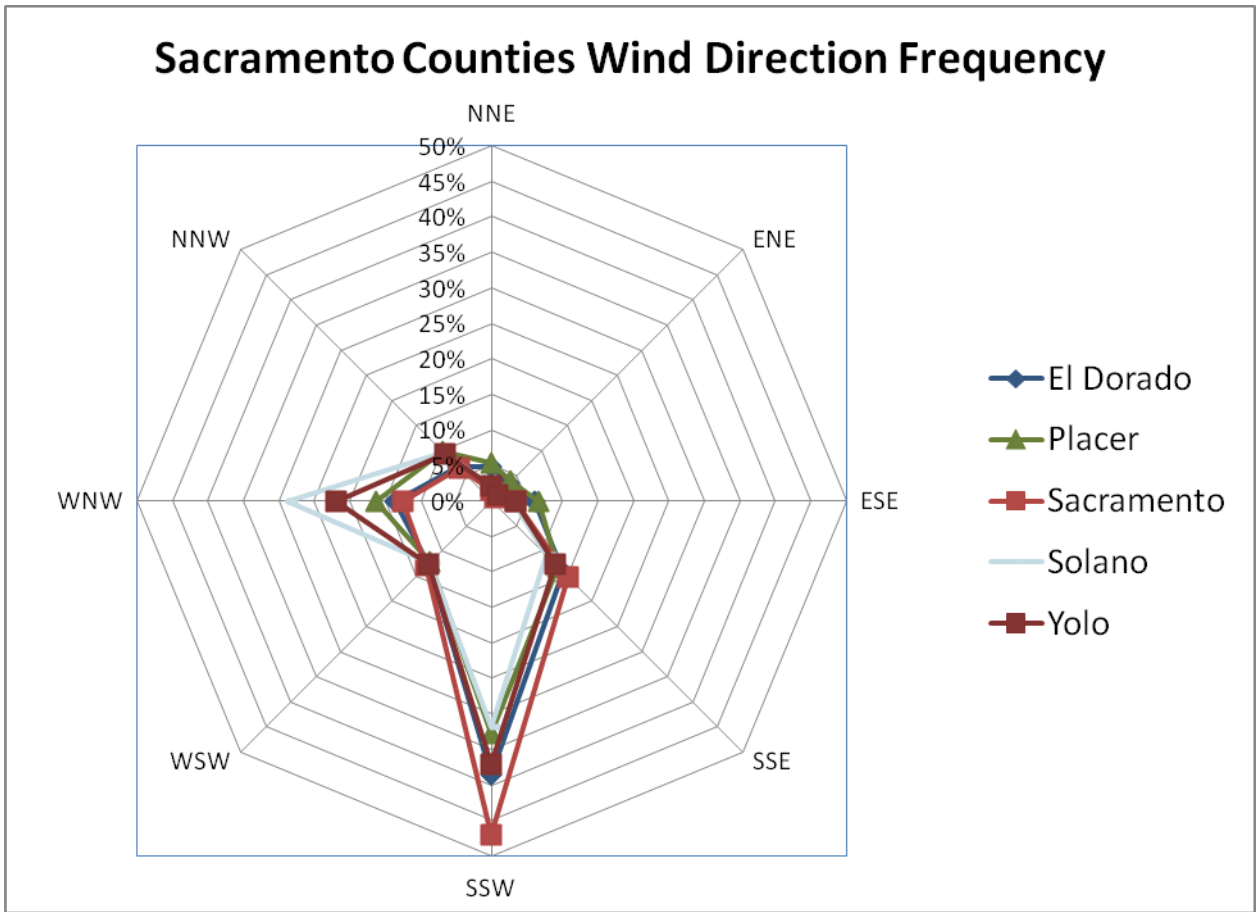


Figure 2

The California Coast Range topographically separates the Sacramento Metro area from the San Francisco Bay area, despite the important gap leading to the Golden Gate. The two areas have different meteorology, with the Sacramento Metro area being part of the hot and dry Central Valley, though with significant marine influence at times, and the San Francisco Bay area being dominated by interaction with air masses over the Pacific Ocean.

There is no topographic barrier between the Sacramento Valley and the San Joaquin Valley to the south, but generally the air flow from the Pacific Ocean through the Golden Gate toward the east tends to bifurcate where the two valleys meet, providing some degree of separation between the two valleys much of the time.

Consideration of the meteorology factor supports the state's recommendation for the nonattainment area boundary. At the juncture of influences of the Central Valley and the Golden Gate, the meteorology of the Sacramento Metro area is distinct from both the San Joaquin Valley and the San Francisco Bay Area. While transport between adjacent areas can occur, the most important flow during ozone episodes within the Sacramento Metro area is toward the northeast and the foothills within the Sacramento Metro area itself.

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 Sacramento Metro area is at the southern end of the Sacramento Valley, the name for the northern half of California's broad, flat, Central Valley. Two-thirds of the area is flat, while the eastern third, comprising El Dorado County and the eastern portion of Placer County, is in the foothills and mountains of the Sierra Nevada range. These two counties extend to and beyond the range crest at over 2,500 meters (8,000 feet) elevation, and bound the Sacramento Metro area on the east.

The area is bounded on the west by California's Coast Range, except for the gap leading to the Golden Gate. Rivers drain to the Pacific Ocean though that gap, which is also important for air flow. There is no topographic barrier to the north or south. To the north, the area is distinguished by the greater distance from the influence of the Golden Gate, and the exclusively north-south orientation of the walls of the Central Valley, as compared to the gap west of the Sacramento Metro area.

The California Coast Range topographically separates the Sacramento Metro area from the San Francisco Bay area, despite the important gap leading to the Golden Gate. The two areas have different topography, with the Sacramento Metro area being mainly flat, and a part of the Central Valley, and the San Francisco Bay area being more hilly, and a part of the Pacific coast.

In addition, while there is no topographic barrier between the Sacramento Valley and the San Joaquin Valley to the south, generally the air flow from the Pacific Ocean through the Golden Gate toward the east tends to bifurcate where the two valleys meet, providing some degree of separation between the two valleys much of the time.

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 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 Sacramento Metro nonattainment area has previously established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. This area encompasses the entirety of the developed center of the metropolitan area in Sacramento County. To the south, San Joaquin County is part of the San Joaquin Valley nonattainment area. To the west, Solano County is bisected diagonally, with the southwest half in the San Francisco Bay Area nonattainment area and the northeast portion in the Sacramento Metro nonattainment area. Northwest of Sacramento County, the entirety of Yolo County is included in the Sacramento Metro nonattainment area. The southern portion of Sutter County, to the north of Sacramento County, is included in the Sacramento Metro nonattainment area. Placer County is northeast of the urban center and is included in the nonattainment area up to the crest of the Sierra Nevada mountain range, as is El Dorado County to the east of Sacramento County.

The Sacramento Metro nonattainment area overlaps with the Office of Management and Budget's definition of the Sacramento–Arden-Arcade–Yuba City combined statistical area (CSA). The CSA includes two metropolitan statistical areas (Sacramento–Arden-Arcade–Roseville and Yuba City) and one micropolitan statistical area (Truckee-Grass Valley). This CSA is larger than the Sacramento Metro nonattainment area. The CSA includes Sacramento and Yolo counties, both of which are in the Sacramento Metro nonattainment area. The CSA also includes the entirety of Sutter, Placer, and El Dorado counties, all of which are partial counties for the Sacramento Metro nonattainment area. The CSA also includes Nevada County, which is a partial county that EPA is designating, per the state's recommendation, as a separate nonattainment area. One last county in the CSA, Yuba County, is not part of the nonattainment area. EPA is designating Yuba County as "unclassifiable/attainment".

The Sacramento Metro nonattainment area includes one partial county (Solano) that is not part of the CSA. Solano County is part of the San Jose-San Francisco-Oakland CSA. For ozone designations, Solano County has been split along air district boundaries between the Sacramento Metro and San Francisco Bay Area nonattainment areas. Most of the Sacramento–Arden-Arcade–Yuba City CSA is part of the Sacramento Metro nonattainment area. Portions of Placer and El Dorado counties are excluded because they are beyond the crest of the Sierra Nevada, in the Lake Tahoe hydrologic basin. Of the two counties (Sutter and Yuba) in the Yuba City MSA portion of the CSA, only southern Sutter County is part of the Sacramento Metro nonattainment area.

The Sacramento Metro nonattainment area includes most of the transportation planning agency in the area, which is the metropolitan planning organization (MPO) known as the Sacramento Area Council of Governments (SACOG). Air quality planning is led by the largest air pollution control district in the area, the Sacramento Metro Air Quality Management District. Four other air districts participate in air planning and management in the area. The Yolo-Solano Air Quality Management District (AQMD) has jurisdiction over Yolo County and the Sacramento Metro portion of Solano County. Feather River AQMD has jurisdiction over Sutter and Yuba counties, including the south Sutter County portion of the Sacramento Metro area. Placer County Air Pollution Control District has jurisdiction over Placer County, as El Dorado County AQMD does over its county.

The Sacramento Metro nonattainment area also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries.

Conclusion

Based on the assessment of factors described above, EPA is including the following counties as part of the Sacramento Metro, CA nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Sacramento County, Yolo County, Solano County (partial), Sutter County (partial), El Dorado County (partial), and Placer County (partial). This area also includes the areas of Indian country of three tribes: the Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria; the United Auburn Indian Community of the Auburn Rancheria of California; and the Yocha Dehe Wintun Nation.

The Clean Air Act requires EPA to designate any area as "nonattainment" if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in El Dorado, Placer, and Sacramento counties are violating the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, Factor 1 supports designating all or part of these counties as "nonattainment."

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5) support the proposed nonattainment boundaries recommended by the state. The geographic boundaries to the west and east are clear; while the boundaries to the north and south are not defined by definite barriers, they include the locations with comparable topography and meteorology that are distinct from those northern and southern areas.

Based on our consideration of all five factors, EPA is designating two whole counties and four partial counties in California and three areas of Indian country (identified in Table 1 above) as "nonattainment" for the 2008 ozone NAAQS as part of the Sacramento Metro, CA multi-jurisdictional nonattainment area.

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

Technical Analysis for San Diego County

Figure 1 is a map of the San Diego County, CA nonattainment area for the 2008 ozone NAAQS. 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

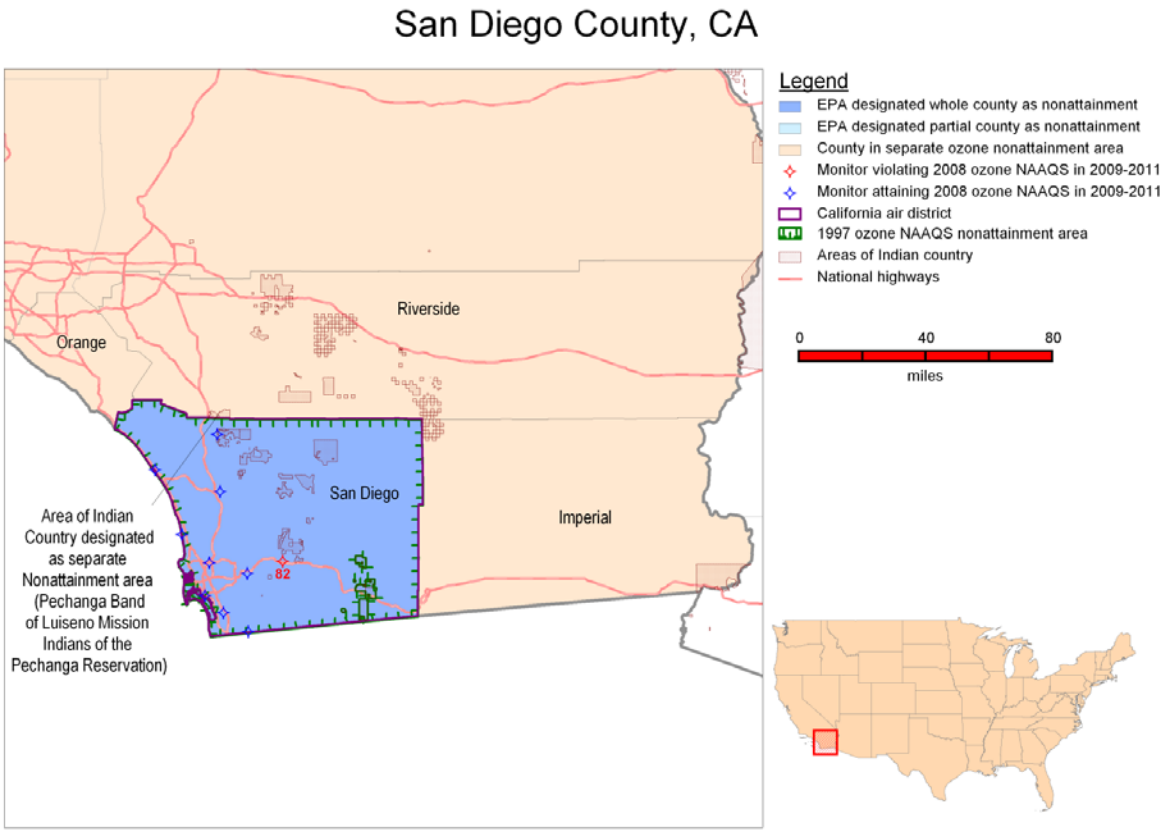


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from the 2009-2011 period (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data.

The San Diego County, CA area was redesignated to attainment for the 1-hour ozone NAAQS in 2003. In 2004, this area was designated nonattainment for purposes of the 1997 8-hour ozone NAAQS. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entirety of San Diego County. Areas of Indian country of federally recognized tribes were included in the nonattainment area. Except as indicated with a footnote in Table 1, these are the same tribes that are listed in Table 1, below.

In March 2009, California provided designation recommendations for the 2008 ozone NAAQS. The state recommended that San Diego County be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data, and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations, but did not revise its recommendation for San Diego 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).

In March 2009, the La Jolla Band of Luiseño Indians recommended that their area of Indian country be designated as "unclassifiable" for the 2008 ozone NAAQS (letter from Larriann Musick, Tribal Chairperson, La Jolla Band of Luiseño Indians, to Laura Yoshii, Acting Regional Administrator, U.S. EPA Region IX, March 6, 2009).

In December 2011, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Monique La Chappa, Tribal Chairwoman, Campo Band of Mission Indians, December 9, 2011), the Campo Band of Diegueno Mission Indians of the Campo Indian Reservation recommended that their reservation lands in San Diego County be designated as "attainment" for the 2008 ozone NAAQS (letter from Monique La Chappa, Tribal Chairwoman, Campo Band of Mission Indians, to Deborah Jordan, Air Division Director, U.S EPA Region IX, December 28, 2011).

In February 2012, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Robert H. Smith, Tribal Chairman, Band of Luiseño Indians of the Pala Reservation, December 9, 2011), the Pala Band of Luiseño Indians of the Pala Reservation recommended that their reservation lands in San Diego County be designated as "unclassifiable/attainment" for the 2008 ozone NAAQS (letter from Robert Smith, Tribal Chairman, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February 22, 2012).

In April 2012, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Robert Pinto, Sr., Chairman, Ewiiaapaayp Band of Kumeyaay Indians, December 9, 2011), the Ewiiaapaayp Band of Kumeyaay Indians recommended that their reservation lands in San Diego County be designated as "attainment" for the 2008 ozone NAAQS (email from Will Micklin, tribal CEO, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, April 4, 2012).[1]

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating San Diego County and Indian country of eighteen federally recognized tribes in San Diego County (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as part of the San Diego County multi-jurisdictional nonattainment area.

[1] The letter from the Ewiiaapaayp Band of Kumeyaay Indians was received after the published deadline for receiving additional information from tribes and states (February 29, 2012). Consideration of late information is at the discretion of EPA. See the Response to Comments for more information.

Table 1. State's or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian Country for San Diego County.

San Diego County	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA's Designated Nonattainment Counties or Areas of Indian Country
San Diego County, CA	San Diego County	San Diego County
Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation	N/A	Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation
Campo Band of Diegueño Mission Indians of the Campo Indian Reservation [1,2]	Attainment	**Campo Band of Diegueño Mission Indians of the Campo Indian Reservation**
Capitan Grande Band of Diegueño Mission Indians of California	N/A	Capitan Grande Band of Diegueño Mission Indians of California
Ewiiaapaayp Band of Kumayaay Indians[1,3]	N/A	**Ewiiaapaayp Band of Kumayaay Indians**
Iipay Nation of Santa Ysabel	N/A	Iipay Nation of Santa Ysabel
Inaja Band of Diegueño Mission Indians of the Inaja and Cosmit Reservation	N/A	Inaja Band of Diegueño Mission Indians of the Inaja and Cosmit Reservation
Jamul Indian Village of California	N/A	Jamul Indian Village of California
La Jolla Band of Luiseño Indians	Unclassifiable	**La Jolla Band of Luiseño Indians**
La Posta Band of Diegueño Mission Indians of the La Posta Indian Reservation [1]	N/A	La Posta Band of Diegueño Mission Indians of the La Posta Indian Reservation
Los Coyotes Band of Cahuilla and Cupeño Indians	N/A	Los Coyotes Band of Cahuilla and Cupeño Indians
Manzanita Band of Diegueño Mission Indians of the Manzanita Reservation [1]	N/A	Manzanita Band of Diegueño Mission Indians of the Manzanita Reservation
Mesa Grande Band of Diegueño Mission Indians of the Mesa Grande Reservation	N/A	Mesa Grande Band of Diegueño Mission Indians of the Mesa Grande Reservation
Pala Band of Luiseño Mission Indians of the Pala Reservation[4]	Unclassifiable/ Attainment	**Pala Band of Luiseño Mission Indians of the Pala Reservation**
Pauma Band of Luiseño Mission Indians of the Pauma and Yuima Reservation	N/A	Pauma Band of Luiseño Mission Indians of the Pauma and Yuima Reservation
Rincon Band of Mission Luiseño Indians of the Rincon Reservation	N/A	Rincon Band of Mission Luiseño Indians of the Rincon Reservation
San Pasqual Band of Diegueño Mission Indians of California	N/A	San Pasqual Band of Diegueño Mission Indians of California
Sycuan Band of the Kumeyaay Nation	N/A	Sycuan Band of the Kumeyaay Nation
Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation	N/A	Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation

EPA modifications to state or tribal recommendations are shown in **bold**.
N/A = tribe did not submit a recommendation.
[1]Tribe is located within San Diego County, but was not included in San Diego County nonattainment area for the 1997 ozone NAAQS.
[2]The Campo Band of Diegueño Mission Indians of the Campo Indian Reservation recommended designation of their Indian country as "attainment" for the 2008 ozone NAAQS as part of their response to EPA's 120-day letter. (Letter from Monique

La Chappa, Tribal Chairwoman, Campo Band of Diegueño Mission Indians of the Campo Indian Reservation, to Deborah Jordan, Air Division Director, U.S EPA Region IX, December 28, 2011.)

[3]The Ewiiaapaayp Band of Kumayaay Indians recommended designation of their Indian country as "attainment" for the 2008 ozone NAAQS as part of their response to EPA's 120-day letter. (Email from Will Micklin, CEO, Ewiiaapaayp Band of Kumeyaay Indians, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, April 4, 2012.)

[4]The Pala Band of Luiseño Indians of the Pala Reservation recommended designation of their Indian country as "unclassifiable" for the 2008 ozone NAAQS as part of their response to EPA's 120-day letter. (Letter from Robert Smith, Tribal Chairman, Pala Band of Luiseño Indians of the Pala Reservation , to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February 22, 2012.)

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in San Diego County, based on data from the most recent three year period for which we had timely submitted certified air quality data. San Diego Air Pollution Control District (APCD) submitted certified air quality data for 2011 before February 29, 2012 for this area; thus, for purposes of the final designations, we are considering air quality from the 2009-2011 period (i.e., the 2011 DV) for this area. 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.]

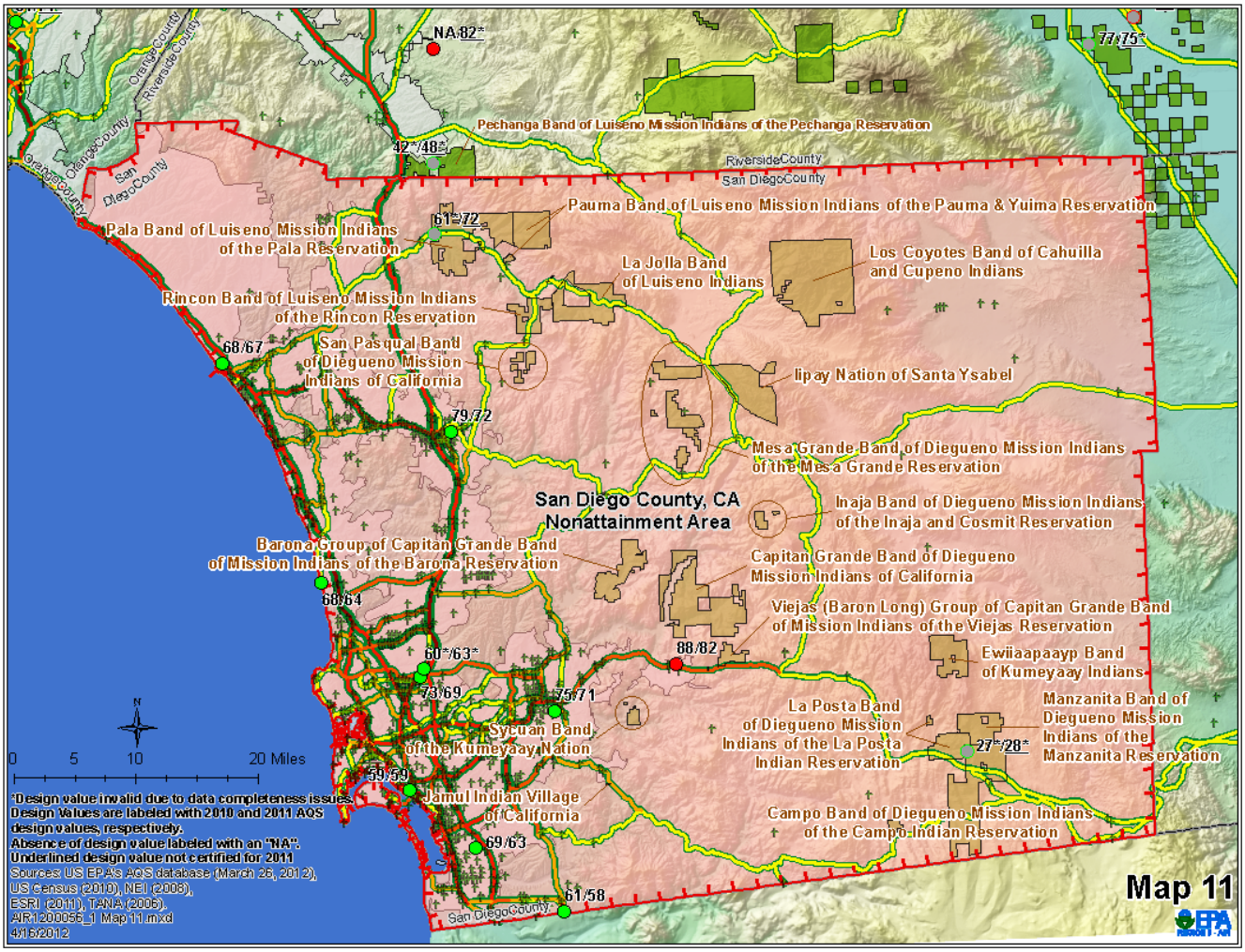
Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year. Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. San Diego APCD certified 2011 data by February 29, 2012 for San Diego County. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that San Diego County is violating the 2008 ozone NAAQS. San Diego County's 2010 DV was 88 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within San Diego County are shown in Appendix 1, Map 11 (also inserted below).

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (parts per billion)
San Diego, CA	Yes	82

Maps contained in Appendix 1 show the geographic distribution of monitors. Map 11 shows monitor locations for San Diego County. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designations) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists 2009-2011 DVs for San Diego County. 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 11: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in San Diego County show a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, this area is included in the San Diego County nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for San Diego County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
San Diego, CA	Yes	59,093	54,767
	Areawide:	59,093	54,767

Emissions in San Diego County contribute to the monitored violations in the county. Stationary source emissions are predominantly located about 20 miles from the coast, upwind of the violating monitor which is located farther inland. Stationary sources in San Diego County are scattered in the central and eastern portions of the county and clustered most heavily in the southern and western portions of county, coinciding with both the population centers and major roadways (see Maps 11 and 11a in Appendices 1 and 2, respectively). Emissions of NO_x are slightly greater in San Diego County than in neighboring Riverside County to the northeast and Orange County to the northwest, and about 4.5 times greater than Imperial County to the east. Emissions of VOCs are about 1.2 times greater than VOC emissions from Orange County, nearly two times greater than VOC emissions from Riverside County and over six times greater than VOC emissions from Imperial County. EPA is designating these other areas as separate nonattainment areas for the 2008 ozone NAAQS.

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 NO_x and VOC emissions that may contribute to ozone formation. Rapid population or vehicle miles traveled (VMT) growth (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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
San Diego, CA	Yes	3,095,313	0.73	269,918	+10%
	Areawide:	3,095,313	0.73	269,918	+10%

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)

Like point source emissions, the population centers in San Diego County are located along the western coast of the county and extend approximately 20 miles inland (see Maps 11 and 11a in Appendices 1 and 2, respectively). The San Diego metropolitan area is located in the southern coastal portion of the county. The total population of San Diego County is very similar to the population of Orange County, is 1.4 times greater than Riverside County and almost 18 times greater than Imperial County, with a population density that is similarly greater than Riverside and Imperial Counties (2.4 and nearly 19 times greater, respectively). In contrast, although the populations of San Diego and Orange County are similar, the population density of Orange County is over five times higher than San Diego County. Over 2000 - 2010, the population of San Diego County has grown at a rate comparable to other smaller coastal counties (for example, Ventura County and San Luis Obispo County).

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 for San Diego County.

Table 5. Traffic (VMT) Data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
San Diego, CA	Yes	33,689
	Areawide:	33,689

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

The county's VMT is greater than most of the counties in the neighboring Los Angeles-South Coast Air Basin, including Riverside and Orange counties (which range from 20,000 to about 23,000 VMT in 2008), with the exception of Los Angeles County (nearly 80,000 VMT in 2008). A substantial amount of non-truck traffic occurs within 20 miles inland of the coast of San Diego County, generally between the northern and southern portions of the county and within the San Diego metropolitan 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 conditions, would affect the fate and transport of precursor emissions contributing to ozone formation. EPA reviewed the 8-hour Ozone Attainment Plan for San

Diego County, as well as several previous assessments of ozone transport in Southern California. EPA also reviewed the wind frequency distribution of wind direction data based on an average of 30 years of National Weather Service information for the months of June, July, and August.

The "Eight-Hour Ozone Attainment Plan" for San Diego County, produced by San Diego County APCD in May 2007, discusses meteorological conditions that would affect fate and transport of precursor emissions contributing to ozone formation.[2] The ozone conceptual model identifies five regimes of ozone and ozone precursor transport to San Diego County. In addition, the conceptual model identifies conditions present when local emissions in San Diego County are sufficient to generate ozone concentrations exceeding the federal standard.

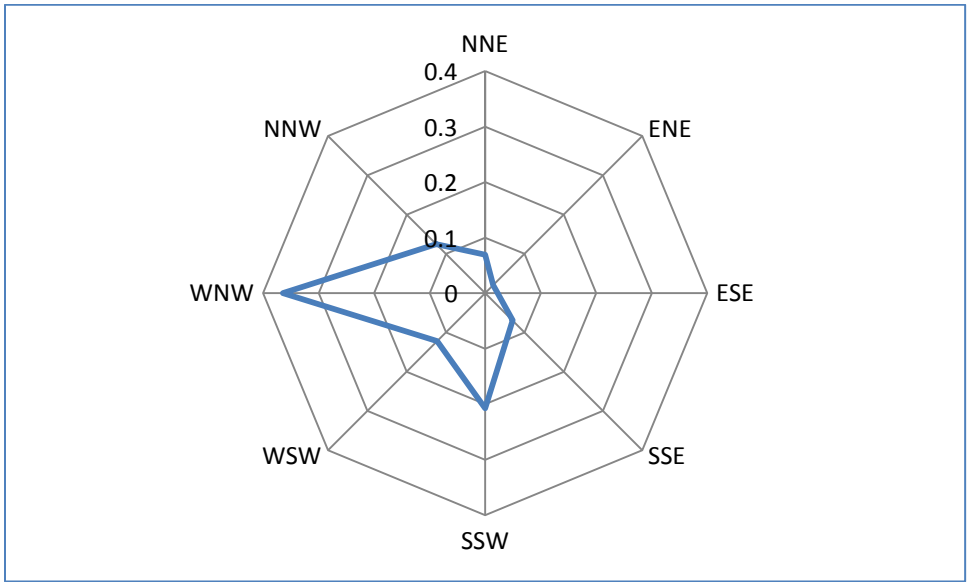


Figure 2: San Diego Summer Wind Frequency Distribution

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 northwesterly component.

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.

San Diego County is shown in Appendix 1, Map 11a. San Diego County encompasses 4,300 square miles with 70 miles of beach along the Pacific Ocean. The county area is 65 miles from north to south and 86 miles from east to west. It borders Orange and Riverside counties to the north, Mexico to the South, Imperial County to the east, and the Pacific Ocean to the west. The Cleveland National Forest,[3] with peaks of up to 6,271 feet, is located in the central portion of the county. The Anza-Borrego Desert State Park is located in the northeast portion of the county.

[2] P. 1-7. Eight-Hour Ozone Attainment Plan For San Diego County, May 2007. San Diego County Air Pollution Control District. http://www.sdapcd.org/planning/8-Hour-O3-Attain-Plan.pdf
[3] http://www.fs.usda.gov/main/cleveland/about-forest

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, Indian country boundaries, and 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 San Diego County area has previously established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. For the 1-hour ozone NAAQS, the entirety of San Diego County was initially designated nonattainment and then redesignated to attainment with a maintenance plan in 2003. For the 1997 ozone NAAQS, the county was designated nonattainment in 2004 and remains nonattainment.

In addition to prior ozone designations, there are other jurisdictional considerations for this area. The San Diego APCD performs air quality planning for the county, in addition to permitting and other regulatory and non-regulatory forms of air pollution controls. The metropolitan planning organization (MPO) in charge of transportation planning for the area is the San Diego Association of Governments (SANDAG). The entirety of the county is also defined by the Office of Management and Budget (OMB) as the San Diego-Carlsbad-San Marcos metropolitan statistical area (MSA). OMB uses full counties for its urban area definitions. EPA notes that in this case, San Diego is a very large county (over 4,200 square miles) and that the population is in the west half of the county. The state's recommendation to designate the entirety of the county nonattainment reflects the boundary for the air district, the transportation planning agency, the county government, and the MSA.

The San Diego County area also includes portions 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 tribes into account in establishing appropriate nonattainment area boundaries.

Evaluation of Recommendation from La Jolla Band of Luiseño Indians

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 La Jolla Band of Luiseño Indians (La Jolla) based on currently available information.

La Jolla is a federally recognized tribe whose Indian country is located in the northern portion of the San Diego-Carlsbad-San Marcos MSA. Map 11a in Appendix 2 shows the location of the area of Indian country within the San Diego County nonattainment area.

In 2004, EPA established the San Diego nonattainment boundaries for the 1997 ozone NAAQS. This boundary included most portions of San Diego County and encompassed the lands of La Jolla.

In March 2009, La Jolla recommended that portions of its lands in San Diego County be designated as "unclassifiable" for the 2008 ozone NAAQS (letter from Larriann Musick, Tribal Chairperson, La Jolla Band of Luiseño Indians, to Laura Yoshii, Acting Regional Administrator, U.S. EPA Region IX, March 6, 2009).

Based on the factors discussed below, EPA has concluded that La Jolla should be designated nonattainment as part of the San Diego County nonattainment area for the 2008 ozone NAAQS.

Air Quality Data

Currently, La Jolla does not operate any ozone monitors within the tribal boundaries. Map 11 in Appendix 1 shows monitor locations for the San Diego County nonattainment area. 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).

The typical pattern for ozone levels along the southwest coast of California is lower ozone levels along the coast from clean coastal air with increasing levels inland as precursors and temperatures increase. At times, ozone and its precursors can be transported along the coast, as described above in Factor 3. Air monitoring stations show this pattern with coastal monitors attaining the 2008 ozone NAAQS (e.g., monitor numbers 060731008, 060731001, 060731010) and inland monitors violating (e.g., 060731006 and 060659001). See Appendix 3. The violating monitor in San Diego is 20-25 miles inland, which is similar to the location of La Jolla's reservation. We believe that this violating monitor is representative of La Jolla's air quality.

Several studies have shown ozone transport from the South Coast air basin and the western portions of San Diego County can impact the inland areas of San Diego County.[4] Also, modeling performed in the 2007 8-hour ozone attainment plan for San Diego shows that La Jolla experiences similar air quality as the surrounding inland areas.[5] Based on the lack of topographic barriers, similarities in meteorology and transport patterns to the surrounding area, La Jolla is expected to have similar air quality as the surrounding inland areas.

Emissions and Emissions-Related Data

The lands of La Jolla consist of 8,822 acres of Indian country, which are home to 470 tribal members. La Jolla has a few sources of ozone precursor emissions within the tribal boundaries;

[4] Bigler-Engler, V, 1995: Analysis of an Ozone Episode during the San Diego Air Quality Study: The Significance of Transport Aloft. *Journal of Applied Meteorology*, 34, 1863-1875). Luria, M, 2005: Local and Transported pollution of San Diego, California. *Atmospheric Environment*, 39, 6765-6776. Boucouvala, D, 2003: Analysis of transport patterns during an SCOS97-NARSTO episode. *Atmospheric Environment*, 37 Supplement No. 2, S73-S94. Meteorological and Photochemical Modeling for the San Diego County 2007, 8 Hour Ozone State Implementation Plan.

[5] Eight-Hour Ozone Attainment Plan For San Diego County, May 2007. San Diego County Air Pollution Control District. http://www.sdapcd.org/planning/8-Hour-O3-Attain-Plan.pdf

these include a gas station, general store, and local traffic. Also, Highway 76 passes through La Jolla's Indian country.

General information on emissions, population density and degree of urbanization, traffic and commuting patterns for San Diego County can be found in Factor 2 of the San Diego County nonattainment area technical analysis, above. This information is relevant for both San Diego County's densely-populated coastal areas and the less-populated inland areas, including La Jolla's area of Indian country.

Meteorology (Weather/Transport Patterns)

La Jolla is located about 20 miles inland and experience similar meteorology and transport patterns as other inland parts of western San Diego County. Therefore, the information for San Diego County discussed in Factor 3 above, also characterizes the complex meteorology and transport patterns for La Jolla. As described in Factor 3, transport of ozone and its precursors is prevalent within San Diego County, and from adjacent nonattainment areas.

Geography/Topography

La Jolla's Indian country does not have any geographical or topographical barriers that would prevent air pollution transport from the surrounding San Diego County nonattainment area. Although the terrain is complex, there are no topographic barriers. Therefore, geography and topography support including La Jolla's Indian country with the surrounding area.

Jurisdictional Boundaries

La Jolla is a federally recognized tribe located in the northern portion of the San Diego-Carlsbad-San Marcos MSA. Map 11a in Appendix 2 shows the location of the area of Indian country within the San Diego County nonattainment area.

Conclusion for La Jolla

While La Jolla has recommended that their Indian country be designated as unclassifiable, based on the information currently available and the five factor analysis above, EPA is designating the lands of the La Jolla as nonattainment, as part of the San Diego County nonattainment area for the 2008 ozone NAAQS.

Evaluation of Recommendation from Campo Band of Diegueño Mission Indians of the Campo Indian 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 Campo Band of Diegueño Mission Indians of the Campo Indian Reservation (Campo) based on currently available information.

Campo is a federally recognized tribe located in the southeastern portion of San Diego County. Map 11a in Appendix 2 shows the location of the area of Indian country within the San Diego County nonattainment area.

In 2004, EPA established the San Diego nonattainment boundaries for the 1997 ozone NAAQS. This boundary included most portions of San Diego County, but excluded the lands of Campo.

In December 2011, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Monique La Chappa, Tribal Chairwoman, Campo Band of Mission Indians, December 9, 2011), Campo recommended that their reservation lands in San Diego County be designated as "attainment" for the 2008 ozone NAAQS (letter from Monique La Chappa, Tribal Chairwoman, Campo Band of Diegueño Mission Indians of the Campo Indian Reservation, to Deborah Jordan, Air Division Director, U.S EPA Region IX, December 28, 2011). Based on the factors discussed below, EPA is designating Campo nonattainment as part of the San Diego County nonattainment area for the 2008 ozone NAAQS.

Air Quality Data

Currently, Campo does not operate any ozone monitors within the tribal boundaries. Map 11 in Appendix 1 shows monitor locations for the San Diego County nonattainment area. 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).

The closest ozone monitoring site to Campo is operated by the La Posta Band of Diegueño Mission Indians of the La Posta Indian Reservation (La Posta). However, the data from this monitoring site does not meet regulatory requirements. EPA has identified issues with the La Posta data, including extended periods of instrument malfunctions, anomalously low ozone values that are significantly lower than expected background concentrations, and very poor completeness levels during ozone season. In 2008, the data completeness for the year was 46%; data completeness in 2009 was 32%; and data completeness in 2010 was 60%. Data are deemed complete if daily maximum 8-hour average concentrations are available for at least 90% of the days within the ozone monitoring season, on average, for a three year period, with a minimum data completeness requirement in any one year of at least 75%. (40 CFR part 50, Appendix P, section 2.3.) EPA is therefore unable to use the La Posta data for regulatory decision making at this time. The next closest ozone monitor is located 24 miles to the west-northwest of the Campo reservation at 2,000 feet of elevation in Alpine, California, and is operated by the San Diego Air Pollution Control District (APCD). Currently, the Alpine monitoring site is the design value site for the San Diego nonattainment area with a 2009-2011 design value of 0.082 parts per million (ppm). EPA believes that the Alpine monitoring site is representative of the eastern, inland portions of San Diego County, including areas surrounding the Campo reservation. Several studies have shown ozone transport from the South Coast Air Basin and the western portions of San Diego County can reach the inland areas of San Diego County.[6] Also, modeling performed in the 2007 8-hour ozone attainment plan for San Diego County shows that Campo experiences similar air quality as the surrounding inland areas[7]. The San Diego APCD also

[6] Bigler-Engler, V, 1995: Analysis of an Ozone Episode during the San Diego Air Quality Study: The Significance of Transport Aloft. *Journal of Applied Meteorology*, 34, 1863-1875). Luria, M, 2005: Local and Transported pollution of San Diego, California. *Atmospheric Environment*, 39, 6765-6776. Boucouvala, D, 2003: Analysis of transport patterns during an SCOS97-NARSTO episode. *Atmospheric Environment*, 37 Supplement No. 2, S73-S94. Meteorological and Photochemical Modeling for the San Diego County 2007, 8 Hour Ozone State Implementation Plan.

[7] Eight-Hour Ozone Attainment Plan For San Diego County, May 2007. San Diego County Air Pollution Control District. http://www.sdapcd.org/planning/8-Hour-O3-Attain-Plan.pdf

operated an ozone monitor in Descanso during a field study in the late 1980s and early 1990s. The Descanso monitoring site was located approximately 17 miles to the northwest of the Campo Reservation at 3,600 feet of elevation, and measured high ozone levels that were comparable to those measured at Alpine. Based on the lack of topographic barriers, similarities in meteorology and transport patterns to the surrounding area, and the high levels of ozone in the area, EPA has determined that nearby monitors in San Diego County, specifically the Alpine monitor, adequately represent the air quality in the area, including the area surrounding Campo.

Emissions and Emissions-Related Data

EPA acknowledges that Campo is located in a rural area with few major sources of ozone precursors and that the Campo reservation has a low population density compared to other areas of San Diego County. While there are no large sources of emissions near the Campo reservation, emissions from western San Diego County and the South Coast Air Basin can influence high ozone levels in the eastern portions of San Diego County. Additionally, sections of I-8 pass through the reservation. According to the Federal Highway Administration data for 2007, the annual average daily non-truck traffic for this portion of I-8 is approximately 17,000 vehicles, while the annual average daily truck traffic is approximately 2,700 vehicles.

General information on emissions, population density and degree of urbanization, traffic and commuting patterns for San Diego County can be found in Factor 2 of the San Diego County nonattainment area technical analysis, above. This information is relevant for both San Diego County's densely-populated coastal areas and the less-populated inland areas, including the Campo reservation.

Meteorology (Weather/Transport Patterns)

EPA's assessment of meteorology is consistent with Campo's claim that winds are predominantly from the west and southwest. However, such patterns are conducive to high levels of ozone transport to the elevated portions of eastern San Diego County and do not typically reduce ozone concentrations. EPA also reviewed other sources of information that reaffirm that high levels of ozone can occur in eastern San Diego County as a result of transport from the San Diego metropolitan area and the South Coast Air Basin.[8]

Furthermore, the information for San Diego County discussed in Factor 3 above, also characterizes the complex meteorology and transport patterns for Campo. As described in Factor 3, transport of ozone and its precursors is prevalent within San Diego County, and from adjacent nonattainment areas.

Geography/Topography

As previously discussed, the Alpine monitoring site is located at 2,000 feet of elevation and the previously operated Descanso monitoring site located at 3,600 feet, approximately 17 miles to the northwest of the Campo Reservation, measured comparable values. Alpine is the design

[8] Bigler-Engler, V, 1995: Analysis of an Ozone Episode during the San Diego Air Quality Study: The Significance of Transport Aloft. *Journal of Applied Meteorology*, 34, 1863-1875). Luria, M, 2005: Local and Transported pollution of San Diego, California. *Atmospheric Environment*, 39, 6765-6776. Boucouvala, D, 2003: Analysis of transport patterns during an SCOS97-NARSTO episode. *Atmospheric Environment*, 37 Supplement No. 2, S73-S94. Meteorological and Photochemical Modeling for the San Diego County 2007, 8 Hour Ozone State Implementation Plan.

value site for the San Diego nonattainment area, with a 2011 DV of 0.082 ppm. Elevations on the Campo reservation range from 3,100 feet in the southern areas of the reservations up to 4,600 feet in the areas north of I-8, which are similar to the elevation of the Descanso monitoring site. Therefore, it is reasonable to assume that high ozone levels can occur in these elevated portions of eastern San Diego County.

Campo does not have any geographical or topographical barriers that would prevent air pollution transport from the surrounding San Diego County nonattainment area. Although the terrain is complex, there are no topographic barriers. Therefore, geography and topography support including Campo with the surrounding area.

Jurisdictional Boundaries

Campo is a federally recognized tribe located in the southeastern portion of San Diego County. Map 11a in Appendix 2 shows the location of the areas of Indian country within the San Diego County nonattainment area.

Conclusion for Campo

While Campo has recommended that their reservation lands be designated attainment, based on the information currently available and the five factor analysis above, EPA is designating Campo nonattainment as part of the San Diego County nonattainment area for the 2008 ozone NAAQS.

Evaluation of Recommendation from Pala Band of Luiseño Indians of the Pala 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 in nearby areas. EPA has evaluated the recommendation of the Pala Band of Luiseño Indians of the Pala Reservation (Pala) based on currently available information.

Pala is a federally recognized tribe located in the northern portion of the San Diego-Carlsbad-San Marcos MSA. Map 11a in Appendix 2 shows the location of the area of Indian country within the San Diego County nonattainment area.

In 2004, EPA established the San Diego nonattainment boundaries for the 1997 ozone NAAQS. This boundary included most portions of San Diego County and encompassed Pala's Indian country.

In February 2012, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Robert H. Smith, Tribal Chairman, Pala Band of Luiseño Indians of the Pala Reservation, December 9, 2011), Pala recommended that their reservation lands in San Diego County be designated as "unclassifiable/attainment" for the 2008 ozone NAAQS (letter from Robert Smith, Tribal Chairman, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February 22, 2012). Based on the factors discussed below, EPA is designating Pala's Indian country nonattainment as part of the San Diego County nonattainment area for the 2008 ozone NAAQS.

Air Quality Data

Map 11 in Appendix 1 shows ozone monitors within San Diego County. 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).

Currently, Pala operates an ozone monitoring site on the reservation. At this time, the data from this site do not meet standards for use in regulatory decisions, such as NAAQS designations, and therefore cannot be used for regulatory purposes. Precision and accuracy information has not been submitted to EPA's Air Quality System (AQS). Agencies collecting monitoring data for regulatory purposes are required to submit these data to AQS in order to determine if monitoring data are meeting the data quality objectives required by regulation. Also, Pala only recently began participating in the National Performance Audit Program (NPAP). In 2011, the Pala ozone monitor failed the NPAP audit. During the audit, the Pala monitor was measuring 20-30 parts per billion (ppb) lower than the EPA audit system, indicating an audit failure. Measurements from this monitor have been biased low for an indeterminate period of time. Due to these uncertainties, EPA cannot solely rely on the ozone data collected from this site in this regulatory decision. Because there is no regulatory monitor at Pala for the current 2008 ozone NAAQS designations, EPA has reviewed data from the closest monitors: Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation (Pechanga), Escondido, and Temecula. Pechanga is only three miles to the north of Pala and it is reasonable to assume that ozone concentrations on Pechanga lands are similar to those on Pala lands. However, as explained in the Technical Analysis for Pechanga, only a limited amount of data from the Pechanga monitor can be used and comparisons of available data show that Pechanga data closely tracks with Temecula data. Because of the proximity of Pala to Pechanga, we believe it is reasonable to compare Pala's air quality to the Temecula monitor as well. The Temecula monitor has valid data for only 2011 so it does not have a valid design value, which requires three years of valid data. However, the one year of valid data shows an 8-hour 4th maximum of 0.082 ppm (this value would be averaged over three years to calculate the design value).

The typical pattern for ozone levels along the southwest coast of California is low ozone levels along the coast from clean coastal air with increasing levels inland as precursors and temperatures increase. At times, ozone and its precursors can be transported along the coast, as described in Factor 3 for San Diego County, above. Air monitoring stations show this pattern with coastal monitors attaining the 2008 ozone NAAQS (e.g., monitor numbers 060731008, 060731001, and 060731010) and inland monitors violating (e.g., monitor numbers 060731006 and 060659001). See Appendix 3. This area is also subject to inland transport from the South Coast air basin along the Interstate 15 freeway when winds are from the north. The violating monitor in San Diego is 20-25 miles inland, as are Pala's tribal lands. EPA has also reviewed modeling from the 2007 San Diego attainment plan for the 1997 ozone NAAQS that shows air quality in Pala is similar to the rest of San Diego County.[9] Together, these data show that the air quality at Pala is similar to ozone levels to San Diego County, which has a design value of 0.082 ppm.

[9] Eight-Hour Ozone Attainment Plan For San Diego County, May 2007. San Diego County Air Pollution Control District. http://www.sdapcd.org/planning/8-Hour-O3-Attain-Plan.pdf

Emissions and Emissions-Related Data

The Pala reservation consists of 12,449 acres, which are home to approximately 1,315 tribal members. Sources of ozone precursor emissions on Pala's Indian country include the Pala Casino Spa & Resort, a gas station, and other mobile sources. EPA acknowledges that Pala's Indian country is located in a rural area with few major sources of ozone precursors and that the Pala reservation has a low population density compared to other areas of San Diego County. While there may be no large sources of emissions on the Pala reservation, emissions from western San Diego County and the South Coast Air Basin can influence high ozone levels in these inland areas of San Diego County.

General information on emissions, population density and degree of urbanization, traffic and commuting patterns for San Diego County can be found in Factor 2, above. This information is relevant for both San Diego County's densely-populated coastal areas and the less-populated inland areas, including the lands of Pala.

Meteorology/Transport Patterns

Pala is located about 20 miles inland and experiences similar meteorology and transport patterns as other inland parts of eastern San Diego County. Therefore, the information for San Diego County discussed in Factor 3 above, also characterizes the complex meteorology and transport patterns for Pala. As described in Factor 3, transport of ozone and its precursors is prevalent within San Diego County, and from adjacent nonattainment areas. EPA also reviewed other sources of information that reaffirm that high levels of ozone can occur in the inland areas San Diego County as a result of transport from the San Diego metropolitan area and the South Coast Air Basin.[10]

Geography/Topography

Pala does not have any geographical or topographical barriers that would eliminate air pollution transport from the surrounding San Diego County nonattainment area. Although the terrain is complex, there are no topographic barriers. Therefore, geography and topography support including Pala with the surrounding area.

Jurisdictional Boundaries

Pala is a federally recognized tribe located in the northern portion of San Diego County. Map 11a in Appendix 2 shows the location of the areas of Indian country within the San Diego County nonattainment area.

Conclusion for Pala Band

Pala requested to be designated as "unclassifiable/attainment" for the 2008 ozone NAAQS. Due to available representative data from surrounding monitors, similarities in meteorology and

[10] Bigler-Engler, V, 1995: Analysis of an Ozone Episode during the San Diego Air Quality Study: The Significance of Transport Aloft. *Journal of Applied Meteorology*, 34, 1863-1875). Luria, M, 2005: Local and Transported pollution of San Diego, California. *Atmospheric Environment*, 39, 6765-6776. Boucouvala, D, 2003: Analysis of transport patterns during an SCOS97-NARSTO episode. *Atmospheric Environment*, 37 Supplement No. 2, S73-S94. Meteorological and Photochemical Modeling for the San Diego County 2007, 8 Hour Ozone State Implementation Plan.

transport patterns to the surrounding area, the high levels of ozone in the area, and the lack of geographical or topographical barriers that would prevent transport from the San Diego nonattainment area, EPA is designating Pala nonattainment as part of the San Diego nonattainment area for the 2008 ozone NAAQS.

Conclusion

Based on the assessment of factors described above, EPA is designating San Diego County, CA nonattainment for the 2008 ozone NAAQS. This nonattainment area also includes areas of Indian country of eighteen federally recognized tribes.

The Clean Air Act requires EPA to designate any area as "nonattainment" if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in San Diego County show a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, Factor 1 supports designating San Diego County as nonattainment.

Emissions and emission-related data (Factor 2) show that based on locations of stationary sources and population centers, as well as traffic patterns, the state's recommended nonattainment area encompasses both source and receptor populations in the county.

Based on meteorology and weather or transport patterns (Factor 3), influenced by geography and topography (Factor 4), EPA concurs with the state's analysis characterizing the formation of ozone from local sources as well as transport. EPA believes that this factor supports the nonattainment boundaries of San Diego County.

In considering jurisdictional boundaries (Factor 5), EPA recognizes that the San Diego County area has established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. EPA concurs with this recommendation and believes that the existing boundary appropriately encompasses stationary and mobile sources of emissions and accounts for meteorological and geographical boundaries that affect ozone concentrations in San Diego County, and reflects the appropriate jurisdictional boundaries (e.g., San Diego APCD, SANDAG and the San Diego-Carlsbad-San Marcos metropolitan statistical area).

Eighteen tribes are being designated nonattainment as part of the San Diego County nonattainment area[11]. Four tribes submitted recommendations to EPA. La Jolla, located over 20 miles inland in the northern portion of the county, recommended its lands be designated unclassifiable. Based on available air quality data as well as meteorology and geography, EPA has concluded that La Jolla's Indian country is not sufficiently distinct to separate the Tribe from the San Diego nonattainment area. Campo and Ewiiaapaayp recommended that their areas of Indian country be designated attainment. Based on the information currently available and the five factor analysis above, EPA is designating Campo's area of Indian country nonattainment as part of the San Diego County nonattainment area for the 2008 ozone NAAQS. A five factor analysis was not prepared for Ewiiaapaayp because their response was received past the deadline for tribal and state comments. EPA is designating the Tribe's Indian country as part of the San Diego County nonattainment area for the 2008 ozone NAAQS. Pala requested to be designated

[11] Campo Band of Diegueño Mission Indians of the Campo Indian Reservation, Ewiiaapaayp Band of Kumayaay Indians, La Posta Band of Diegueño Mission Indians of the La Posta Indian Reservation, and Manzanita Band of Diegueño Mission Indians of the Manzanita Reservation were excluded from the San Diego nonattainment during the 2004 designations of the 1997 standard ozone standard.

as “unclassifiable/attainment” for the 2008 ozone NAAQS. Due to available representative data from surrounding monitors, similarities in meteorology and transport patterns to the surrounding area, the high levels of ozone in the area, and the lack of geographical or topographical barriers that would prevent transport from the San Diego nonattainment area, EPA is designating Pala nonattainment as part of the San Diego nonattainment area for the 2008 ozone NAAQS.

Based on our consideration of all five factors, EPA is designating San Diego County and Indian country of eighteen federally recognized tribes (as listed in Table 1) nonattainment as part of the San Diego County, CA multi-jurisdictional nonattainment area.

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

Technical Analysis for San Francisco Bay Area

Figure 1 is a map of the San Francisco Bay Area, 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 2008 ozone NAAQS nonattainment designation. Also shown is the boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

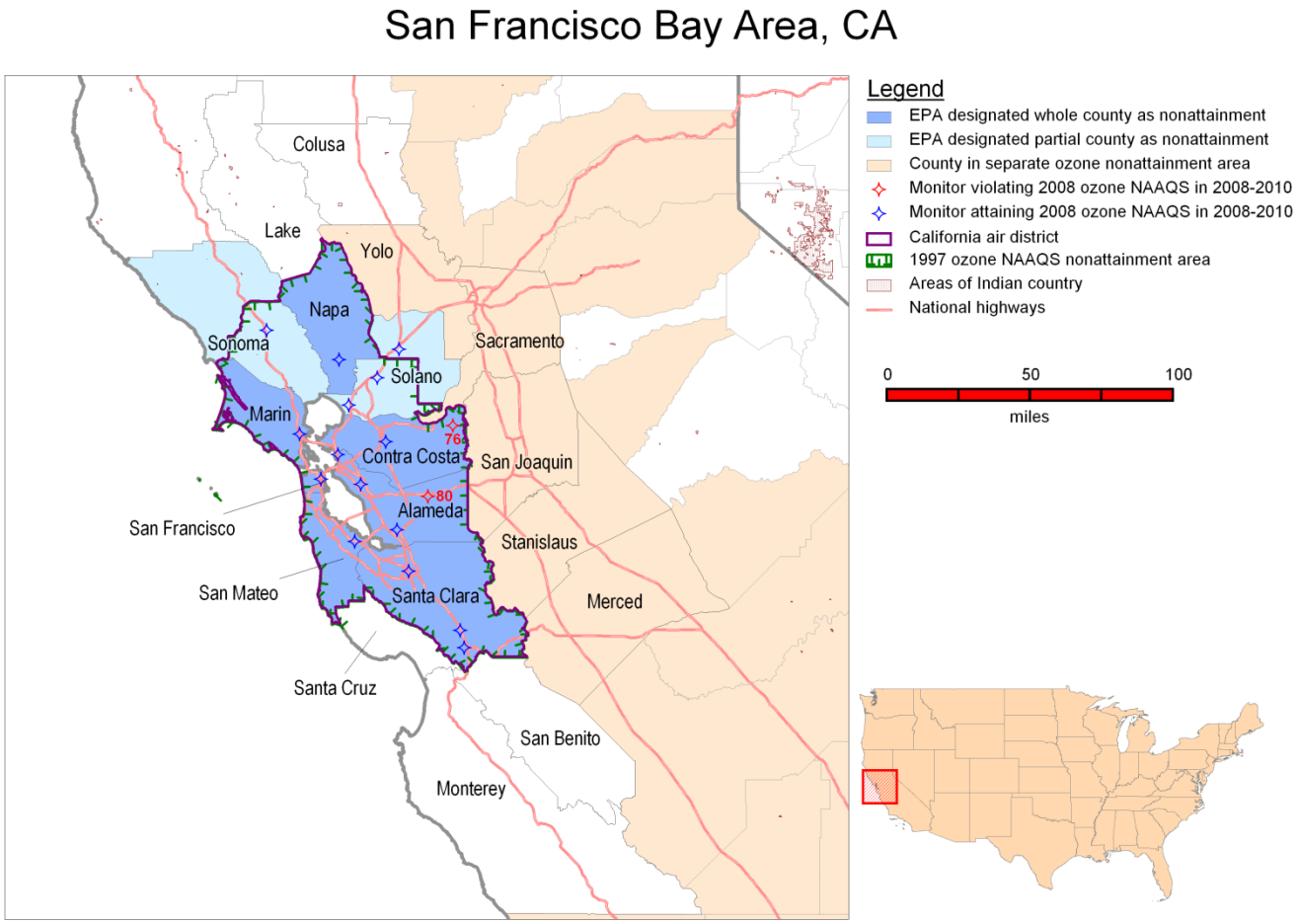


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2008-2010 (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entire counties of San Francisco, Marin, Napa, Contra Costa, Alameda, Santa Clara and San Mateo and part of Sonoma (southern part) and Solano (southwest part not included in Sacramento Metro Area) counties. Several areas of Indian country were included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same counties or parts of counties be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 San Francisco Bay Area. These 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 seven counties, two partial counties, and areas of Indian country of two federally recognized tribes (identified in Table 1 below) as "nonattainment" for the 2008 ozone NAAQS as part of the San Francisco Bay Area multi-jurisdictional nonattainment area.

Table 1. State or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for San Francisco Bay Area.

San Francisco Bay Area, CA	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country
San Francisco County	San Francisco County	San Francisco County
Marin County	Marin County	Marin County
Sonoma County	Sonoma County (p)	Sonoma County (p)
Napa County	Napa County	Napa County
Solano County	Solano County	Solano County
Contra Costa County	Contra Costa County	Contra Costa County
Alameda County	Alameda County	Alameda County
Santa Clara County	Santa Clara County	Santa Clara County
San Mateo County	San Mateo County	San Mateo County
Federated Indians of Graton Rancheria	N/A	Federated Indians of Graton Rancheria
Lytton Rancheria of California	N/A	Lytton Rancheria of California

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

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 San Francisco Bay Area 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 San Francisco Bay Area nonattainment area comprises Alameda County, Contra Costa County, Marin County, Napa County, San Francisco County, San Mateo County, Santa Clara County, Solano County (partial), and Sonoma County (partial) (see Map 12a in Appendix 2). The 2010 DVs for the ozone NAAQS for counties in the existing San Francisco Bay Area nonattainment area are shown in Table 2.

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Alameda, CA	Yes	80
Contra Costa, CA	Yes	76
Marin, CA	Yes	54
Napa, CA	Yes	66
San Francisco, CA	Yes	47
San Mateo, CA	Yes	57
Santa Clara, CA	Yes	75
Solano, CA	Yes	71
Sonoma, CA	Yes (partial)	54

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the San Francisco Bay Area nonattainment area are shown in Appendix 1, Map 12 (inserted below). The state has recommended that Solano County be designated nonattainment, with the northeastern part in the Sacramento Metro nonattainment area, and the southwestern part in the San Francisco Bay Area nonattainment area. The design value shown in Table 2 is from a monitor located within this northeastern portion of Solano County. As shown in Appendix 1, Map 12, the southwestern part of Solano County, within the existing San Francisco Bay Area nonattainment area, has a 2010 DV

of 69 ppb. All other values shown in Table 2 are from monitors within the existing San Francisco Bay Area nonattainment area.

California's ozone season encompasses the entire year, but some ozone monitors in the San Francisco Bay Area have been approved to operate on a seasonal schedule per 40 CFR part 58, Appendix D, section 4.1(i). Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. Map 12 in Appendix 1 includes preliminary 2011 DVs for the existing San Francisco Bay Area 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 San Francisco Bay Area 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.

Monitors in Alameda County and Contra Costa County show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, these areas are included in the San Francisco Bay Area 2008 ozone NAAQS nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

From Appendix 1, Map 12: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1. Monitor dot colors (green or red) are based on preliminary 2011 DV data. EPA is basing its intended designation for the San Francisco Bay Area on 2008-2010 data.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for violating and nearby counties that we considered for inclusion in the San Francisco Bay Area 2008 ozone NAAQS nonattainment area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Alameda, CA	Yes	40,415	27,192
Contra Costa, CA	Yes	34,200	21,751
Marin, CA	Yes	5,518	5,959
Napa, CA	Yes	3,761	4,626
San Francisco, CA	Yes	15,391	10,779
San Mateo, CA	Yes	14,002	11,959
Santa Clara, CA	Yes	32,952	33,035
Solano, CA	Yes	15,361	11,339
Sonoma, CA	Yes (partial)	10,517	13,906
	Areawide:	172,116	140,546

Emissions of ozone precursors from the nine-county San Francisco Bay Area nonattainment area are higher than emissions from the Sacramento Metro area (70,578 and 56,819 tons per year of NO_x and VOC, respectively), but not as high as emissions from the San Joaquin Valley and Los Angeles-South Coast Air Basin nonattainment areas. Stationary source emissions are clustered along the San Francisco Bay (rather than along the Pacific Ocean side of San Francisco and Marin counties), and along the major roadways running north through southern Sonoma and Napa counties, northeast through Solano County, east through Contra Costa County and Alameda County, and south through Santa Clara County (see Map 12 in Appendix 1). Stationary sources of ozone precursor emissions are distributed throughout the San Francisco Bay Area, on both a north-south axis, as well as running east into the Sacramento Metro and San Joaquin Valley nonattainment areas. The northern portion of Sonoma County is distinct from the southern portion in that it contains very few stationary sources of ozone precursor emissions. The northeastern portion of Solano County, included in the Sacramento Metro nonattainment area, contains numerous stationary sources of emissions.

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 NO_x 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Alameda, CA	Yes	1,510,271	2.01	59,875	+4%
Contra Costa, CA	Yes	1,049,025	1.38	95,721	+10%
Marin, CA	Yes	252,409	0.47	4,812	+2%
Napa, CA	Yes	136,484	0.17	11,946	+10%
San Francisco, CA	Yes	805,235	17.06	27,703	+4%
San Mateo, CA	Yes	718,451	1.57	10,009	+1%
Santa Clara, CA	Yes	1,781,642	1.37	95,488	+6%
Solano, CA	Yes	413,344	0.47	16,373	+4%
Sonoma, CA	Yes (partial)	483,878	0.30	23,453	+5%
	Areawide:	7,150,739	1.00	345,380	+5%

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 12 and 12a in Appendices 1 and 2, respectively, show population for this area. Over the 2000 - 2010 period, the nine counties in the San Francisco Bay Area exhibited growth rates of 10% or less, which are lower than growth rates observed in the counties comprising the San Joaquin Valley and Sacramento Metro nonattainment areas. However, the absolute change in population in the San Francisco Bay was similar to the population increase in the Sacramento Metro area. Population growth is associated with even greater growth in traffic and commuting patterns, which are also associated with emissions of ozone precursors (see next section). Population centers are located throughout the San Francisco Bay Area counties, and are generally co-located with the stationary sources of NO_x and VOC emissions (see Maps 12 and 12a of Appendices 1 and 2). The violating monitors in the San Francisco Bay Area are located farther inland in parts of Alameda and Contra Costa counties that are less densely populated than the population centers adjacent to the San Francisco Bay. The northern portion of Sonoma County is distinct from the southern portion in that it is sparsely populated. The northeastern portion of Solano County is also not heavily populated.

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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 for each county in the area.

Table 5. Traffic (VMT) data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Alameda, CA	Yes	11,201
Contra Costa, CA	Yes	8,405
Marin, CA	Yes	2,364
Napa, CA	Yes	1,488
San Francisco, CA	Yes	4,258
San Mateo, CA	Yes	7,543
Santa Clara, CA	Yes	14,993
Solano, CA	Yes	3,280
Sonoma, CA	Yes (partial)	4,118
	Areawide:	57,651

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

In the San Francisco Bay Area, VMT is high compared to VMT in the Sacramento Metro and San Joaquin Valley nonattainment areas. The northern portion of Sonoma County is distinct from the southern portion in that it has lower traffic volume (see Map 12 of Appendix 1). The northeastern portion of Solano County, included in the Sacramento Metro 2008 ozone NAAQS nonattainment area, contains high traffic volume. EPA is designating Sacramento Metro and the San Joaquin Valley as separate nonattainment areas.

Factor 3: Meteorology (weather/transport patterns)

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

The eastern portions of the San Francisco Bay Area have hot, dry, summers, with conditions conducive to ozone formation. The summers are less intense than in the Central Valley toward the east, on the other side of the Coast Ranges. The summer heat is mitigated by periods of fog caused by condensation in air cooled by the cold upwelling Pacific waters.

The San Francisco Bay Area flow is most frequently from the north-northwest according to 30-year average of National Weather Service summer wind direction frequencies computed by EPA, as shown in the “radar”-style wind rose diagram below (Figure 2).

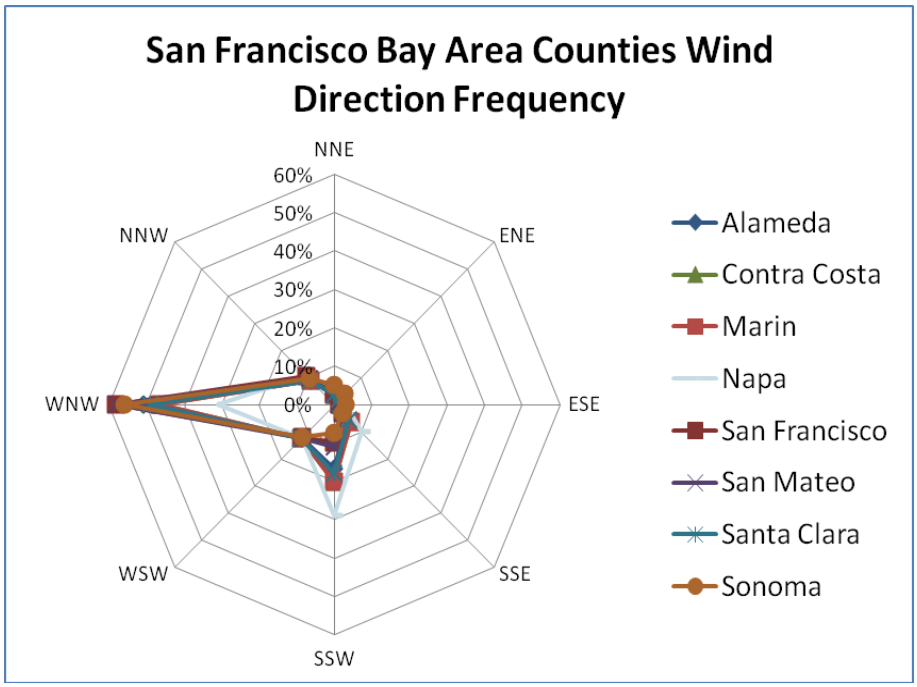


Figure 2

The California Coast Range topographically separates the Sacramento Metro area from the San Francisco Bay area, despite the important gap leading to the Golden Gate. The two areas have different meteorology, with the Sacramento Metro area being part of the hot and dry Central Valley, with substantial marine influence at times, while the San Francisco Bay area is dominated by interaction with air masses over the Pacific Ocean.

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 San Francisco Air Basin encompasses approximately 5,430 square miles and consists of all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, the southern half of Sonoma County and the southwestern portion of Solano County. The Air Basin is equivalent to the state's recommended San Francisco Bay Area nonattainment area. The region is characterized by complex terrain, consisting of coastal mountain ranges, rugged hillsides, and inland valleys and bays. Elevations range from sea level to 1,500 feet. The area is generally surrounded by hilly or mountainous terrain that separates it from neighboring areas. The main exception is the Golden Gate (at the mouth of San Francisco Bay), which is an important gap toward the northwest, and the Sacramento Metro area.

The California Coast Range topographically separates the Sacramento Metro area from the San Francisco Bay area, despite the important gap leading to the Golden Gate. The two areas have different topography, with the Sacramento Metro area being mainly flat, and a part of the Central Valley, and the San Francisco Bay area being more hilly, and a part of the Pacific coast.

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 urban growth boundaries. 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 San Francisco Bay Area has previously-established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS.

The state's recommendation includes the entire counties of San Francisco, Marin, Napa, Contra Costa, Alameda, Santa Clara and San Mateo and part of Sonoma (southern part) and Solano (southwest part not included in Sacramento Metro Area) counties. The state's recommendation includes the entirety of the jurisdictional area of the Bay Area Air Quality Management District (Bay Area AQMD). The partial county boundary for Sonoma County reflects the fact that the northern portion of the county is relatively less populated. The county forms the boundary for the Santa Rosa-Petaluma Metropolitan Statistical Area (MSA). The Office of Management and Budget defines such areas in decreasing ranking of populated areas within the MSA. Both Santa Rosa and Petaluma are completely within the partial county boundary that is included as part of the Bay Area AQMD. The partial county boundary for Sonoma County is consistent with the boundary between the Bay Area Air Basin and the North Coast Air Basin.

Regarding the partial county boundary in Solano County, this boundary is shared among various jurisdictions. The boundary demarcates the portion of the county that falls under the air quality management jurisdictions of the Bay Area AQMD and the Yolo-Solano Air Quality Management District (YSAQMD). The northern part of the YSAQMD is included in the Sacramento Metro nonattainment area for the 1997 ozone NAAQS and EPA is including it with the Sacramento Metro nonattainment area for the 2008 ozone NAAQS as well. The partial county boundary for Solano County is consistent with the boundary between the Bay Area Air Basin and the Sacramento Valley Air Basin[1]. Regarding transportation planning, the partial county boundary in Solano County is also the boundary between the jurisdictions of the Metropolitan Transportation Commission (MTC), which performs transportation planning in the Bay Area, and the Sacramento Council of Governments (SACOG), which performs the same function in the wider Sacramento Metro area.

The San Francisco Bay Area 2008 ozone NAAQS nonattainment area includes most of the San Jose-San Francisco-Oakland combined statistical area (CSA). The CSA comprises six metropolitan statistical areas (MSAs): the Santa Rosa-Petaluma, Napa, Vallejo-Fairfield, San Francisco-Oakland-Fremont, San Jose-Sunnyvale-Santa Clara, and Santa Cruz-Watsonville MSAs. The CSA reflects the intended nonattainment area boundaries except the partial counties for Sonoma and Solano counties, as previously discussed, and the exclusion of San Benito County, to the south. San Benito County[2] is not

[1] http://www.arb.ca.gov/ei/maps/statemap/abmap.htm
[2] San Benito County is in attainment of the 2008 ozone NAAQS based on 2009-2011 data. See Appendix 3.

under the jurisdiction of the Bay Area Air Quality Management District, but rather it is under the jurisdiction of the Monterey Bay Unified Air Pollution Control District.

The San Francisco Bay Area also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries. The tribes whose areas of Indian country are included in the San Francisco Bay Area nonattainment area are the Federated Indians of Graton Rancheria and Lytton Rancheria of California.

Conclusion

Based on the assessment of factors described above, EPA is designating the following counties as part of the San Francisco Bay Area, CA nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: San Francisco County, Marin County, Sonoma County (partial), Napa County, Solano County (partial), Contra Costa County, Alameda County, Santa Clara County, and San Mateo County. This area also includes the reservation lands of two tribes: the Federated Indians of Graton Rancheria and the Lytton Rancheria of California.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in Alameda County and Contra Costa County show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, based on Factor 1, Alameda County and Contra Costa County are included in the San Francisco Bay Area nonattainment area.

Evaluation of emissions and emissions-related data (Factor 2) show that emission sources of ozone precursors (including stationary sources, population centers, and mobile sources) from all seven counties or partial counties are clustered along the San Francisco Bay. The state's recommended nonattainment area includes two partial counties in the San Francisco Bay nonattainment area. The northern portion of Sonoma County is distinct from the southern portion in that it is sparsely populated, has lower traffic volume and contains very few stationary sources of ozone precursor emissions. The northeastern portion of Solano County is also not heavily populated but does contain numerous stationary sources of emissions and high traffic volume, both of which contribute to ozone formation. EPA is designating the northeastern portion of Solano County with the Sacramento Metro nonattainment area. Consideration of emissions data (Factor 2) supports the state's recommended nonattainment area, which appropriately encompasses source and receptor populations in the San Francisco Bay Area.

EPA's review of meteorology and weather or transport patterns (Factor 3) and geography and topography (Factor 4) support the state's recommendation for the San Francisco Bay Area nonattainment area.

In considering jurisdictional boundaries (Factor 5), the San Francisco Bay Area has previously-established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state has recommended the same boundary for the 2008 ozone NAAQS. The existing

boundary includes two partial counties: Sonoma County to the north along the Pacific coast, and Solano County to the northeast. The Sonoma partial county boundary shares the same boundary as the boundary between the Bay Area Air Basin and the North Coast Air Basin. The boundary that creates the partial Solano County demarcates the portion of the county that falls under the jurisdictions of the Bay Area AQMD and the Yolo-Solano AQMD. The Yolo-Solano AQMD is part of the Sacramento Metro nonattainment area for the 1997 ozone NAAQS and EPA is including it with the Sacramento Metro nonattainment area for the 2008 ozone NAAQS as well. The state's recommended nonattainment area has identical borders to the San Francisco Bay Air Basin.

EPA concurs with the state's recommendation that the existing nonattainment area boundary appropriately encompasses stationary and mobile sources of emissions and accounts for meteorological, geographical, and existing jurisdictional boundaries in the San Francisco Bay Area. EPA is designating seven counties, two partial counties, and areas of Indian country (identified in Table 1 above) as "nonattainment" for the 2008 ozone NAAQS as part of the San Francisco Bay Area, CA multi-jurisdictional nonattainment area.

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

Technical Analysis for San Joaquin Valley

Figure 1 is a map of the San Joaquin Valley, CA nonattainment area. The map provides other relevant information including the locations and design values of air quality monitors, county and other jurisdictional boundaries. Also shown is the boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

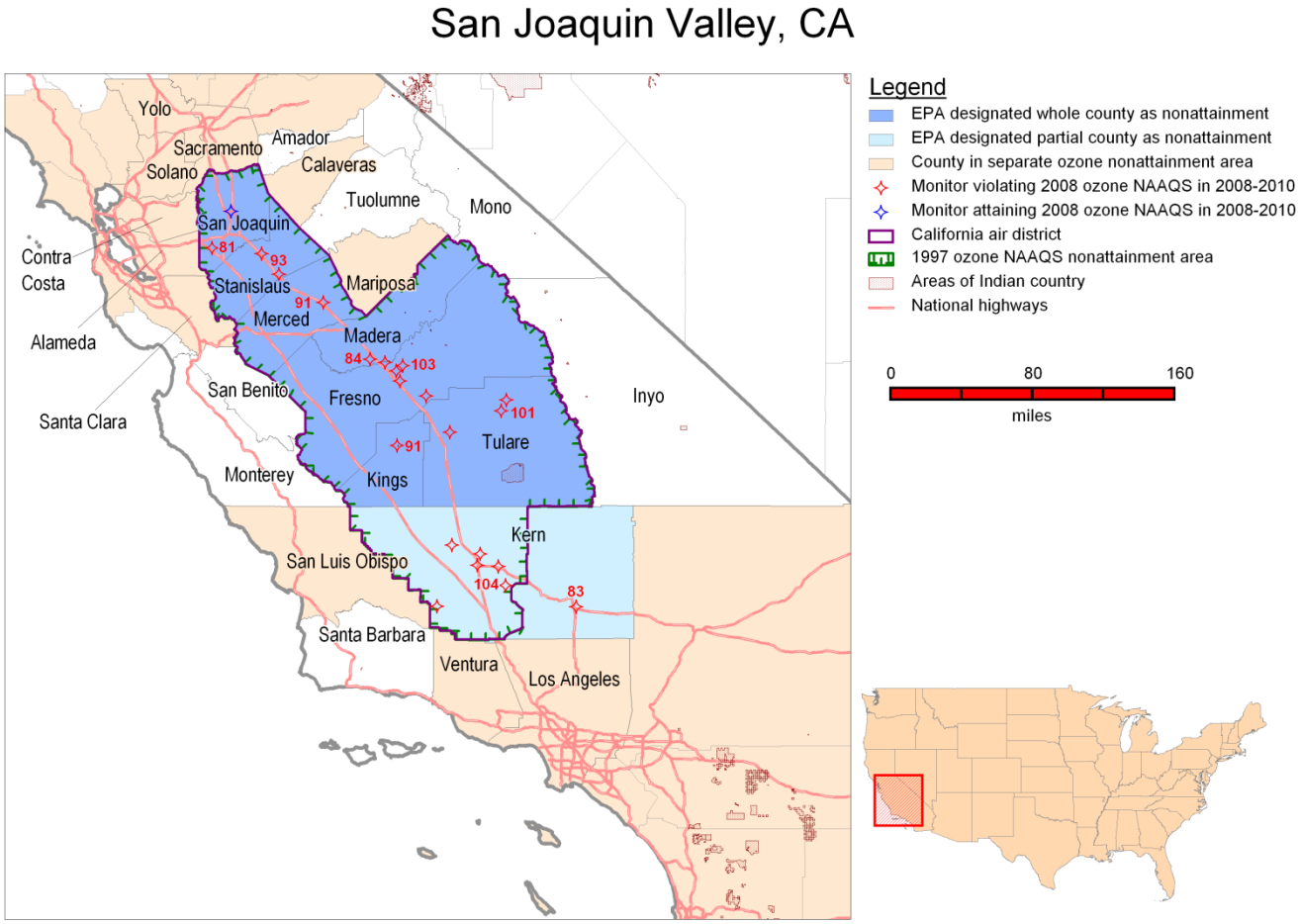


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from 2008-2010 (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entire counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings and Tulare and part of Kern County (western part). Areas of Indian country of several federally recognized tribes were included in the nonattainment area. These are the same tribes that are listed in Table 1, below.

In March 2009, California recommended that the same counties or parts of counties be designated as nonattainment for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 San Joaquin Valley. These 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).

In November 2011, the Picayune Rancheria of the Chukchansi Indians of California recommended designation of their Indian country as "unclassifiable" for the 2008 ozone NAAQS (letter from Nancy Ayala, Tribal Council Vice Chairwoman, Picayune Rancheria of the Chukchansi Indians of California, to Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, November 14, 2011).

In February 2012, in response to EPA's 120-day letter, the Table Mountain Rancheria of California recommended designation of their Indian country as "unclassifiable" for the 2008 ozone NAAQS (letter from Leanne-Walker Grant, Tribal Chairperson, Table Mountain Rancheria of California, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February, 29 2012).

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating seven counties and one partial county in California, and areas of Indian country (identified in Table 1 below) nonattainment for the 2008 ozone NAAQS as part of the San Joaquin Valley multi-jurisdictional nonattainment area.

Table 1. State or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for San Joaquin Valley.

San Joaquin Valley	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA Nonattainment Counties or Areas of Indian country
San Joaquin County	San Joaquin County	San Joaquin County
Stanislaus County	Stanislaus County	Stanislaus County
Merced County	Merced County	Merced County
Madera County	Madera County	Madera County
Fresno County	Fresno County	Fresno County
Kings County	Kings County	Kings County
Tulare County	Tulare County	Tulare County
Kern County	Kern County (p)	Kern County (p)
Big Sandy Rancheria of Mono Indians of California	N/A	Big Sandy Rancheria of Mono Indians of California
Cold Springs Rancheria of Mono Indians of California	N/A	Cold Springs Rancheria of Mono Indians of California
North Fork Rancheria of Mono Indians of California	N/A	North Fork Rancheria of Mono Indians of California
Picayune Rancheria of Chuckchansi Indians of California	Unclassifiable	**Picayune Rancheria of Chuckchansi Indians of California**
Santa Rosa Indian Community of the Santa Rosa Rancheria	N/A	Santa Rosa Indian Community of the Santa Rosa Rancheria
Table Mountain Rancheria of California	Unclassifiable[1]	**Table Mountain Rancheria of California**[1]
Tule River Indian Tribe of the Tule River Reservation	N/A	Tule River Indian Tribe of the Tule River Reservation

p = partial
N/A = Tribe did not submit a recommendation.
EPA modifications to state or tribe recommendations are shown in **bold.**
[1]The Table Mountain Rancheria of California recommended designation of their Indian country as "unclassifiable" for the 2008 ozone NAAQS as part of their response to EPA's 120-day letter. (Letter from Leanne-Walker Grant, Tribal Chairperson, Table Mountain Rancheria, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February, 29 2012.)

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 San Joaquin Valley 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.]

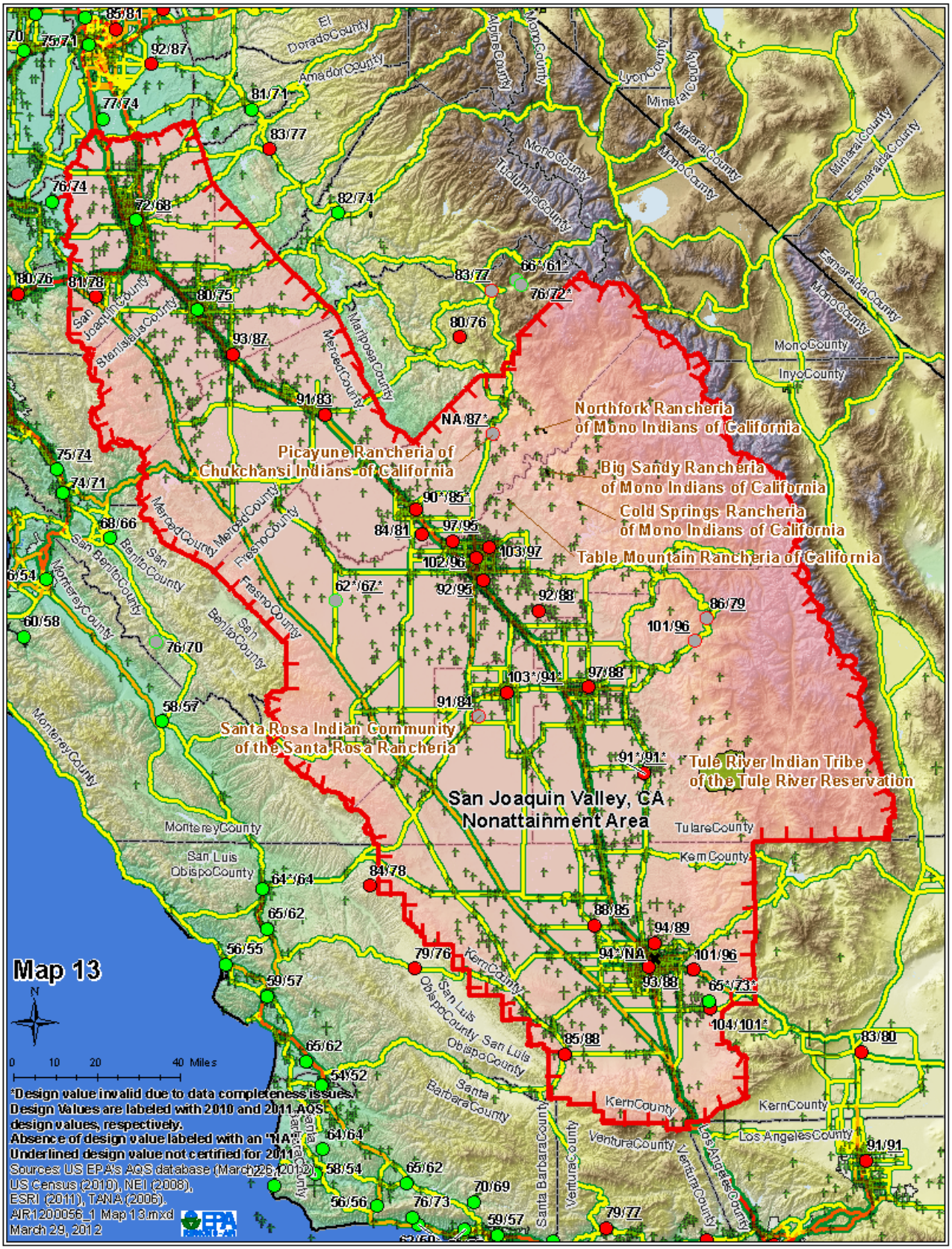
The existing San Joaquin Valley nonattainment area comprises San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings and Tulare counties, and the western portion of Kern County (see Map 13a in Appendix 2). The 2010 DVs for the ozone NAAQS for counties in the existing San Joaquin Valley nonattainment area are shown in Table 2.

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Fresno, CA	Yes	103
Kern, CA	Yes (partial)	104
Kings, CA	Yes	91
Madera, CA	Yes	84
Merced, CA	Yes	91
San Joaquin, CA	Yes	81
Stanislaus, CA	Yes	93
Tulare, CA	Yes	101

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within the existing San Joaquin Valley nonattainment area are shown in Appendix 1, Map 13. 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 13 in Appendix 1 includes preliminary 2011 DVs for the existing San Joaquin Valley 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 San Joaquin Valley 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 13: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in every county listed above in Table 1 show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, these areas are included in the San Joaquin Valley 2008 ozone nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for violating and nearby counties that we considered for inclusion in the San Joaquin Valley area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Fresno, CA	Yes	37,561	27,617
Kern, CA	Yes (partial)	70,256	32,300
Kings, CA	Yes	9,139	5,230
Madera, CA	Yes	10,006	6,398
Merced, CA	Yes	17,857	10,223
San Joaquin, CA	Yes	31,674	16,587
Stanislaus, CA	Yes	16,769	15,394
Tulare, CA	Yes	15,411	16,273
	Areawide:	208,673	130,022

The ozone precursor emissions listed for these eight counties contribute to monitored violations in the San Joaquin Valley. Emissions in the San Joaquin Valley of NO_x and VOCs are approximately half of the NO_x and VOC emissions in the Los Angeles-South Coast Air Basin nonattainment area, and are substantially greater than emissions within the Sacramento Metro nonattainment area (70,578 and 56,819 tons per year of NO_x and VOC, respectively). San Joaquin Valley's total NO_x emissions are higher and VOC emissions are slightly lower than emissions within the San Francisco Bay Area nonattainment area (172,116 and 140,546 tons per year of NO_x and VOC, respectively). Stationary source emissions of ozone precursors are clustered along the major roadways that run northwest-southeast through the center of the valley (see Map 13 in Appendix 1). Kern County, located in the southern portion of the San Joaquin Valley is the largest source of NO_x and VOC emissions in the San Joaquin Valley. The majority of sources in Kern County are in the western portion of the county, which is the portion included in the San Joaquin Valley nonattainment area. The majority of the eastern portion of Kern County is being designated as a separate nonattainment area, the Kern County (Eastern

Kern) nonattainment area. San Joaquin County, in the northern portion of the San Joaquin Valley, and Fresno County, in the central portion of the San Joaquin Valley, are the second and third highest sources of NO_x and VOCs, indicating that sources of ozone precursor emissions are distributed throughout the San Joaquin Valley.

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 NO_x and VOC emissions, which contribute to ozone formation. Rapid population 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.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Fresno, CA	Yes	930,450	0.15	128,327	+16%
Kern, CA	Yes (partial)	839,631	0.10	176,121	+27%
Kings, CA	Yes	152,982	0.11	23,206	+18%
Madera, CA	Yes	150,865	0.07	27,293	+22%
Merced, CA	Yes	255,793	0.13	44,241	+21%
San Joaquin, CA	Yes	685,306	0.48	117,283	+21%
Stanislaus, CA	Yes	514,453	0.34	64,745	+14%
Tulare, CA	Yes	442,179	0.09	73,484	+20%
	Areawide:	3,971,659	0.14	654,700	+20%

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)

During the 2000 - 2010 period, population in the eight counties that comprise the San Joaquin Valley nonattainment area exhibited among the strongest growth of all nonattainment areas in California. Although the total population in San Joaquin Valley (nearly 4 million people) is small compared to the population of Los Angeles-South Coast Air Basin (17 million), the absolute change in population over this period in San Joaquin Valley is similar to the absolute change in population in the Sacramento Metro and San Francisco Bay Area nonattainment areas (located upwind of the San Joaquin Valley) combined. Population growth is associated with even greater growth in VMT, which are themselves associated with emissions of ozone precursors (see next section).

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 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Fresno, CA	Yes	8,307
Kern, CA	Yes (partial)	8,578
Kings, CA	Yes	1,101
Madera, CA	Yes	1,763
Merced, CA	Yes	2,231
San Joaquin, CA	Yes	5,261
Stanislaus, CA	Yes	3,773
Tulare, CA	Yes	4,357
	Areawide:	35,372

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

Total VMT in the San Joaquin Valley is lower than VMT in the South Coast Air Basin (nearly 143 billion VMT in 2008) and the upwind nonattainment area of the San Francisco Bay Area (nearly 58 billion VMT in 2008). Highest truck and non-truck traffic volumes occur along the major roadways that run north-south through the San Joaquin Valley (see Map 13 in Appendix 1), with relatively lighter traffic on roadways that run east-west to other nonattainment counties or counties in attainment with the 2008 ozone NAAQS.

Factor 3: Meteorology (weather/transport patterns)

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

Wind flow most frequently comes from the west-northwest, as shown by the 30-year average of National Weather Service summer wind direction frequencies computed by EPA and depicted in the "radar"-style wind rose diagram below (Figure 2). This is consistent with the geographic orientation of the San Joaquin Valley and its relationship to the Golden Gate (at the mouth of San Franisco Bay), the key route for air flow between the Pacific Ocean and the Central Valley of California. San Joaquin and Stanislaus, the northernmost two counties, have an additional southerly component more than the other counties, which may reflect their locations closer to the Sacramento Valley, the northern half of California's Central Valley.

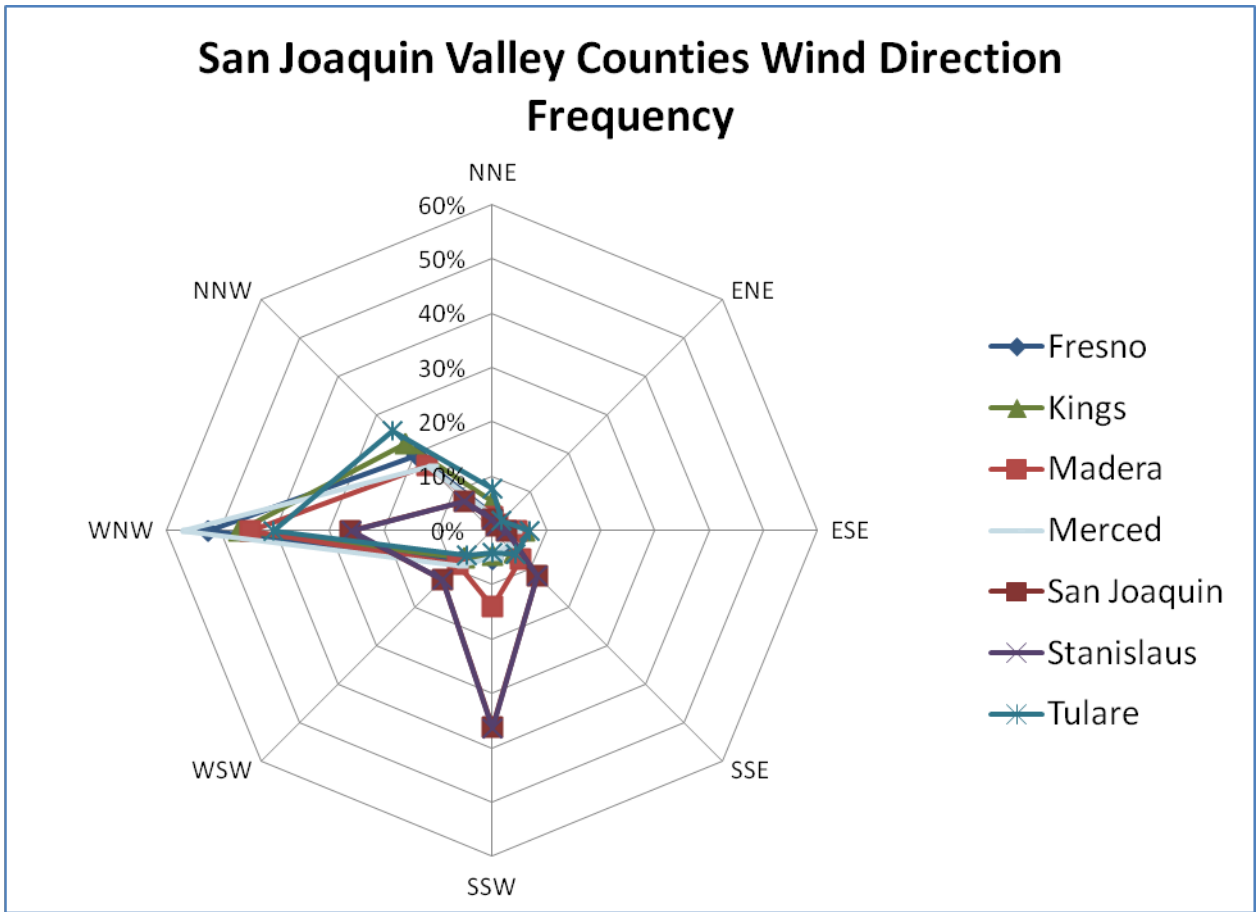


Figure 2

The San Joaquin Valley 2007 Ozone Plan[1] includes a conceptual description of ozone formation in the area. It notes phenomena conducive to high ozone concentrations in the San Joaquin Valley. These include the Sierra Nevada, Tehachapi, and South Coast mountain ranges that surround the San Joaquin Valley on the east, south, and west, and which restrict air flow and ventilation. The summers are hot with little rainfall or cloud cover (Fresno averages 36 days per year with temperatures 100°F or hotter), and with frequent inversions that trap pollutants below them. Sea breezes (or "marine flows") may bring pollutants from coastal areas into the San Joaquin Valley from the northwest. Recirculation of San Joaquin Valley pollutants can occur via nighttime drainage winds ("slope flows"), which return pollutants that were transported up into mountain valleys during the day. Recirculation can also occur via the "Fresno eddy", a counterclockwise flow that returns polluted air that would otherwise escape through southern mountain passes. All of these contribute to the buildup of ozone and precursors, due to enhanced photochemical formation and to restricted dispersion. Also noted are various flow patterns, including transport between the San Joaquin Valley and both the Sacramento Valley to the north and the San Francisco Bay Area to the northwest. While there is interchange of air between San Joaquin Valley and these nearby areas, its unique flow patterns make it meteorologically distinct from those areas.

While there is no topographic barrier between the San Joaquin Valley and the Sacramento Valley to the north, and at times there can be transport between them, generally the air flow from the Pacific Ocean

[1] "Photochemical Modeling Protocol for Developing Strategies to Attain the Federal 8-hour Ozone Air Quality Standard in Central California," California Air Resources Board, May 22, 2007; included as Appendix C to the ARB Staff Report. See especially pp.6-8. Available at http://www.arb.ca.gov/planning/sip/2007sip/sjv8hr/sjvozone.htm

through the Golden Gate toward the east tends to bifurcate where the two valleys meet, providing some degree of separation much of the time.

EPA notes that the San Joaquin Valley may influence ozone concentrations in the Southern Mountain Counties nonattainment area and perhaps counties within the "Mountain Counties Air Basin", namely Amador, Calaveras, Mariposa, and Tuolumne counties. The western portions of these counties are likely also subject to the meteorology of the San Joaquin Valley, but even at their western ends those counties are in the foothills of the Sierra Nevada mountain range, rather than in the flats of San Joaquin Valley, and on the whole those counties are more rural and largely mountainous.

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 San Joaquin Valley is the southern half of the large, flat, Central Valley of California. Except to the north, it is surrounded on all sides by tall mountains. These include the Sierra Nevadas to the east, the Tehachapis to the south and southwest, and South Coast ranges to the west. These ranges tend to restrict air flow and ventilation.

While there is no topographic barrier between the San Joaquin Valley and the Sacramento Valley to the north, and at times there can be transport between them, generally the air flow from the Pacific Ocean through the Golden Gate toward the east tends to bifurcate where the two valleys meet, providing some degree of separation much of the time.

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 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 San Joaquin Valley nonattainment area has previously established boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS.

The state recommended the same boundary for the San Joaquin Valley as the San Joaquin Valley Air Pollution Control District's (SJVAPCD's) jurisdictional boundary. This large district manages one of the only extreme nonattainment areas in the nation. It contains seven whole counties (San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings and Tulare) and part of Kern County (western part). The boundary between west and east Kern County is a generally north-south line bisecting the county along the Sierra Nevada mountain range. This line is also the boundary between the jurisdictions of the SJVAPCD and the Eastern Kern Air Pollution Control District (Eastern Kern APCD). The boundary of the SJVAPCD in Kern County is also the boundary of the San Joaquin Valley Air Basin. The eastern

portion of Kern County lies to the east of the Sierra Nevada mountain range and lies in the Mojave Desert Air Basin.

The San Joaquin Valley nonattainment area includes the Fresno-Madera Combined Statistical Area (CSA) comprising the Fresno and Madera-Chowchilla Metropolitan Statistical Areas (MSA), and the entireties of the Stockton, Modesto, Merced, Hanford-Corcoran, and Visalia-Porterville MSAs. The entirety of Kern County forms the Bakersfield-Delano MSA, which is split between the San Joaquin Valley and the East Kern County nonattainment areas.

The San Joaquin Valley area also includes areas 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 tribes into account in establishing appropriate nonattainment area boundaries.

Evaluation of Recommendation from Picayune Rancheria of Chuckchansi Indians of California

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 Picayune Rancheria of Chuckchansi Indians of California (Picayune) based on currently available information.

Picayune is a federally recognized tribe located in the central portion of the Madera-Chowchilla MSA, in Madera County. Map 13a in Appendix 2 shows the locations of the areas of Indian country within the San Joaquin Valley nonattainment area.

In 2004, EPA previously established the San Joaquin Valley nonattainment area boundaries for the 1997 ozone NAAQS that included Madera County which encompasses Picayune.

In a letter dated November 14, 2011, Picayune recommended designation of their Indian country as "unclassifiable" for the 2008 ozone NAAQS (letter from Nancy Ayala, Tribal Council Vice Chairwoman, Picayune Rancheria of the Chukchansi Indians of California, to Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, November 14, 2011). Based on the factors discussed below, EPA is designating Picayune's area of Indian country nonattainment as part of the San Joaquin Valley nonattainment area for the 2008 ozone NAAQS.

Air Quality Data

Currently, Picayune operates one ozone monitor within its tribal boundaries. Map 13 in Appendix 1 shows monitor locations for the San Joaquin Valley nonattainment area. 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).

The typical pattern for ozone concentrations in the San Joaquin Valley is an increase in concentration to the south and the east. Ozone concentrations tend to increase with elevation in the Sierra Nevada Mountains as a result of transport of precursors and ozone by the upslope flow discussed in Factor 3 above. The Picayune monitor started reporting data to AQS in August of 2011, and therefore does not have three years of data necessary for calculating a valid design value. Picayune's currently available data for August 2011 shows eight days in that month with 8-hour ozone concentrations exceeding the standard. Surrounding monitors in Madera and other neighboring counties show violations of the 2008 8-hour ozone standard based on 2008-2010 data. We believe that these air monitoring data are representative of the air quality on Picayune's area of Indian country.

Emissions and Emissions-Related Data

Picayune consists of 820.89 acres of Indian country, which is home to approximately 1,000 tribal members. Picayune does not have any major stationary sources within the tribal boundaries. Sources of emissions include a casino and hotel, several restaurants, a gas station, and a wastewater treatment plant. Also, California State Route Highway 41 passes through Picayune.

General information on emissions, population density and degree of urbanization, traffic and commuting patterns for the San Joaquin Valley nonattainment area can be found in Factor 2 of the San Joaquin Valley nonattainment area technical analysis, above.

Meteorology (Weather/Transport Patterns)

Picayune is in the foothills on the eastern side of the San Joaquin Valley and is similar to other eastern parts of the central and southern San Joaquin Valley. Therefore, the information for the San Joaquin Valley nonattainment area discussed in Factor 3 of the San Joaquin Valley nonattainment area technical analysis, above, adequately characterizes meteorology and transport patterns for the tribe.

Geography/Topography

Although the terrain is complex, Picayune does not have any geographical or topographical barriers that would prevent air pollution transport from the San Joaquin Valley nonattainment area from the west. Therefore, geography and topography support including Picayune's area of Indian country with the surrounding area.

Jurisdictional Boundaries

Picayune is a federally recognized tribe located in the central portion of the Madera-Chowchilla MSA, in Madera County. Map 13a in Appendix 2 shows the locations of the areas of Indian country within the San Joaquin Valley nonattainment area.

Conclusion for Picayune Rancheria

Picayune recommended that designation of their area of Indian country as "unclassifiable", based on the lack of complete monitoring data from their monitor. However, due to available representative data from surrounding monitors and indications of exceedances from the limited data available from the tribe's monitor, EPA is designating Picayune's Indian country

nonattainment, as part of the San Joaquin Valley nonattainment area for the 2008 ozone NAAQS.

Evaluation of Recommendation from Table Mountain Rancheria of California

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 Table Mountain Rancheria of California (Table Mountain) based on currently available information.

Table Mountain is a federally recognized tribe located in the central portion of Fresno County. Map 13a in Appendix 2 shows the locations of the areas of Indian country within the San Joaquin Valley nonattainment area.

In 2004, EPA previously established the San Joaquin Valley nonattainment area boundaries for the 1997 ozone NAAQS that included Fresno County which encompasses Table Mountain.

In a letter dated February 29, 2012, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region, to Leanne-Walker Grant, Tribal Chairperson, Table Mountain Rancheria of California, December 9, 2011), Table Mountain recommended that the tribe's area of Indian country be designated as "unclassifiable" for the 2008 ozone NAAQS (letter from Leanne-Walker Grant, Tribal Chairperson, Table Mountain Rancheria of California, to Jared Blumenfeld, Regional Administrator, U.S EPA Region IX, February, 29 2012). Based on the factors discussed below, EPA is designating Table Mountain's Indian country as "nonattainment" as part of the San Joaquin Valley nonattainment area for the 2008 ozone NAAQS.

Air Quality Data

Currently, Table Mountain does not operate any ozone monitors within the tribal boundaries. Map 13 in Appendix 1 shows monitor locations for the San Joaquin Valley nonattainment area. 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).

The typical pattern for ozone concentrations in the San Joaquin Valley is an increase in concentration to the south and the east. Ozone concentrations tend to increase with elevation in the Sierra Nevada Mountains as a result of transport of precursors and ozone by the upslope flow discussed in Factor 3 above. Surrounding monitors in Fresno and other neighboring counties show violations of the 2008 8-hour standard based on 2008-2010 and preliminary 2009-2011 data. The closest ozone monitoring site to Table Mountain is located 12 miles to the south-southwest in Clovis. Operated by the San Joaquin Valley APCD, the Clovis monitor measures some of the highest ozone levels in the nation. The 2008-2010 and preliminary 2009-2011 design values for the Clovis monitoring site are 0.103 and 0.099 ppm, respectively. Based on the lack of topographic barriers, similarities in meteorology and transport patterns with the surrounding area, and the high levels of ozone in the area, EPA has determined that monitors in Fresno County, including the Clovis monitor, adequately represent the air quality in the area, specifically including the area surrounding Table Mountain.

Emissions and Emissions-Related Data

Table Mountain does not have any major stationary sources within the tribal boundaries. Minor sources include a few gas stations. There are also mobile source emissions from Millerton and Auberry Roads.

General information on emissions, population density and degree of urbanization, traffic and commuting patterns for the San Joaquin Valley nonattainment area can be found in Factor 2 of the San Joaquin Valley nonattainment area technical analysis, above.

Meteorology (Weather/Transport Patterns)

Table Mountain is in the foothills on the eastern side of the San Joaquin Valley and is similar to other eastern parts of the central and southern San Joaquin Valley. Therefore, the information for the San Joaquin Valley nonattainment area discussed in Factor 3 of the San Joaquin Valley nonattainment area technical analysis, above, adequately characterizes meteorology and transport patterns for the tribe.

Geography/Topography

Although the terrain is complex, Table Mountain does not have any geographical or topographical barriers that would prevent air pollution transport from the San Joaquin Valley nonattainment area to Table Mountain. Therefore, geography and topography support including Table Mountain's area of Indian country with the surrounding area.

Jurisdictional Boundaries

Table Mountain is a federally recognized tribe located in Fresno County. Map 13a in Appendix 2 shows the locations of the areas of Indian country within the San Joaquin Valley nonattainment area.

EPA's assessment of the jurisdictional factor was performed in accordance with EPA's 2011 "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country." The policy stresses the importance of recognizing tribal sovereignty and the jurisdictional status of Indian country in the decision-making process. The policy articulates specific examples and associated designations that may be appropriate in these circumstances. Explicitly included in the policy is an example stating that Indian country could be designated unclassifiable if it is lacking a regulatory monitor, and is located within a multi-jurisdictional area with a violating regulatory monitor that is not representative of the Indian country. As discussed in Factor 1, EPA has determined that other nearby monitors in Fresno County, including the Clovis monitor, adequately represent the air quality in the area, specifically including the area surrounding Table Mountain. Therefore, the policy indicates that an unclassifiable designation is not appropriate.

Conclusion for Table Mountain

Table Mountain recommended designation of their Indian country as "unclassifiable" based on the lack of monitoring data in the immediate area surrounding their lands. However, due to available representative data from surrounding monitors, similarities in meteorology and transport patterns to the surrounding area, the high levels of ozone in the area, and the lack of geographical or topographical barriers that would prevent transport from the San Joaquin Valley, EPA is designating Table Mountain's Indian country as "nonattainment" for the 2008 ozone NAAQS, as part of the San Joaquin Valley nonattainment area.

Conclusion

Based on the assessment of factors described above, EPA is designating the following counties as part of the San Joaquin Valley, CA nonattainment area because they are violating the 2008 ozone NAAQS: San Joaquin County, Stanislaus County, Merced County, Madera County, Fresno County, Kings County, Tulare County, and Kern County (partial). EPA's boundary for San Joaquin Valley also includes seven federally recognized tribes, as listed in Table 1.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in each of the counties of the existing San Joaquin Valley nonattainment area (which includes counties as listed above in Table 1) show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, Factor 1 supports designating these areas as "nonattainment."

EPA's review of emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5) support the nonattainment boundaries recommended by the state. The state's recommendation for the San Joaquin Valley nonattainment area for the 2008 ozone standard is consistent with the existing nonattainment area under the 1997 8-hour ozone NAAQS. The area has its own air pollution control district and this district is one of the largest in the nation. The area also is coterminous with the entirety of the San Joaquin Valley Air Basin. The area contains major population centers and other sources of ozone precursor emissions that contribute to violations in the air basin.

The split of Kern County between the San Joaquin Valley and the East Kern County nonattainment areas is consistent with current ozone designations, the state's recommendations for these areas, and with the factors that EPA applies to setting nonattainment area boundaries. EPA is designating the western portion of the county as nonattainment with San Joaquin Valley and the eastern portion with the East Kern County nonattainment area. The county is bisected in a north-south direction in the central part of the county by the southern end of the Sierra Nevada mountain range, which results in different meteorology in the two portions of the county. The Eastern Kern APCD separates the eastern portion of the county from the San Joaquin Valley APCD portion.

Given the preceding analysis, EPA is designating the same area as nonattainment for the 2008 ozone NAAQS that is currently nonattainment for the 1997 ozone NAAQS.

EPA's nonattainment area boundary for San Joaquin Valley also includes seven different areas of Indian country. EPA received a recommendation from Picayune for their area of Indian country to be designated as "unclassifiable" based on the lack of complete monitoring data from its monitor. Based on available information from surrounding monitors, the limited, available data from the tribe's monitor,

and the analysis described above, EPA has concluded that Picayune's Indian country should be designated "nonattainment" as part of the San Joaquin Valley nonattainment area for the 2008 ozone NAAQS. Table Mountain recommended that the tribe's area of Indian country be designated as "unclassifiable" based on the lack of monitoring data in the immediate area surrounding their lands. However, due to available representative data from surrounding monitors, similarities in meteorology and transport patterns to the surrounding area, the high levels of ozone in the area, and the lack of geographical or topographical barriers that would prevent transport from the San Joaquin Valley, EPA is designating Table Mountain's Indian country as "nonattainment" for the 2008 ozone NAAQS, as part of the San Joaquin Valley nonattainment area. Areas of Indian country of the seven tribes listed in Table 1 are included in the 2008 ozone NAAQS San Joaquin Valley, CA nonattainment area.

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

Technical Analysis for San Luis Obispo (Eastern San Luis Obispo)

Figure 1 is a map of San Luis Obispo County, CA. The map provides other relevant information including the locations and design values of air quality monitors, county names and boundaries and indicates EPA's partial county nonattainment designation. See Map 14 in Appendix 1 (and inserted under Factor 1, below) for a detailed map of the partial county boundary that EPA is designating nonattainment.

Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from the 2009-2011 period (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

In March 2009, California recommended that a new partial-county area be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations, but did not revise its recommendation for San Luis Obispo 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 Luis Obispo County (partial) in California nonattainment for the 2008 ozone NAAQS, as the San Luis Obispo (Eastern San Luis Obispo) nonattainment area.

Table 1. State's or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for San Luis Obispo (Eastern San Luis Obispo).

San Luis Obispo (Eastern San Luis Obispo), CA	State or Tribe-Recommended Nonattainment Counties or Areas in Indian country	EPA's Nonattainment Counties or Areas in Indian Country
San Luis Obispo County	San Luis Obispo County (p)	San Luis Obispo County (p)
No areas of Indian country located within the nonattainment area		

p = partial

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in San Luis Obispo County, based on data from the most recent three-year period for which we had timely submitted certified air quality data. San Luis Obispo County Air Pollution Control District (APCD) and California Air Resources Board (ARB) submitted certified air quality data for 2011 before February 29, 2012 for this area; thus, for purposes of the final designations, we are considering air quality from the 2009-2011 period (i.e., the 2011 DV) for this area. 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.]

Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year. Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. San Luis Obispo County APCD and ARB certified 2011 data by February 29, 2012 for San Luis Obispo County. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that San Luis Obispo County is violating the 2008 ozone NAAQS. San Luis Obispo County's 2010 DV was 84 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within San Luis Obispo County are shown in Appendix 1, Map 14 (also inserted below).

Table 2. Air Quality Data.

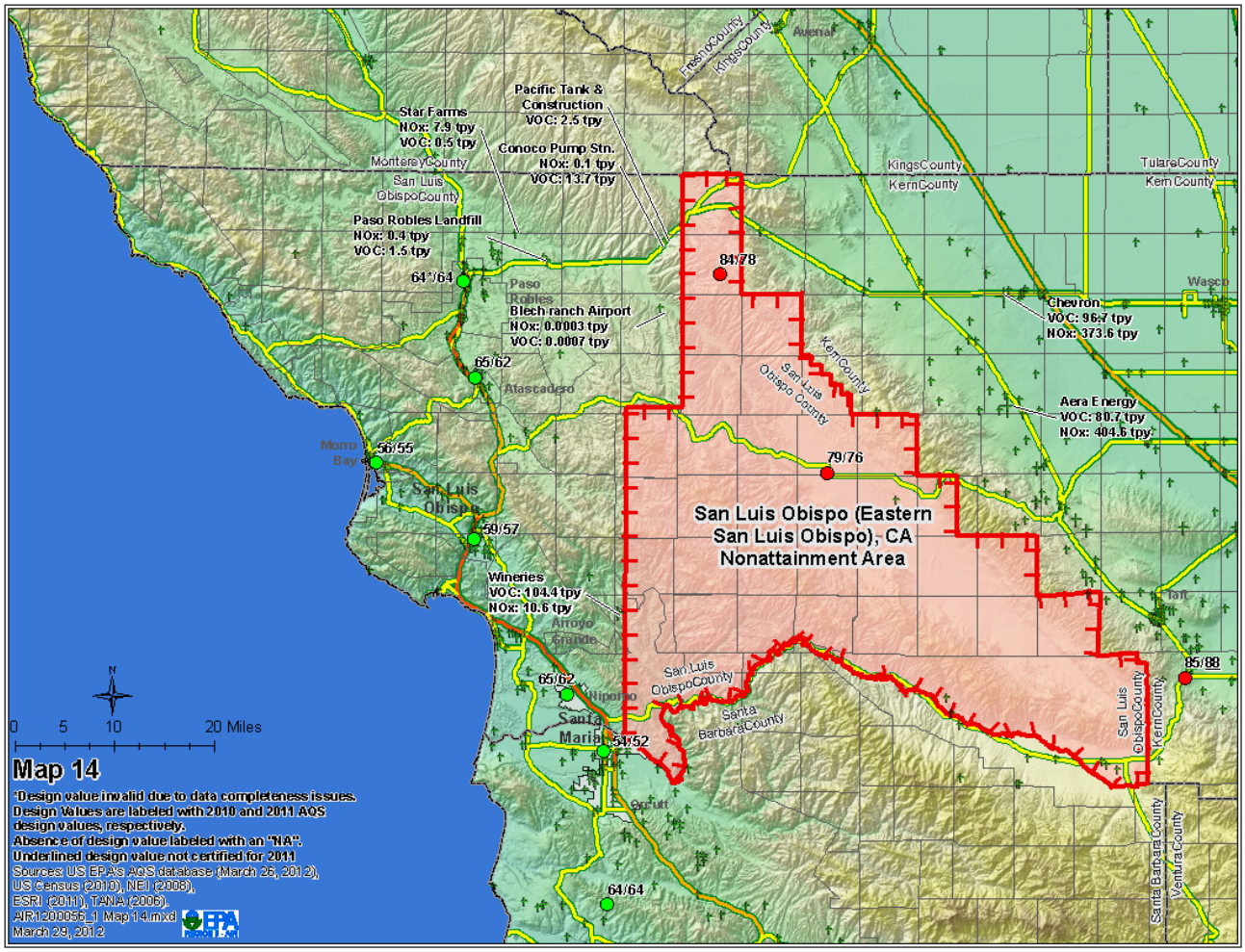
County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
San Luis Obispo, CA	Yes (partial)	78

Maps contained in Appendix 1 show the geographic distribution of monitors. Map 14 shows monitor locations for San Luis Obispo County. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designation) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists 2009-2011 DVs for San Luis Obispo County. 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.

The State of California recommended a partial county nonattainment designation for San Luis Obispo County. As shown on Map 14 in Appendix 1, the only violating monitors in San Luis Obispo County are in the eastern portion of the county, based on certified 2009-2011 data. All five monitors in the western portion of the county are attaining the 2008 ozone NAAQS and both monitors in the eastern portion of the county are violating.

A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.



From Appendix 1, Map 14: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for San Luis Obispo County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
San Luis Obispo, CA	Yes (partial)	7,463	8,460
	Areawide:	7,463	8,460

The eastern part of San Luis Obispo County has very few sources of emissions (see Map 14 of Appendix 1). Almost all stationary sources in the county are found at lower elevations and are located in the western part of the county, close to attaining monitors within the county and a substantial distance away from any violating monitors. In contrast, there are a large number of large stationary sources beyond the county lines to the east, on the other side of the coastal range that divides the coastal portion of San Luis Obispo County from the San Joaquin Valley.

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 NO_x 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 San Luis Obispo County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
San Luis Obispo, CA	Yes (partial)	269,637	0.08	21,761	+9%
	Areawide:	269,637	0.08	21,761	+9%

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)

Emissions associated with the population centers in San Luis Obispo County are not expected to cause violations at the higher elevation air quality monitors in the eastern part of San Luis Obispo County. There are relatively few population centers in San Luis Obispo County and they occur primarily on the western portion of the county, near the coast as well as along the major roadways (see Map 14a in Appendix 2). The largest population centers of San Luis Obispo, Atascadero, and Paso Robles are still quite small compared to population centers in neighboring Kern County in the San Joaquin Valley nonattainment area (for example, the Bakersfield-Delano Metro Area – see Map 13a in Appendix 2). The population density of the county is slightly lower than Kern County (approximately 1.3 times smaller) and the overall population of San Luis Obispo County is over 3 times smaller than Kern County. Compared to other nonattainment coastal counties like Ventura County or San Diego County, San Luis Obispo County has a very low population density: over 5 times lower than Ventura County and nearly 9 times lower than San Diego County.

Over 2000 - 2010, the population of San Luis Obispo County has grown at a rate of approximately 10%, comparable to Ventura County and San Diego County. The population growth rate of the neighboring Kern County over the same period was 27%. Population growth is associated with even greater growth in traffic and commuting patterns, which are themselves associated with emissions of ozone precursors (see next section).

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
San Luis Obispo, CA	Yes (partial)	3,043
	Areawide:	3,043

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

VMT in San Luis Obispo County is roughly 11 times lower than the VMT of San Diego County and 2.6 times lower than the VMT of Ventura County. Similarly, the VMT in San Luis Obispo County is 2.8 times lower than the VMT in Kern County within the adjacent San Joaquin Valley nonattainment area. Major roads are primarily located near the coast and travel between the northern and southern portions of the county (see Map 14 of Appendix 1). There are relatively few roads that link the eastern and western portions of the county, and these roads experience relatively light non-truck traffic. The greatest non-truck traffic occurs on relatively short stretches of roadway, linking San Luis Obispo to Santa Maria along the coastal route to the south, Morro Bay to the northwest, and Atascadero and Paso Robles to the north. These traffic patterns indicate that the western and eastern portions of the county are generally isolated from each other, with most of the traffic flowing generally in a north-south direction.

Factor 3: Meteorology (weather/transport patterns)

EPA evaluated available meteorological data to help determine how meteorological conditions, such as weather, transport patterns and stagnation conditions, would affect the fate and transport of precursor emissions contributing to ozone formation. EPA reviewed information provided by the State, including the State's 2009 recommendation for the ozone area boundaries, and the 2001 "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California." In addition, EPA simulated back trajectories for several days when exceedances of the eight hour ozone NAAQS were measured in 2010 in San Luis Obispo County. EPA also reviewed the wind frequency distribution of wind direction data based on an average of 30 years of National Weather Service information for the months of June, July, and August.

The state argues that in the absence of transport from outside the County, it is likely that exceedances would not occur at the monitoring sites in the eastern portion of San Luis Obispo County. The State recommends that, given that ozone exceedances are limited to the eastern portion of the County, and all other sites in the county meet the standard, that only the eastern portion of San Luis Obispo County should be designated as nonattainment. The State has presented the following information for the eastern

portion of San Luis Obispo County as a basis for the March 2009 recommendation for the area's boundaries:[1]

> "San Luis Obispo County is located in California's south central coast region and encompasses coastal, as well as inland areas. The design value[2] for the County is 0.084 ppm, measured at the Carrizo Plains School-9640 Carrizo site in the eastern part of the County. This site is located in a populated area and was originally sited to provide information on transport impacts from the San Joaquin Valley. The design value for a second inland, eastern County site, Red Hills, is also above the standard at a level of 0.088 ppm, but only two years of data are available. In contrast to Carrizo Plains, the Red Hills site is located in an unpopulated area. Design values for all other sites in San Luis Obispo County are below the level of the standard, as are design values for sites in counties located both to the north and to the south of San Luis Obispo County. Previous studies have shown that ozone and ozone precursor emissions from the San Joaquin Valley are transported west, impacting sites in eastern San Luis Obispo County, including Carrizo Plains and Red Hills. Ozone concentrations can also be impacted by transport south from the San Francisco Bay Area. In the absence of transport, it is likely that exceedances would not occur at these sites. Therefore, reducing the transport impact will be critical to attaining the federal standard. Given that exceedances are limited to the eastern portion of the County, and all other sites meet the standard, ARB recommends that only the eastern portion of San Luis Obispo County be designated as nonattainment."

The "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California"[3] (California Environmental Protection Agency, Air Resources Board, March 2001), includes a detailed analysis of the transport of ozone from the San Francisco Bay Area and the San Joaquin Valley to San Luis Obispo County. Although the analysis addresses the transport on days with exceedances of the state 1-hour ozone standard in 1998, the discussion of the transport mechanisms provided in the analysis is also applicable to the 2008 8-hour ozone NAAQS.

> "All 1996 through 1998 ozone exceedance days were first screened to determine which were violations of the State Ambient Air Quality Standard using the criteria for extreme concentrations. All the violation days were examined with the focus on analyzing examples of "overwhelming", "significant", and "inconsequential" ozone transport…
>
> …The major findings supporting the [ARB] staff's conclusion that the northern County was impacted by significant emissions from the SFBAAB [San Francisco Bay Area Air Basin] are listed below:
>
> · high ozone concentrations in the southern SFBAAB;
> · low ozone concentrations at the surface in the NCCAB [North Central Coast Air Basin];

[1] Recommended Area Designations for the 2008 Federal 8-Hour Ozone Standard Staff Report State of California Air Resources Board, Revised: March 3, 2009.
[2] This information is based on the design value for 2006-2008. The current design values are discussed in Factor 1, above.
[3] http://www.arb.ca.gov/regact/trans01/isor.pdf

· high ozone concentrations in the elevated portions of NCCAB at Pinnacles;
· surface and aloft northwest to north winds within the first few thousand feet;
· mid-afternoon SFBAAB emissions impact on Pinnacles;
· the progression of the time of the southern SFBAAB to the northern County peak ozone concentration;
· the Paso Robles early evening (1900 PST) ozone concentration peak occurring with increasing northerly winds; and
· light surface northerly winds at Atascadero.

In addition, the following findings suggest that the northern County was impacted by significant emissions from the SJVAB [San Joaquin Valley Air Basin]:

· high ozone concentrations in the SJVAB;
· offshore flow aloft throughout central California;
· State 1-hour ozone exceedances at Black Mountain; and
· deep vertical mixing over the County and southern NCCAB."[4]

The conclusion of ARB's staff was that northern San Luis Obispo County was impacted by emissions from the San Francisco Bay Area Air Basin and the San Joaquin Valley Air Basin. EPA is designating both the San Francisco Bay Area and San Joaquin Valley as their own nonattainment areas.

In addition to reviewing the State's documentation of transport of ozone to San Luis Obispo County, provided above, EPA simulated back trajectories for several days when exceedances of the 8-hour ozone NAAQS were measured in 2010 in San Luis Obispo County. The 8-hour ozone NAAQS was exceeded in San Luis Obispo County on 17 days in 2010. There were several exceedances measured at the Red Hills monitoring site (AQS number 06-079-8005) on July 30, August 24-25, September 1-4 and 24-28, and October 12-15, 2010. There was one exceedance measured at the Carrizo monitoring site (AQS number 06-079-8006) on July 24, 2010. HYSPLIT[5] back trajectories are presented below for the Red Hills monitoring site (AQS number 06-079-8005) for one day of each episode, specifically August 24, 2010, September 2, 2010, and October 13, 2010. HYSPLIT back trajectories are presented below for the Carrizo monitoring site (AQS number 06-079-8006) on July 24, 2010. Each set of back trajectories is consistent with the state's characterization of transport of ozone and ozone precursors from the San Joaquin Valley to San Luis Obispo County (see Figures 2 - 5, below).

AQS Number	Site Address	Latitude (N)	Longitude (W)
06-079-8005	3601 Gillis Canyon Road, San Luis Obispo CA	35.64366	-120.23134
06-079-8006	9640 Carrizo Highway, CA	35.35472	-120.04000

[4]p. F-15. California Environmental Protection Agency, Air Resources Board. "Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California", and p. F-21. "Technical Support for Assessments"http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm

[5] Hybrid Single-Particle Lagrangian Integrated Trajectory model, National Oceanic and Atmospheric Administration, http://ready.arl.noaa.gov/HYSPLIT.php

Site: Red Hills AQS 06-079-8005
Date: August 24, 2010

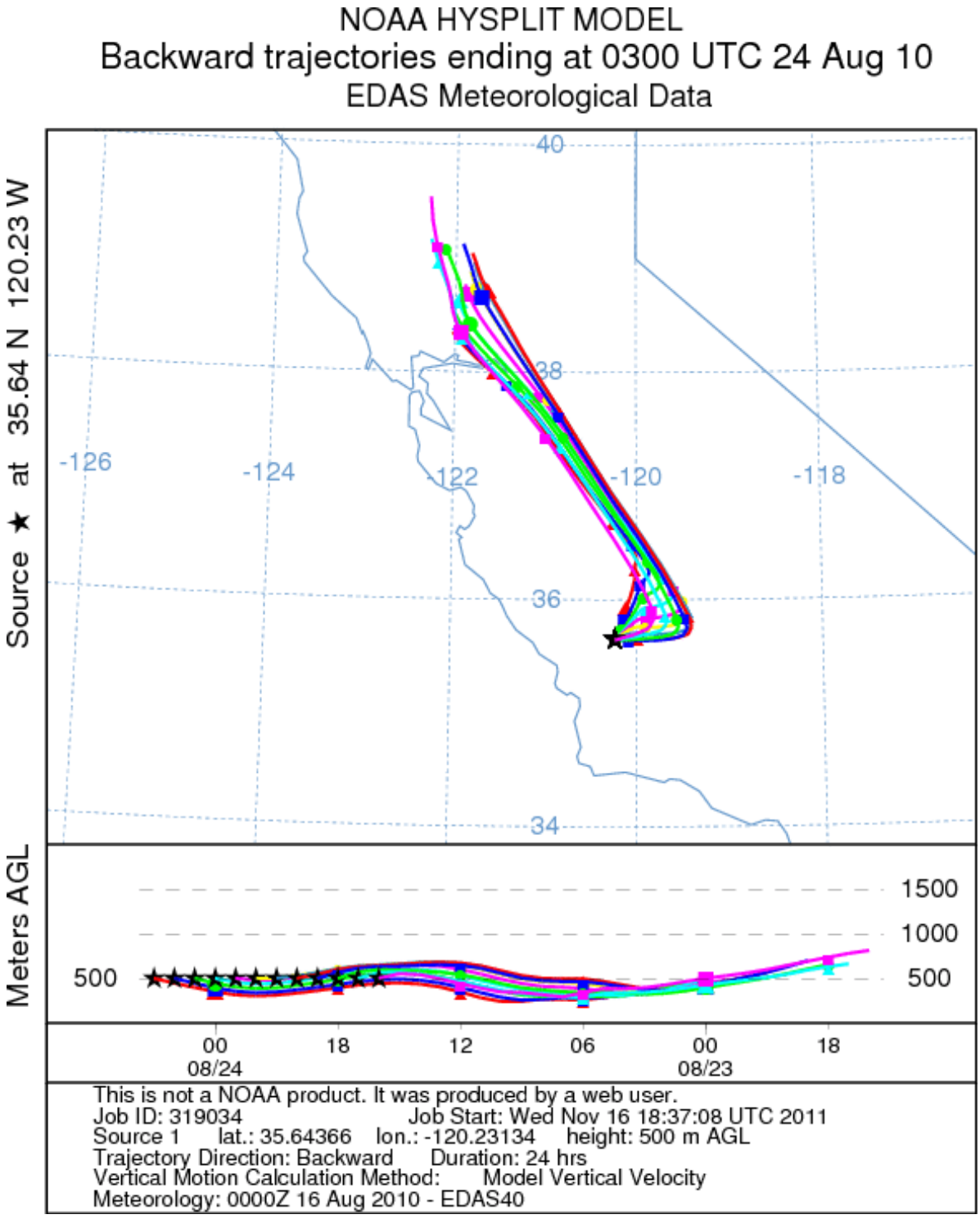


Figure 2

Site: Red Hills AQSS 06-079-8005
Date: September 2, 2010

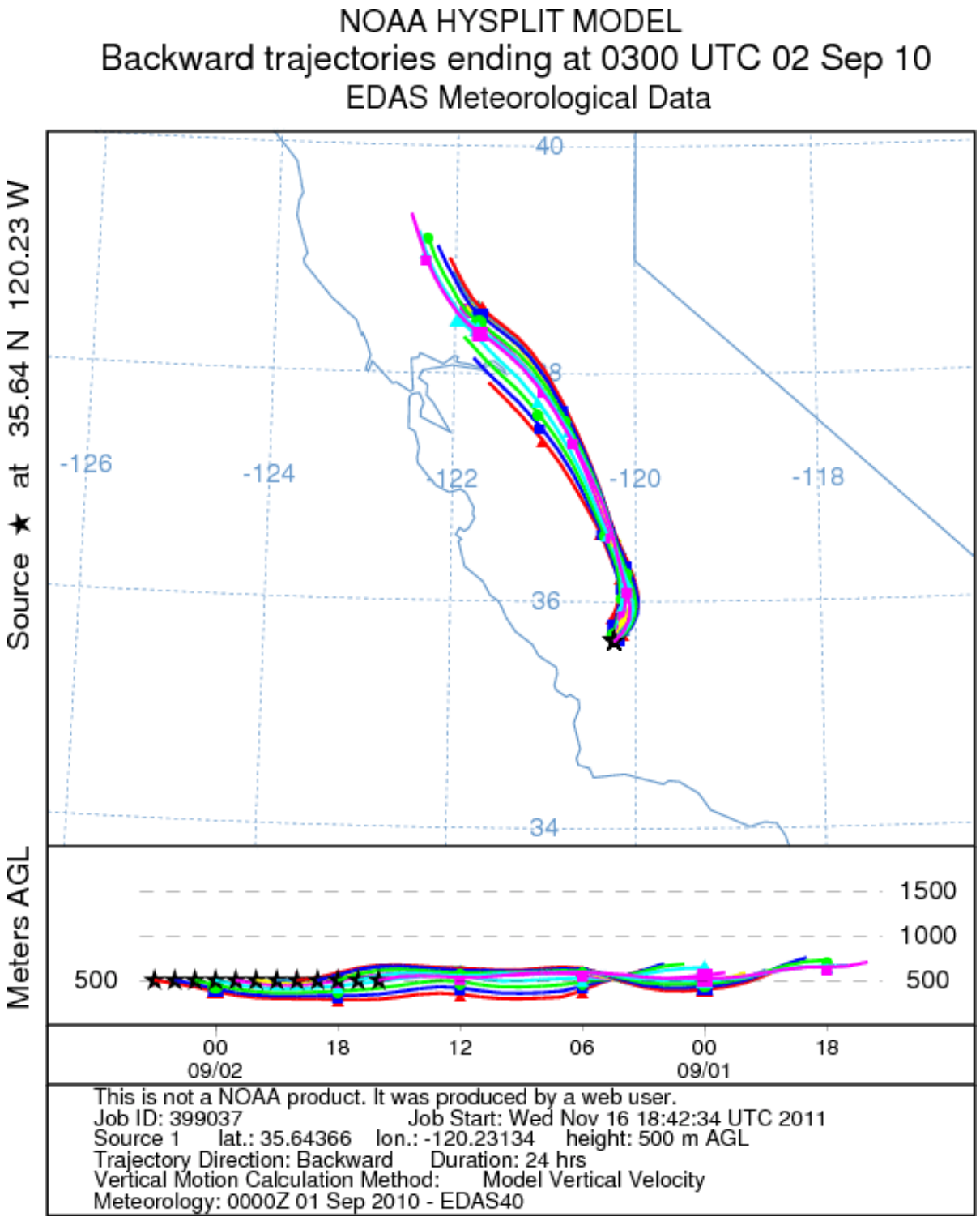


Figure 3

Site: Red Hills AQS 06-079-8005
Date: October 10, 2010

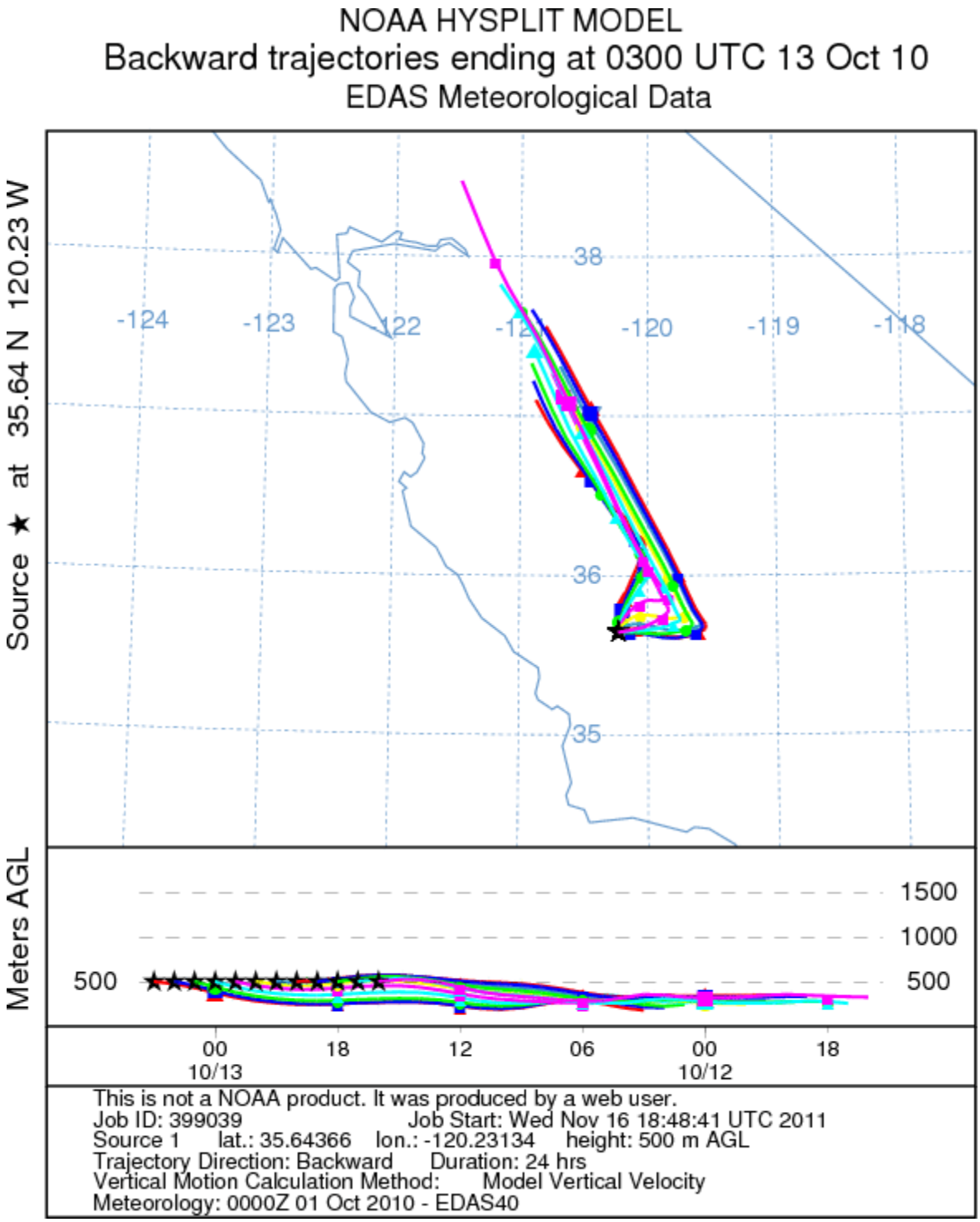


Figure 4

Site Carrizo: AQS 06-079-8006
Date: July 24, 2010

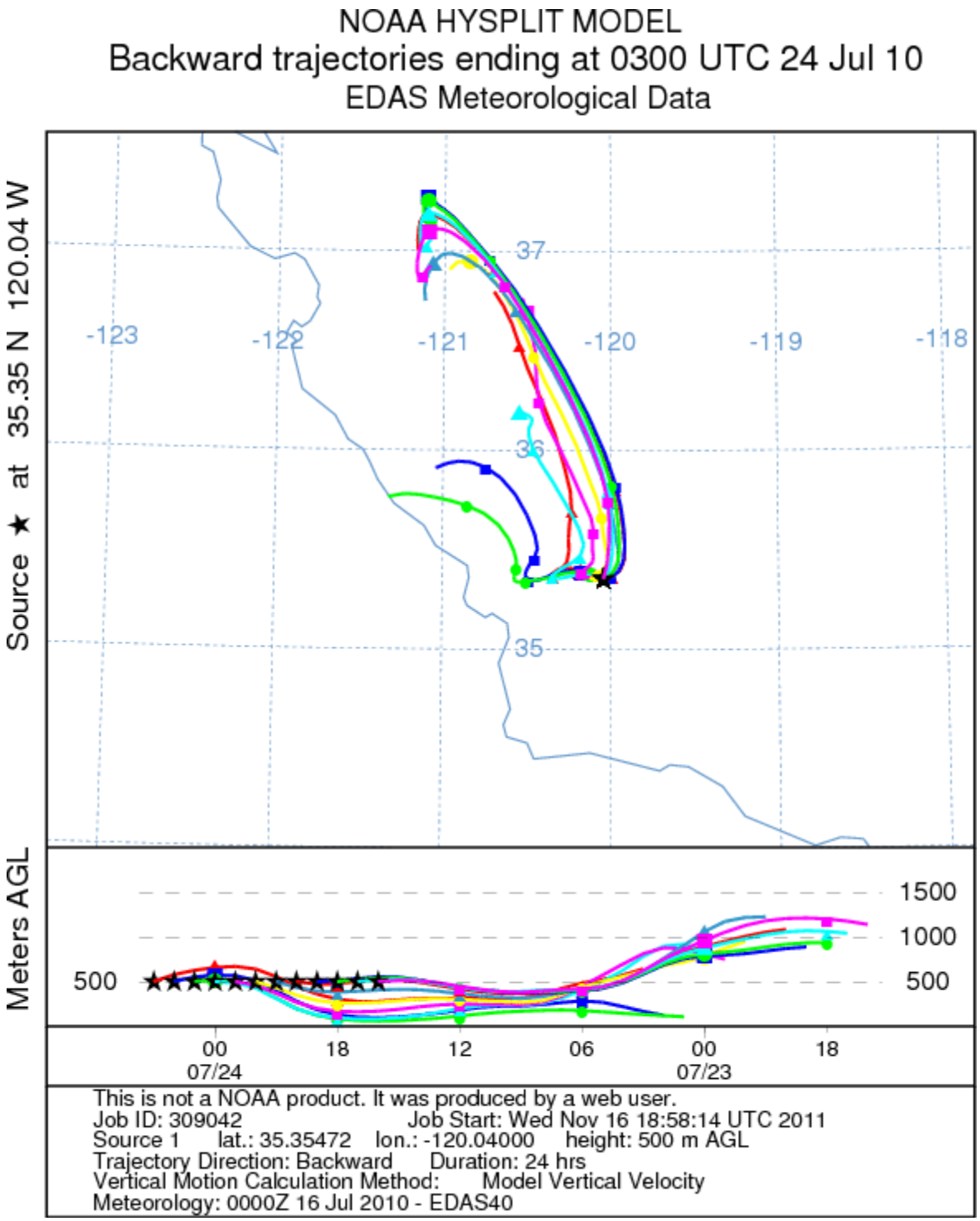


Figure 5

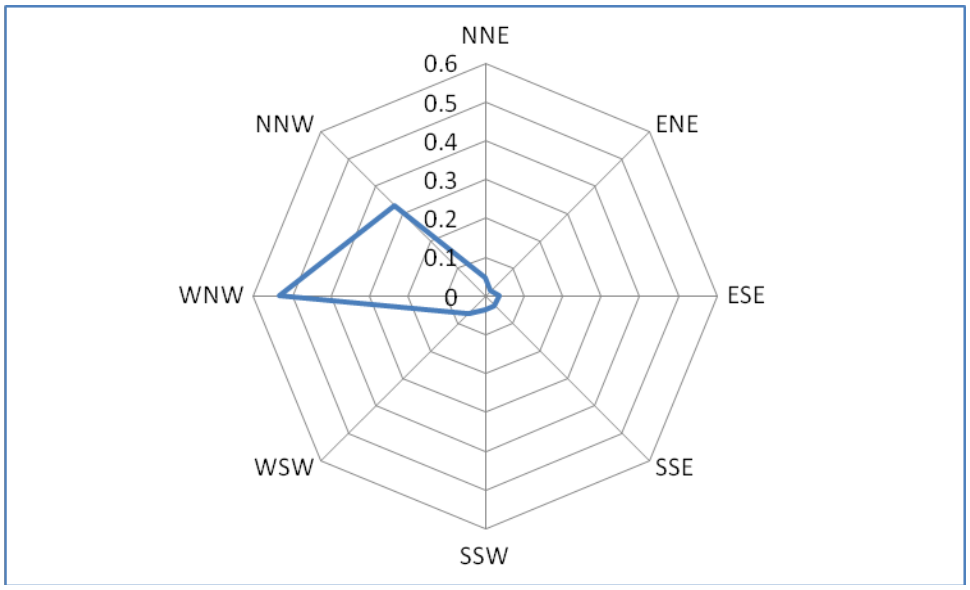


Figure 6: San Luis Obispo County Summer Wind Frequency Distribution

The wind frequency distribution of wind direction data in Figure 6, 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 northwesterly component. This differs from the distribution of wind direction for days when the measured ozone levels are elevated, when, as discussed above, there appears to be transport of ozone and ozone precursors from the San Joaquin Valley.

The analysis of ozone transport to San Luis Obispo County provided by the State, and EPA's back trajectory analysis of current exceedances of the 8-hour ozone NAAQS, indicate transport of ozone and ozone precursors to San Luis Obispo County from the San Joaquin Valley Air Basin. EPA is designating San Joaquin Valley as its own nonattainment area.

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.

San Luis Obispo County area is shown in Appendix 2, Map 14a. The County consists of three geographic regions:

1) The coastal plateau along the Pacific Ocean;
2) The upper Salinas River Valley in the northern section of the county; and
3) The east county plain which consists mostly of the Carrizo Plain, a large drainage basin. The Carrizo Plain borders the Temblor Mountain range to the east, which lies in a northwest-southeast direction along the western side of the San Joaquin Valley Air Basin. The only major break in the range occurs at the Cholame Pass (elevation 1,155 feet) in the northern end of the mountain range.

The San Luis Obispo nonattainment area represents only the eastern portion of San Luis Obispo County.

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 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 state's recommended boundary is defined by the county line on the north, east, and south. The north and east county boundary also forms the California air basin boundary between the South Central Coast Air Basin and the San Joaquin Valley Air Basin[6]. The county line also follows the same boundary for the transportation planning agency, the San Luis Obispo Council of Governments (SLOCOG). SLOCOG has jurisdiction for transportation planning within the entire county. The local air planning agency, the San Luis Obispo County APCD, also uses the county line to define the boundary of its jurisdiction.

To the west, the state recommends drawing a line using specific latitudes and longitudes in a generally north and south orientation through the middle of the county (see Map 14 in Appendix 1). This line does not appear to be based on jurisdictional considerations. However, the boundary for the recommended nonattainment area to the north, south and east is based upon recognized jurisdictions and EPA is using those boundaries for designating the east San Luis Obispo County nonattainment area for the 2008 ozone NAAQS.

Conclusion

Based on the assessment of factors described above, EPA is designating the eastern part of San Luis Obispo County nonattainment, as the San Luis Obispo (Eastern San Luis Obispo), CA nonattainment area, because the area violates the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that monitors in the eastern part of San Luis Obispo County violate the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, Factor 1 supports designating San Luis Obispo County (Eastern San Luis Obispo) as nonattainment.

Emissions and emission-related data (Factor 2) support the state's recommended boundary, encompassing only the mountainous eastern portion of San Luis Obispo County, because this area is likely affected by emissions from sources located in San Joaquin Valley, not in the county itself. EPA is designating San Joaquin Valley as a separate nonattainment area (see the technical analysis for San Joaquin Valley).

Under Factor 3 (meteorology and weather or transport patterns), which may be influenced by geography and topography (Factor 4), the analysis of ozone transport to San Luis Obispo County provided by the

[6] http://www.arb.ca.gov/ei/maps/statemap/abmap.htm

state, and EPA's back trajectory analysis of current exceedances of the 8-hour ozone NAAQS, indicate transport of ozone and ozone precursors to San Luis Obispo County from the San Joaquin Valley Air Basin. EPA concurs with the state that, in the absence of this transport from outside the county, it is likely that exceedances would not occur at the monitoring sites in the eastern portion of San Luis Obispo County. Factors 3 and 4 support the state's recommendation that the eastern portion of San Luis Obispo County be designated nonattainment. As previously noted, EPA is designating San Joaquin Valley as a separate nonattainment area (see the technical analysis for San Joaquin Valley).

In considering jurisdictional boundaries (Factor 5), it is not clear why the state has chosen to draw the specific north-south line it is using as a western boundary to the nonattainment area. This line runs according to specific latitudes and longitudes provided by the state, but the state has not explained how it derived the coordinates for drawing the line. However, the roughly triangular area recommended by the state is fairly large in size, about half of the county. It also generally includes the higher elevation portions of the county, consistent with the observed ozone NAAQS violations at monitors in the more mountainous part of the county. For an area receiving transport from San Joaquin Valley, it is appropriate to make a partial county nonattainment designation for San Luis Obispo County, and EPA concludes that the western boundary proposed by the state is acceptable.

EPA's review of air quality data (Factor 1), emissions and emission related data (Factor 2), as well as meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5), supports the nonattainment boundaries recommended by the state. EPA concurs with the state's boundary recommendation and is designating San Luis Obispo (Eastern San Luis Obispo), CA nonattainment for the 2008 ozone NAAQS.

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

Technical Analysis for Tehama County (Tuscan Buttes)

Figure 1 is a map of Tehama County, CA. The map provides other relevant information including the locations and design values of air quality monitors, county names and boundaries and indicates EPA's partial county nonattainment designation. See Map 15 in Appendix 1 (and inserted under Factor 1, below) for a detailed map of the partial county boundary that EPA is designating nonattainment.

Tehama County (Tuscan Buttes), CA

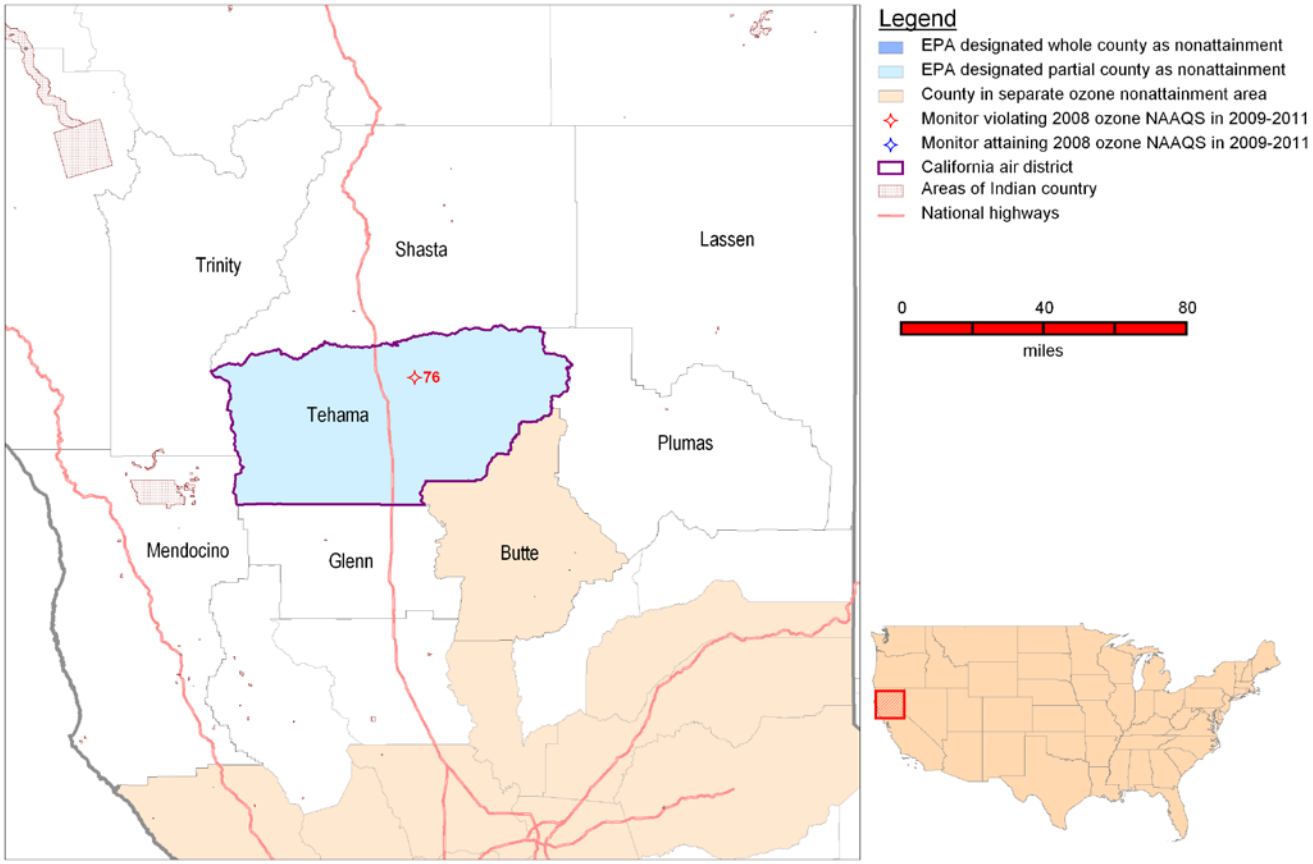


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) based on data from the 2009-2011 period (i.e., the 2011 design value, or DV), which are the most recent years with fully-certified air quality data. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

In March 2009, California recommended that a new partial-county area be designated as "nonattainment" for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the original recommendation in October 2011 based on air quality data from 2008-2010 and preliminary 2009-2011 data, and indicating to EPA that it intended to early-certify data for 2011 so that it could be used for the final designations, but did not revise its recommendation for this area. 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 Tehama County (partial) (identified in Table 1 below) nonattainment for the 2008 ozone NAAQS, as the Tuscan Buttes nonattainment area.

Table 1. State's or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Tuscan Buttes.

Tuscan Buttes, CA	State or Tribe-Recommended Nonattainment Counties or Areas in Indian country	EPA's Nonattainment Counties or Areas in Indian country
Tehama County	Tehama County (p)	Tehama County (p)
No areas of Indian country in this nonattainment area		

p = partial county

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in Tehama County, based on data from the most recent three-year period for which we had timely submitted certified air quality data. The state of California submitted certified air quality data for 2011 before February 29, 2012 for this area; thus, for purposes of the final designations, we are considering air quality from the 2009-2011 period (i.e., the 2011 DV) for this area. 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 Tuscan Buttes nonattainment area comprises the portions of Tehama County above 1,800 feet (see Map 15a in Appendix 2). Certified, quality assured data are available in EPA's Air Quality System (AQS) for all areas through calendar year 2010. California's ozone season encompasses the entire year, however, the ozone monitor in the Tuscan Buttes nonattainment area has been approved to operate on a seasonal schedule per 40 CFR part 58, Appendix D, section 4.1(i). Preliminary, non-certified data from calendar year 2011 is available in AQS for most areas. States are required to certify and quality assure data by May 1st of the following year. California Air Resources Board (ARB) certified 2011 data by February 29, 2012 for Tehama County. EPA's designation for this area is therefore based on 2009-2011 data. As shown in Table 2, air quality data from 2009-2011 data indicate that Tehama County is violating the 2008 ozone NAAQS. Tehama County's 2010 DV was 80 ppb. Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within Tehama County are shown in Appendix 1, Map 15 (also inserted below).

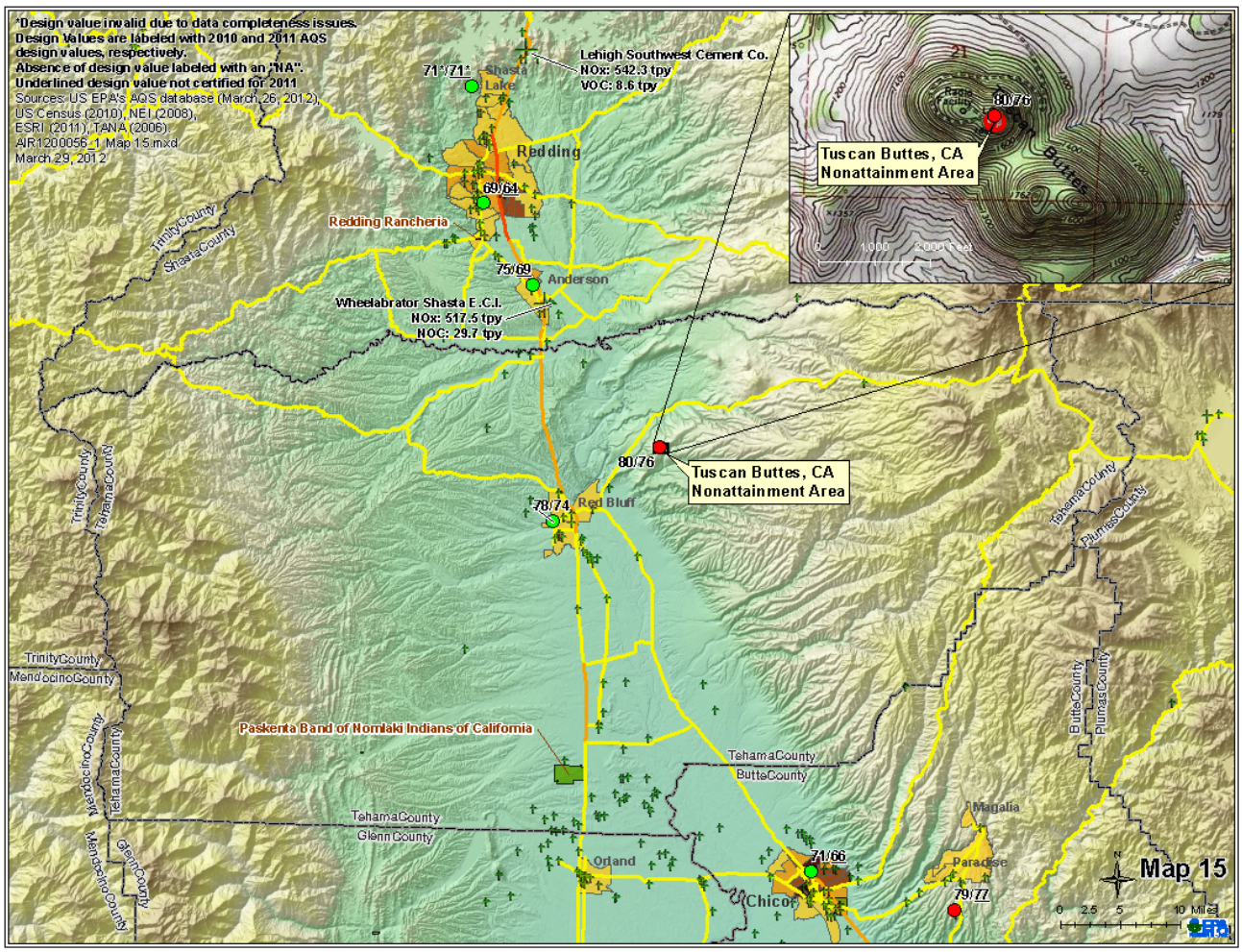
Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2009-2011 Design Value (ppb)
Tehama, CA	Yes (partial)	76

Maps contained in Appendix 1 show the geographic distribution of monitors. Map 15 shows monitor locations for Tehama County. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in AQS. These were the most recent data available at the time we notified the State of our intended designations) and the 2009-2011 DV (which has been certified and which we are relying on for our final designation decisions for this area). Absence of a DV is symbolized with an "x".

Appendix 3 lists 2009-2011 DVs for Tehama County. 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.

The monitor in the Tuscan Buttes area of Tehama County shows a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, this area is included in the Tuscan Buttes nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.



From Appendix 1, Map 15: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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). Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Tehama County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Tehama, CA	Yes (partial)	6,027	3,403
	Areawide:	6,027	3,403

Stationary emission sources in Tehama County are all small (less than 100 tons per day of VOCs or NO_x) and are mostly located around Red Bluff, in the central part of the county, and in the southern part of the county, near its borders with Glenn County and Butte County (see Map 15 in Appendix 1). These stationary sources are located at lower elevations and to the south and southwest of the violating monitor. Emissions of NO_x and VOCs in Tehama County are approximately 1.4 times and 2.2 times lower, respectively, than emissions in Butte County, the neighboring nonattainment county to the southeast. Two large sources of NO_x emissions (greater than 500 tons per year) are located north of Tehama County, in Shasta County, near Anderson, California, and Shasta Lake, California. The large stationary NO_x source near Anderson is approximately 5 miles from the Shasta-Tehama County line. The large stationary NO_x source near Shasta Lake is approximately 25 miles from the Shasta-Tehama County line.

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 NO_x 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 Tehama County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Tehama, CA	Yes (partial)	63,463	0.02	7,328	+13%
	Areawide:	63,463	0.02	7,328	+13%

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 15 and 15a in Appendices 1 and 2, respectively, show population in this area. The main population center in Tehama County is in the Red Bluff Micropolitan Area (see Map 15a in Appendix 2), located to the southwest of the Tuscan Buttes. The 2010 population of Tehama County is quite low, as is the 2010 population density. Although Butte County, to the southeast of Tehama County, is also sparsely populated, with a population of 220,000 and a population density of 0.12, Tehama County is still nearly 3.5 times smaller than Butte County in terms of population, with a population density that is over 6 times lower than Butte County. Although population growth in Tehama County over 2000 - 2010 was larger than the growth observed in Butte County (8%), because of the substantially lower population in Tehama County the absolute change in population in Butte County was still over two times greater than the absolute increase in Tehama County.

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Tehama, CA	Yes (partial)	449
	Areawide:	449

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

Map 15 in Appendix 1 shows relatively low non-truck traffic volume between Tehama County and Butte County, its neighboring nonattainment county. The highest traffic density appears to occur between Red Bluff and Anderson or Redding to the north in Shasta County, which is in attainment for the 2008 ozone NAAQS. Very few major roads run in the east-west direction across Tehama County.

Factor 3: Meteorology (weather/transport patterns)

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

As discussed under Factor 4, Tehama County is at the northern end of California's Central Valley, the northern half of which is also called the Sacramento Valley. The Valley has hot, dry summers, including some stagnant periods, and cool, wet winters. The location at the end of the valley may enhance stagnation under some conditions. These could be conducive to ozone formation in the summer, but there do not appear to be sufficient local emissions to create high ozone concentrations.

Previous assessments of pollution transport found that the broader Sacramento area (which is roughly equivalent to the non-mountainous portions of the Sacramento Metropolitan ozone nonattainment area – see Map 10 in Appendix 1) can have an overwhelming impact on counties of the Upper Sacramento Valley, including Tehama County.[1] EPA is designating the Sacramento Metro area as its own nonattainment area.

The Tuscan Buttes ozone monitor is at a rather unique high-elevation location. It is located at over 1,800 feet (500 meters) above mean sea level (MSL) at the summit of Tuscan Buttes, which rises abruptly from the 1,000 feet (300 meters) elevation of the surrounding foothills. Meteorological conditions at the monitor are thus likely different than in the main part of Tehama County. As compared to the wide foothills around the perimeter of the county (to the east, north, and west – see Map 15 in

[1] "Second Triennial Review of the Assessment of the Impacts of Transported Pollutants on Ozone Concentrations in California (Revised)", California Environmental Protection Agency, Air Resources Board, November 1996, p.61. http://www.arb.ca.gov/aqd/transport/assessments/assessments.htm

Appendix 1), the slopes of Tuscan Buttes are too short to develop substantial upslope flow, so the ozone concentrations at the top are likely not representative of the rest of the county. In addition, the Tuscan Buttes monitor concentrations may not represent counties immediately to the south, such as Butte County. It likely represents longer range transport aloft from the Sacramento metropolitan area.[2] As previously noted, EPA is designating the Sacramento Metro area as its own nonattainment area.

A generally north-south flow pattern is seen in the 30-year average of National Weather Service summer wind direction frequencies computed by EPA, as shown in the "radar"-style wind rose diagram below (see Figure 2). This is consistent with the north-south orientation of the Central Valley, and with upslope and downslope flow on the hills to the north, and with ozone transport from areas to the south.

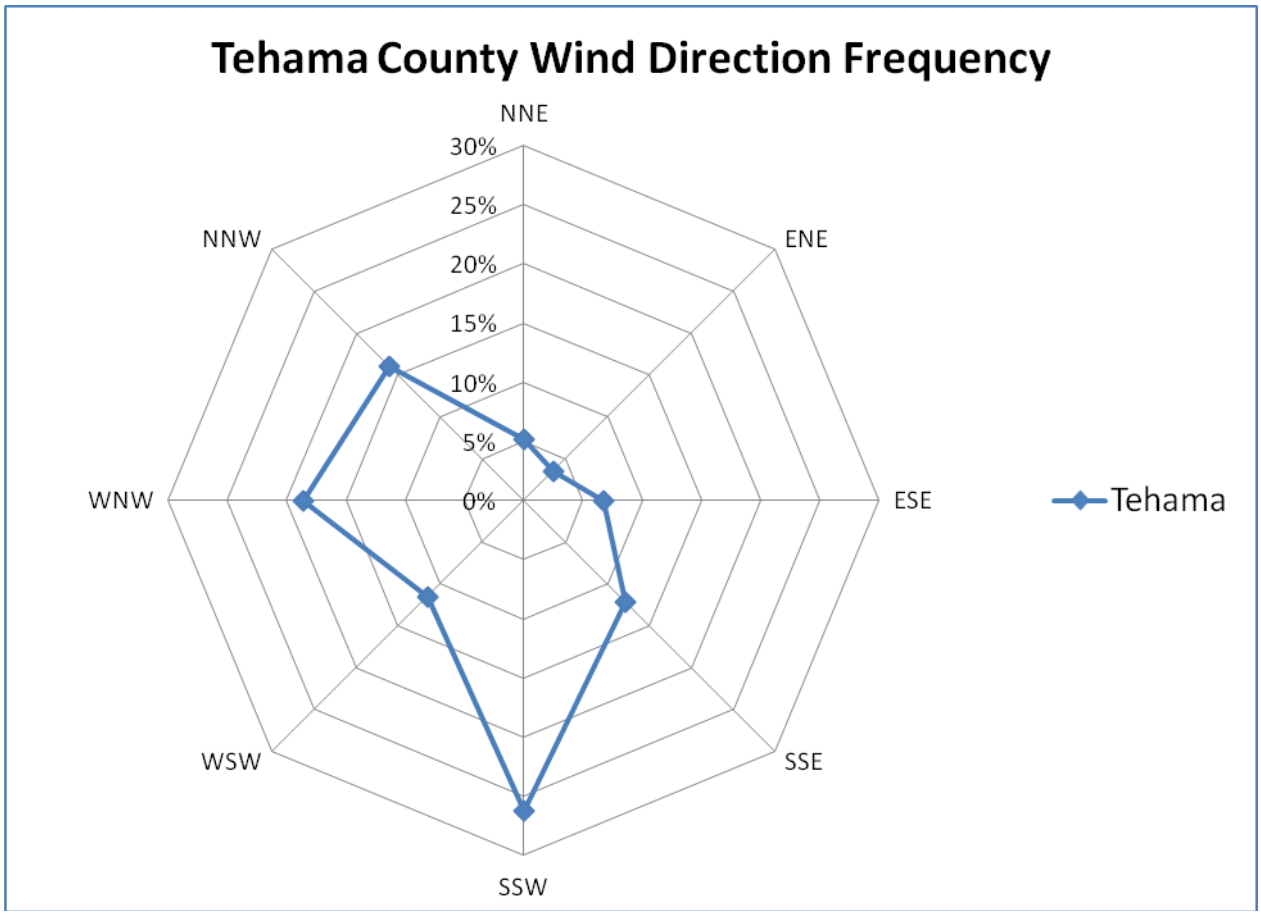


Figure 2

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.

Tehama County is at the northern end of the large, flat, Central Valley of California, the northern half of which is also called the Sacramento Valley. The foothills of the Coast Ranges to the west and the Sierra Nevada mountains to the east converge to close the northern end of the valley, just north of the city of Red Bluff. These foothills and mountain ranges tend to limit flow in all direction except the south, where the Central Valley continues.

[2] *ibid.* p.62

Red Bluff has an elevation of 299 feet (91 meters) above MSL; starting at some 5 miles (8 kilometers) to the northeast, the foothills start to rise. They rise gradually to 1,000 feet (300 meters) above MSL after 8 kilometers, and then abruptly the Tuscan Buttes rise to over 1,800 feet (500 meters) above MSL over just a half-kilometer distance. Elevation drops as quickly in all directions from the summits of this pair of tall, isolated hills, except for a small ridge to the northeast.

The ozone monitor is at the top of the taller of the two hills, a rather unique location within Tehama County. The uniqueness of this high elevation location means the monitored values are unlikely to be representative of the rest of the county, though they could represent transport aloft from areas farther south.

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 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 boundary the state recommended as nonattainment for Tehama County (Tuscan Buttes) is not associated with a jurisdictional boundary. The boundary relates to consideration of the other four factors described above, especially the unique location of the monitor at the high-elevation summit of the Tuscan Buttes and the topographical implications on meteorology and likely source impacts. The Tuscan Buttes are in Tehama County, in the northern Sacramento Valley. This county comprises the Red Bluff micropolitan statistical area. Red Bluff is not part of any larger Combined Statistical Area (CSA).

Conclusion

Based on the assessment of factors described above, EPA is designating parts of Tehama County (above 1,800 feet) nonattainment, as the Tuscan Buttes, CA nonattainment area, because the area violates the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) show that the monitor in the Tuscan Buttes area of Tehama County shows a violation of the 2008 8-hour ozone standard based on 2009-2011 data. Therefore, Factor 1 supports designating Tuscan Buttes as nonattainment.

Although there are stationary and mobile sources of emissions as well as a discrete population center in Tehama County, emissions and emission-related data (Factor 2) support the state's recommended boundary for the Tuscan Buttes nonattainment area. EPA expects that this area is predominantly affected by transport from the Sacramento Metro area (see Factor 3), rather than emissions from within Tehama County or adjacent counties. EPA is designating Sacramento Metro as a separate nonattainment area.

Meteorology and weather or transport patterns (Factor 3) and geography and topography (Factor 4) suggest that a mountaintop nonattainment area is appropriate considering the violating monitor atop Tuscan Buttes. The ozone concentrations measured at the Tuscan Buttes monitor are likely influenced by long-range transport from upwind areas, especially the Sacramento Metro nonattainment area. EPA is designating Sacramento Metro and Chico (Butte County) as separate nonattainment areas.

In considering jurisdictional boundaries (Factor 5), EPA notes that the boundary the state recommended as nonattainment for Tehama County (Tuscan Buttes) is not associated with a jurisdictional boundary. The unique location of the monitor at the high-elevation summit of the Tuscan Buttes suggests that the state's recommended nonattainment area boundary is appropriate. EPA used a similar approach in making designations for the 1997 8-hour ozone NAAQS, for example, designating Sutter Buttes in Sutter County in 2004 as an area that was not attaining.

Based on the five factor analysis and information currently available, EPA is designating portions of Tehama County, as identified in Table 1, as the Tuscan Buttes, CA nonattainment area.

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

Technical Analysis for Ventura County

Figure 1 is a map of the Ventura County, 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 boundary of the existing area that is designated nonattainment for the 1997 ozone NAAQS.

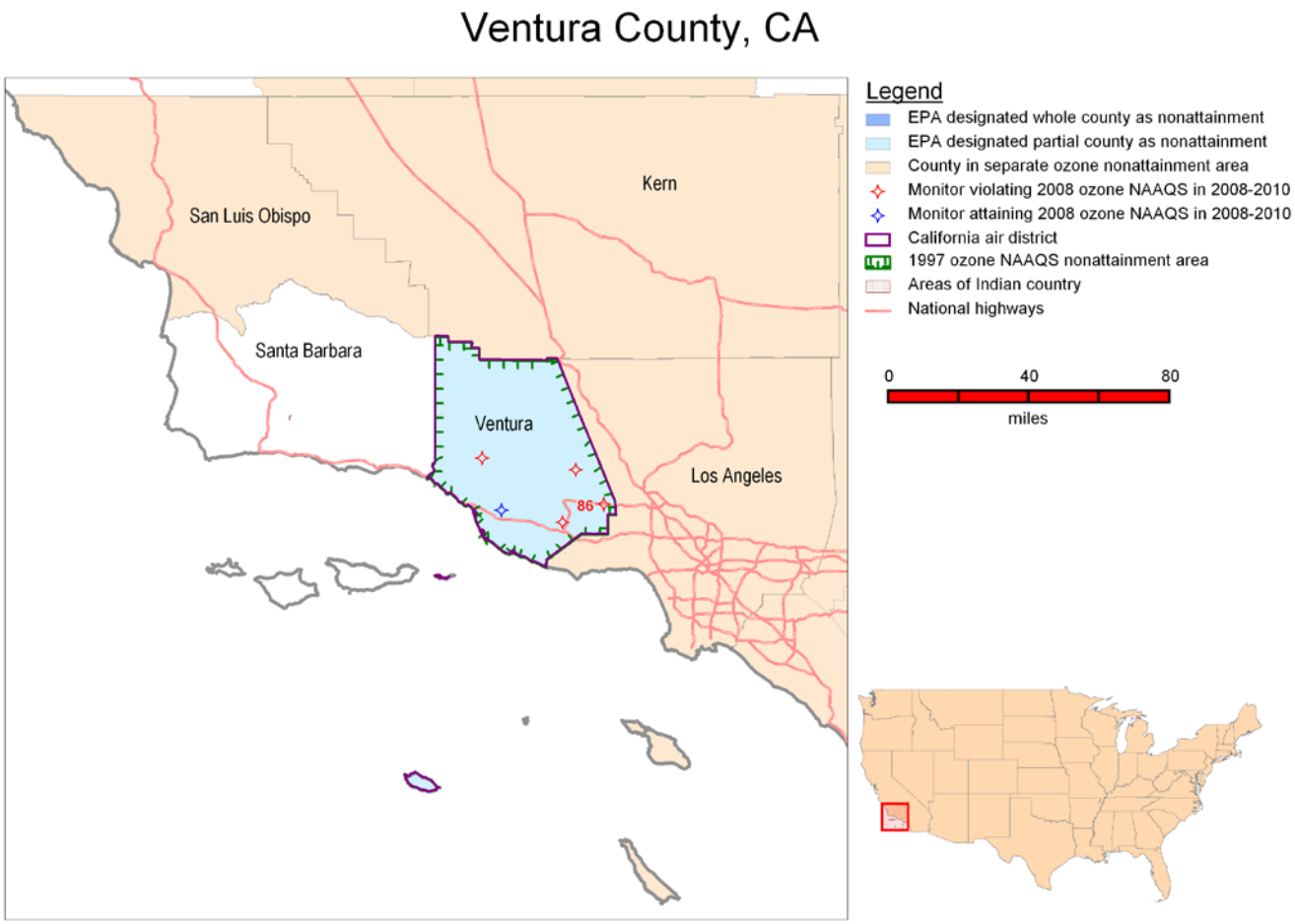


Figure 1

Note: The map shown in Figure 1 provides 8-hour ozone design values in parts per billion (ppb) 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. For each particular area, Factor 1 and Appendix 3 describe the air quality data relevant for our nonattainment decisions.

For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the continental portion of Ventura County.

In March 2009, California recommended that Ventura County be designated as nonattainment for the 2008 ozone NAAQS based on air quality data from 2006-2008 (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 the 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 Ventura County. These 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 the continental portion of Ventura County in California (identified in Table 1 below) as the Ventura County nonattainment area for the 2008 ozone NAAQS.

Table 1. State's or Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Counties or Areas of Indian country for Ventura County.

Ventura County	State or Tribe-Recommended Nonattainment Counties or Areas of Indian country	EPA's Nonattainment Counties or Areas of Indian country
Ventura County, CA	Ventura County (p) (excludes Anacapa and San Nicolas islands)	Ventura County (p)
No areas of Indian country in this nonattainment area		

p = partial

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in Ventura County, based on data from 2008-2010 (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 Ventura County nonattainment area comprises the continental portion of Ventura County (see Map 16a in Appendix 2). The 2010 DV for the ozone NAAQS for Ventura County is shown in Table 2.

Table 2. Air Quality Data.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Ventura, CA	Yes (partial)	86

Ozone monitors relevant for comparison to the NAAQS and information from additional data sources within Ventura County are shown in Appendix 1, Map 16. 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 16 in Appendix 1 includes preliminary 2011 DVs for the existing Ventura County 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 Ventura County. 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 16: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Monitors in the continental portion of Ventura County show a violation of the 2008 8-hour ozone standard based on 2008-2010 data. Therefore, this area is included in the Ventura County 2008 ozone NAAQS nonattainment area. There are no violating monitors on the islands of Ventura County or in Santa Barbara County, based on certified 2011 data (see discussion in this Technical Support Document, State of California Summary, and monitor values in Appendix 3), to the west of the mainland portion of the county. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated based on the weight of evidence of the five factors to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (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 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) Emissions in a nearby area indicate the potential for the area to contribute to observed violations. Table 3 shows emissions of NO_x and VOC (given in tons per year) for Ventura County.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment?	NO_x (tpy)	VOC (tpy)
Ventura, CA	Yes (partial)	15,608	16,136
	Areawide:	15,608	16,136

Point source emissions of ozone precursors are generally located in the southern part of Ventura County, near population centers such as Ventura, Oxnard, Thousand Oaks, and Simi Valley, and along major roadways (see Map 16 of Appendix 1 and Map 16a of Appendix 2). NO_x emissions from Ventura County are over 14 times lower than NO_x emissions from neighboring Los Angeles County to the south and east, and VOC emissions are over 7 times lower than VOC emissions from Los Angeles County. EPA is designating neighboring Los Angeles and Kern Counties as nonattainment as well. Santa Barbara County, located to the west of Ventura County, shows attainment with the 2008 ozone NAAQS using certified 2011 data, and has emissions of ozone precursors that are over 1.3 times lower than emissions from Ventura County.

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 NO_x 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 Ventura County.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Ventura, CA	Yes (partial)	823,318	0.44	66,904	+9%
	Areawide:	823,318	0.44	66,904	+9%

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)

The population of Ventura County is nearly double Santa Barbara County, but smaller than other counties in the Los Angeles-South Coast Air Basin nonattainment area. The population density of Ventura County is nearly three times higher than Santa Barbara County. Los Angeles and Orange counties are more densely populated than Ventura County, while compared to Ventura County, Riverside and San Bernardino counties are more sparsely populated (see technical analysis for Los Angeles-South Coast Air Basin). Similar to the location of point sources, the population of Ventura County is centered mostly in the southern portion of the county, around Oxnard, Thousand Oaks, and Simi Valley, with additional population centers north of Oxnard, in Ventura and Mira Monte (see Maps 16 and 16a in Appendices 1 and 2, respectively). Over 2000-2010, the population of Ventura County has grown by 9%, which is a higher rate of growth compared to Los Angeles and Orange counties, but lower than growth rates observed in Riverside and San Bernardino counties. Population growth is associated with even greater growth in traffic and commuting patterns, which are themselves associated with emissions of ozone precursors (see next section).

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 indicates the presence of motor vehicle emissions that may contribute to ozone formation and 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 for Ventura County.

Table 5. Traffic (VMT) data.

County	State Recommended Nonattainment?	2008 VMT* (million miles)
Ventura, CA	Yes (partial)	7,795
	Areawide:	7,795

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

In Ventura County, 2008 VMT is nearly double the VMT in Santa Barbara County, but is relatively low compared to counties in the Los Angeles-South Coast Air Basin, where counties range from over 20,000 to nearly 80,000 VMT in 2008. Non-truck traffic is highest between Oxnard and Los Angeles County to the southeast, and in the Simi Valley area in the southeast portion of Ventura County, near the Los Angeles County border.

Factor 3: Meteorology (weather/transport patterns)

EPA evaluated available meteorological data to help determine how meteorological conditions, such as weather, transport patterns and stagnation conditions, would affect the fate and transport of precursor emissions contributing to ozone formation. EPA reviewed the discussion of ozone formation in the "Final Ventura County 2007 Air Quality Management Plan," as well as the wind frequency distribution of wind direction data.

The "Final Ventura County 2007 Air Quality Management Plan," by Ventura County Air Pollution Control District (APCD), discusses the meteorological conditions that would affect the fate and transport of precursor emissions contributing to ozone formation. [1] This information is presented below:

> "In Ventura County, ozone generally reaches peak levels by mid-afternoon and, along with ozone precursors, is often blown inland by the prevailing winds. Thus, inland areas such as Simi Valley[2], Thousand Oaks, Ojai, Fillmore, and Piru often have higher ozone levels and the most days over the federal and state ozone standards than the county's coastal areas. The smoggiest days tend to occur from May through October (smog season) when high temperatures and stable atmospheric conditions produce conditions conducive to ozone formation and accumulation."

The modeling protocol also discusses how meteorological conditions would affect the fate and transport of precursor emissions contributing to ozone formation. This discussion provides a rationale for considering Ventura and Los Angeles-South Coast as separate air basins.

> "[…] the political boundary between Los Angeles and Ventura Counties is also a region of convergent air flow. Therefore, it was appropriate to represent Ventura County as a subregion separate from Los Angeles County."[3]

In addition, EPA reviewed the wind frequency distribution of wind direction data in Figure 2 below. The figure 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 west-southwesterly component. This information is consistent with the information provided in the "Final Ventura County 2007 Air Quality Management Plan."

[1] Ventura County 2007 Air Quality Management Plan, May 13, 2008. Ventura County Air Pollution Control District. http://www.vcapcd.org/pubs/Planning/AQMP/VC07_AQMP_Final_w_Appendices.pdf
[2] P. 6, "Final Ventura County 2007 Air Quality Management Plan," May 13, 2008.
[3] D-4, "Final Ventura County 2007 Air Quality Management Plan," May 13, 2008.

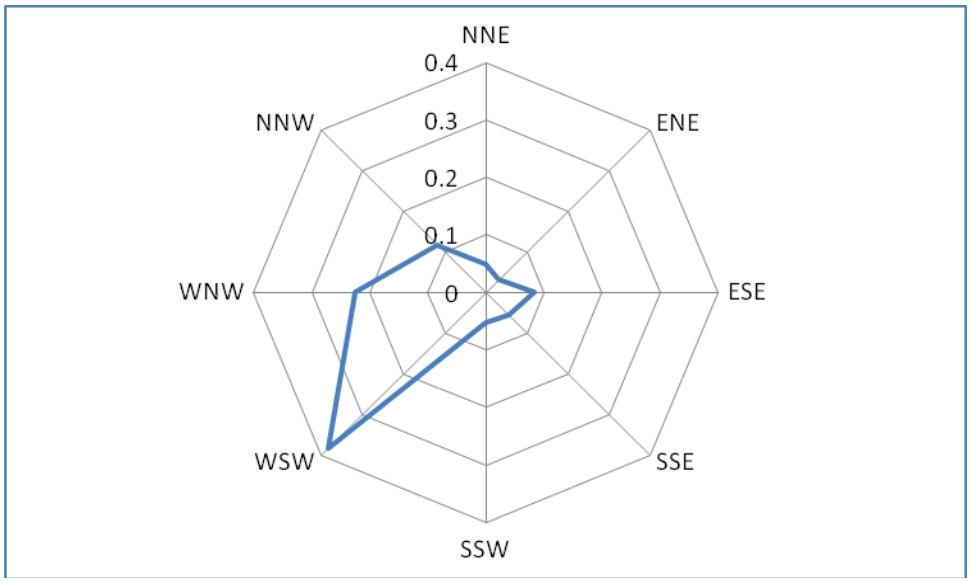


Figure 2: Ventura County - Summer Wind Frequency Distribution

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 Ventura County area is shown in Appendix 1, Map 16. The Coastal Plain and Valley is bounded by the Pacific Ocean on the west and south, the Santa Monica-Santa Susana Mountains on the east, and the Western Transverse Ranges on the north. The Santa Clara River Valley extends for approximately 45 miles (72 kilometers) from the mouth of the Santa Clara River to east of Castaic Junction in Los Angeles County and ranges in elevation from sea level to approximately 1,010 feet (308 meters), measured from the riverbed to Castaic Junction (in Los Angeles County). The valley trends east to west, and is the largest valley in Ventura County, and generally bisects the county north and south geographically.

The Santa Monica-Santa Susana Mountains trend east and west, with its western terminus at the eastern end of the Oxnard Plain. The mountains at the northwestern end of the Santa Monica Mountains are called the Conejo Mountains. The Santa Monica Mountains extend eastward towards Los Angeles, ending at the Los Angeles River in the Griffith Park area (in Los Angeles County) and are part of the Transverse Ranges and generally included within the Western Transverse Ranges sub-region of the California Floristic Province. These mountains are rugged and have high relief, ranging from sea level along their southern edge to 948 meters (3,111 feet) on Sandstone Peak, immediately south of Boney Mountain, both located within Ventura County. The Santa Susana Mountains also trend east-west, originating in the west at the northeast corner of the Oxnard Plain and extend eastward to the Newhall Pass in Los Angeles County. The Santa Clara River Valley creates the northern boundary of these mountains.

The Western Transverse Ranges are the dominant landform of Ventura County, occupying the northern two-thirds of the land area of the county. The Western Transverse Ranges are a collection of east-west trending mountain ranges with intervening valleys. The Western Transverse Ranges are extremely

rugged and have high relief, ranging from sea level west of Ventura along the Rincon coast to 2,682 meters (8,831 feet) on Mount Piños at the very northern edge of Ventura County.[4]

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 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 Ventura County area has previously established nonattainment boundaries associated with both the 1-hour and the 1997 8-hour ozone NAAQS. The state recommended the same boundary for the 2008 ozone NAAQS. The Ventura County Air Pollution Control District has jurisdiction over the entirety of Ventura County, including the continental portion as well as the Anacapa and San Nicolas islands portions. Likewise, the entire county's (mainland and island portions) transportation planning falls under the jurisdiction of the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization (MPO) for the region. The mainland portion of Ventura County forms the southern end of California's South Central Coast Air Basin. The entirety of Ventura County forms the Oxnard-Thousand Oaks-Ventura metropolitan statistical area (MSA). This MSA is part of the larger Los Angeles-Long Beach-Riverside combined statistical area (CSA). Therefore, the state recommendation for a partial county designation is not along jurisdictional lines, but is due to the physical separation of the islands from the mainland.

However, jurisdiction is a factor in designating this mainland portion of Ventura County as a separate area from San Joaquin Valley to the north. San Joaquin Valley is its own air district, is a separate air basin with a mountain range separating it from Ventura County, and at the southern end of the valley has a separate MPO, Kern Council of Governments, from the SCAG MPO that has jurisdiction over Ventura County. Kern County in San Joaquin Valley is also not a part of the Los Angeles-Long Beach-Riverside CSA.

Similar distinctions can be made between the mainland portion of Ventura County, Santa Barbara County, which is attaining the standard, and the South Coast area, which EPA is designating as a separate nonattainment area. Santa Barbara County, which is west of Ventura, is a separate air basin and has a separate air district from Ventura County. The Los Angeles-South Coast nonattainment area, which is east and south of Ventura, is also a separate air basin and has a separate air district from Ventura County.

[4] Ventura County Geography http://venturaflora.com/files/vcgeography.htm .

Conclusion

Based on the assessment of factors described above, EPA is designating the continental portion of Ventura County, CA nonattainment because the area violates the 2008 ozone NAAQS.

The Clean Air Act requires EPA to designate any area as nonattainment if it violates a NAAQS or if it contributes to a violation in a nearby area. Air quality data (Factor 1) indicate that monitors in the existing Ventura County nonattainment area (which includes the continental portion of the county as noted in Table 1) violate the 2008 8-hour ozone standard based on 2008-2010 data. Additionally, there are no violating monitors on the islands of Ventura County or in Santa Barbara County, based on certified 2011 data (see discussion in this Technical Support Document, State of California Summary), to the west of the mainland portion of the county. Therefore, Factor 1 supports the state's recommended boundary of the continental portion of Ventura County for nonattainment.

EPA's review of emissions and emission related data (Factor 2) shows that sources of ozone precursor emissions from Ventura County are higher than those from Santa Barbara County to the west, and lower than those from adjacent counties in the San Joaquin Valley or South Coast Air Basin. EPA believes that the state's recommended nonattainment area encompasses both source and receptor populations in the county.

Based on our consideration of meteorology and weather or transport patterns (Factor 3), geography and topography (Factor 4), and jurisdictional boundaries (Factor 5), EPA concurs with the state's recommendation and is designating the continental portion of Ventura County, CA as nonattainment for the 2008 ozone NAAQS. This boundary is the same as the boundaries used for earlier ozone NAAQS (both 1-hour and the 1997 8-hour) and essentially follows the boundaries of the county, the air district, the MPO and the air basin.

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Technical Analysis for Morongo Band of Mission Indians (Morongo nonattainment area)

Figure 1 is a map of the Morongo Band of Missions Indians nonattainment area (Morongo nonattainment area). The map provides other relevant information including the location and design value of the air quality monitor on the Morongo Band of Mission Indian's (Morongo's) Indian country, county boundaries, and indicates EPA's nonattainment designation.

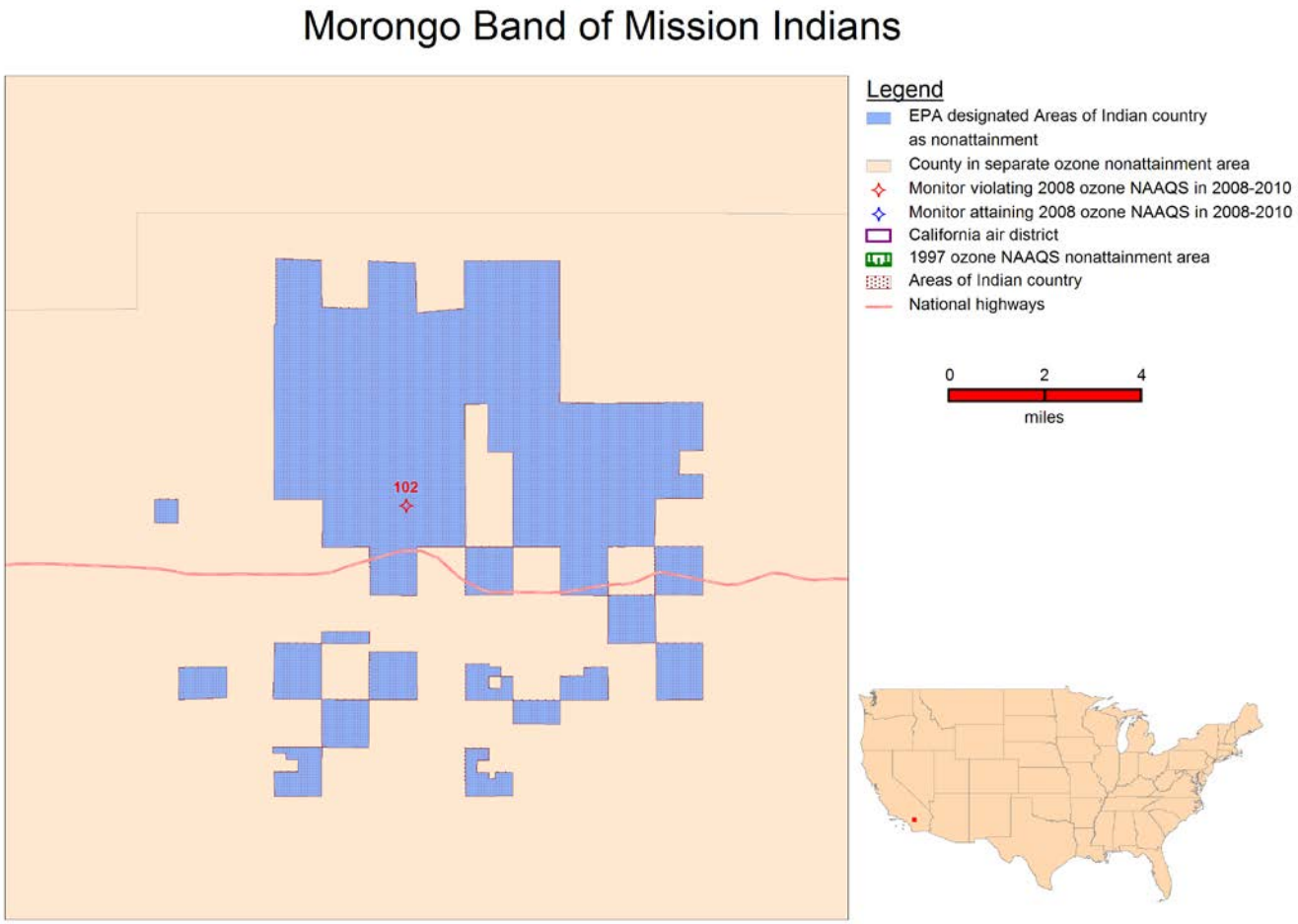
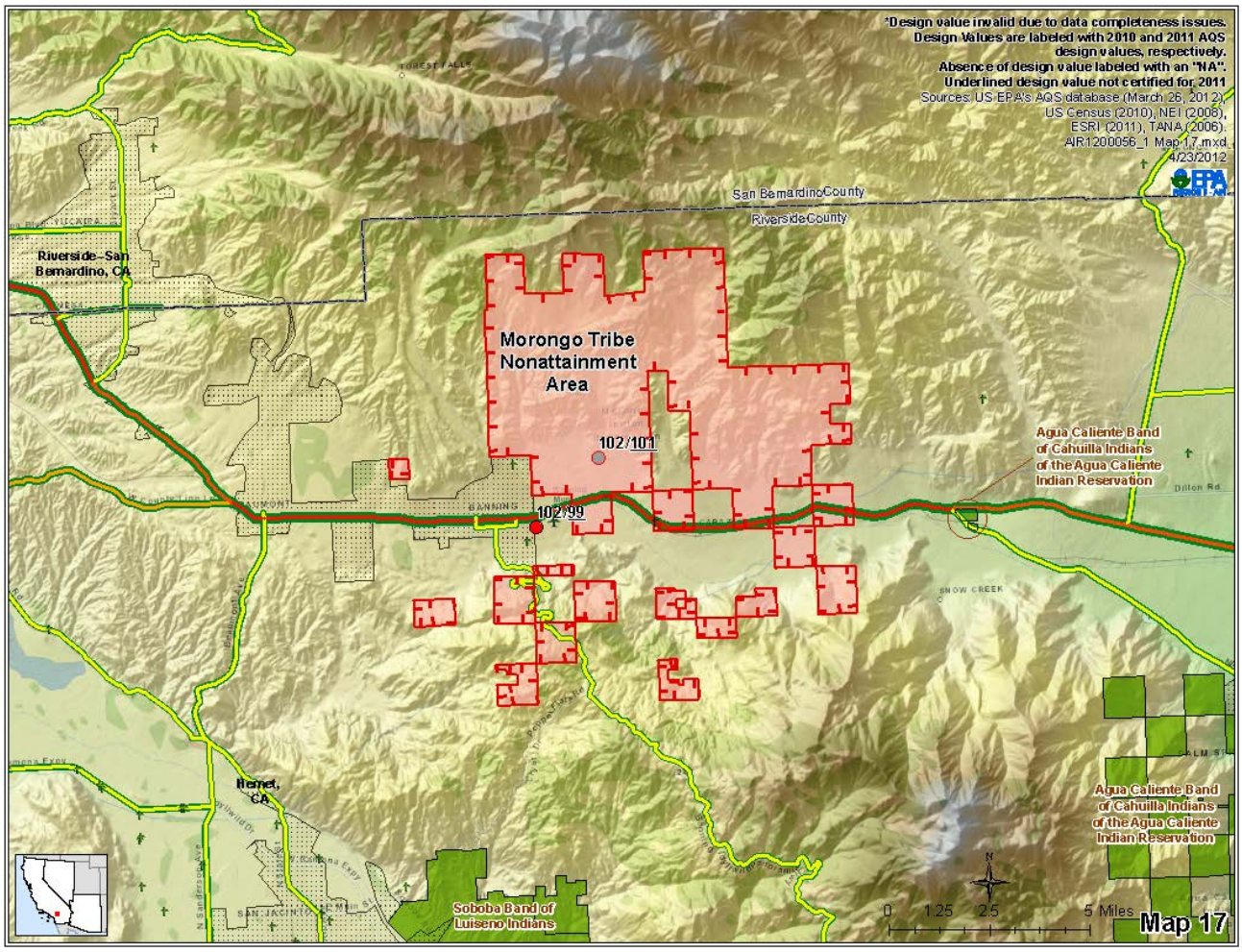


Figure 1

The Morongo Band of Mission Indians (Morongo) is a federally recognized tribe whose Indian country is located in the western portion of the Riverside-San Bernardino-Ontario, CA metropolitan area. Map 17 in Appendix 1, and included below, shows the location of the areas of Indian country in more detail.



From Appendix 1, Map 17: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Morongo's areas of Indian country are located in an area known as Banning Pass, which is an elevated mountain pass connecting the South Coast Air Basin to the Coachella Valley portion of the Salton Sea Air Basin. The Banning Pass (also known as the San Gorgonio Pass) is one of the three major routes by which air pollutants are transported out of the Los Angeles metropolitan area (which lies within the South Coast Air Basin). Banning Pass runs in an east-west direction for about 15 miles and is about 5 miles wide. The pass starts west of Beaumont at an elevation of about 2,200 feet and reaches a maximum elevation of around 2,600 feet in the city of Beaumont, then drops to an elevation of near 1,400 feet between Cabazon and White Water. The San Bernardino Mountains are on the north side of the pass and the San Jacinto Mountains are on the south side. The San Bernardino Mountains reach a maximum elevation of approximately 11,500 feet at the top of San Gorgonio Mountain and the San Jacinto Mountains reach a maximum elevation of approximately 10,800 feet at Mt. San Jacinto.

In 2004, EPA established the Los Angeles-South Coast Air Basin nonattainment area boundaries for the 1997 ozone NAAQS that included the entirety of Orange County, the southwestern portion of Los Angeles County, the southwest portion of San Bernardino County, and the western portion of Riverside County (see Map 6 in Appendix 1); this area includes Morongo's Indian country. In 2004, EPA also established the Riverside County (Coachella Valley) nonattainment area for the 1997 ozone NAAQS which is to the east of and adjacent to the Los Angeles-South Coast Air Basin.

As explained in the following paragraphs, while originally included within the Los Angeles-South Coast Air Basin nonattainment area for the 1997 ozone standard, Morongo's areas of Indian country are now classified differently than the rest of the South Coast for that standard. See 40 CFR 81.305.

For the original photochemical oxidant standard, and later the 1-hour ozone standard, EPA included Morongo's areas of Indian country within the Southeast Desert Air Quality Maintenance Area (AQMA), later referred to as the Southeast Desert Modified AQMA ("Southeast Desert"). See 43 FR 8962 (March 3, 1978). The Southeast Desert included the Coachella Valley portion of Riverside County, as well as Antelope Valley in Los Angeles County, and a portion of San Bernardino County. Under the 1990 CAA Amendments, Morongo's areas of Indian country were classified, along with the rest of the Southeast Desert, as "severe-17" for the 1-hour ozone standard. See 56 FR 56694, at 58729 (November 6, 1991). In 2003, EPA approved a boundary change request submitted by California that shifted the boundary between the South Coast Air Basin and the Southeast Desert in the Banning Pass area approximately 18 miles to the west. See 68 FR 57820 (October 7, 2003). In effect, the 2003 boundary change shifted Morongo's Indian country from the Southeast Desert, which was classified as "severe-17," to the South Coast Air Basin, which was classified as "extreme" for the 1-hour ozone standard. Morongo has requested that EPA correct the Agency's 2003 boundary change action with respect to their lands because, among other reasons, the Tribe was never consulted during EPA's rulemaking process concerning the boundary change.

In 2004, EPA designated areas for the 1997 ozone standard and, consistent with the 2003 boundary change, included Morongo's areas of Indian country in the South Coast Air Basin, which was classified as "severe-17" for the 1997 ozone standard. See 69 FR 23858 (April 30, 2004). Although the 1-hour ozone standard was revoked in 2005, certain control requirements linked to the "extreme" classification continue to apply within Morongo's areas of Indian country under EPA's anti-backsliding requirements governing the transition from the now-revoked 1-hour ozone standard to the 8-hour ozone standard. See 40 CFR 51.905(a)(1)(i).

In 2007, California requested a voluntary "bump-up" for the South Coast from "severe-17" to "extreme" for the 1997 ozone standard. In 2010, EPA approved California's "bump-up" request but deferred reclassification of two tribes' areas of Indian country within the South Coast, one of which was Morongo's Indian country. See 75 FR 24409 (May 5, 2010). Thus, Morongo's Indian country currently has a "severe-17" ozone nonattainment classification for the 1997 ozone standard and lies adjacent to the South Coast Air Basin on the west, which is classified as "extreme," and Coachella Valley on the east, which is classified as "severe-15," for the 1997 ozone standard.

In May 2009, Morongo recommended that their Indian country, as described above, be designated as "nonattainment" for the 2008 ozone NAAQS and as a separate nonattainment area, or that it be designated as "nonattainment" as part of the Coachella nonattainment area for the 2008 ozone NAAQS. (Letter from Robert Martin, Chairman, Morongo Band of Mission Indians, to Deborah Jordan, Director, U.S. EPA

Region IX Air Division, May 29, 2009.) In June 2009, Morongo requested to be its own nonattainment area. (Letter from Robert Martin, Chairman, Morongo Band of Mission Indians, to Deborah Jordan, Director, U.S. EPA Region IX Air Division, June 18, 2009.) In April 2012, in response to EPA's 120-day letter indicating our intention to designate Morongo's Indian country as part of the Los Angeles-South Coast, CA nonattainment area, Morongo reiterated its request that their Indian country be designated nonattainment and as a separate area. (Letter from Jeff R. Keohane, Forman & Associates, on behalf of the Morongo Band of Mission Indians, to Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, received April 9, 2012 and dated February 27, 2012.)

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 multi-factor analysis provided as part of Morongo's May 2009 recommendation, Morongo's June 2009 and April 2012 correspondences, and additional available information as described in this Technical Analysis. EPA's assessment also considers EPA's December 20, 2011 "Policy for Establishing Separate Air Quality Designations for Areas of Indian country" (Tribal Policy)[1].

After considering these recommendations and based on EPA's technical analysis described below, EPA is designating the Indian country of the Morongo Band of Mission Indians as a separate nonattainment area for the 2008 ozone NAAQS.

Table 1. Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Designation

Tribe-Recommended Nonattainment Areas of Indian country	EPA's Nonattainment Areas of Indian country
Morongo Band of Mission Indians	Morongo Band of Mission Indians

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values for air quality monitors in and near Morongo's Indian country, based on data from the 2008-2010 period (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) (or 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 area (or a designated nonattainment area or maintenance area), the DV for the county or area is determined by the monitor with the highest level.

Currently, Morongo operates one ozone monitor on its lands (monitor TT58210161; see Appendix 3). Map 17 in Appendix 1 shows the geographic distribution of monitors near Morongo's Indian country. 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 underlined).

[1] http://www.epa.gov/ttn/oarpg/t1/memoranda/20120117indiancountry.pdf

The TT58210161 ozone monitor operated on Morongo's lands has a 2008-2010 8-hour ozone design value of 0.102 ppm. Monitors that are eligible for providing design value data include monitors that are sited in accordance with 40 CFR Part 58, Appendix D (Section 4.1), are federal reference method (FRM) or federal equivalent method (FEM) monitors, and meet the requirements of 40 CFR part 58, Appendix A. The Morongo monitor did not meet all quality assurance/quality control requirements of 40 CFR Part 58 during this time period. A monitor (Banning, 060650012) operated by South Coast Air Quality Management District that is appropriate for comparison to the NAAQS and use as a regulatory monitor is within two miles of the Morongo monitor and has historically compared well with the Morongo monitor. The daily maximum 8-hour ozone values for the Morongo monitor and the Banning monitor track closely over the high ozone months of May through September, over the data years 2008, 2009, and 2010. The Banning monitor has a 2008-2010 8-hour ozone design value of 0.102 ppm, identical to the Morongo monitor's 2008-2010 design value. Therefore, EPA has determined that the Banning monitor is representative of air quality in Morongo's areas of Indian country, and the Banning monitor is considered the design value monitor for the purpose of this designation. Both of these monitors have data showing violations of the 2008 ozone NAAQS, at a level that corresponds with a "serious" classification.

Reflecting the transitional nature of the Banning Pass area, the 8-hour ozone design value at Morongo's areas of Indian country (0.102 ppm) contrasts with the higher design value of the South Coast Air Basin to the west (0.112 ppm) and the lower design value of the Coachella Valley to the east (0.095 ppm).

Factor 2: Emissions and Emissions-Related Data

Morongo's areas of Indian country encompass approximately 35,000 acres, and over 1,500 tribal members live on these lands. Morongo has sources of ozone precursor emissions within the tribal boundaries, which include the Morongo Casino Resort and Spa cogeneration facility (which has a Title V operating permit which limits the 8.4 megawatt facility's potential to emit from the four natural gas-fired engines and three diesel-fired backup generators to less than 18.7 tpy for NO_x emissions and less than 18.7 tpy for VOC emissions[2]), local traffic (including travel to and from the resort), the Morongo Travel Center, and rail traffic. A busy interstate highway, I-10, also passes through the Morongo lands. In contrast, ozone precursor emissions from the adjacent Los Angeles-South Coast Air Basin nonattainment area exceed 400,000 tpy of NO_x and over 200,000 tpy of VOC, with a total population of approximately 17 million people. See Technical Analysis for Los Angeles-South Coast Air Basin. To the east, ozone precursor emissions from the adjacent Riverside County (Coachella Valley) nonattainment area exceed 50,000 tpy of NO_x and 28,000 tpy of VOC, with a population of over 2 million people. See Technical Analysis for Riverside County (Coachella Valley).

Factor 3: Meteorology (weather/transport patterns)

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

[2] Title V Permit to Operate and Statement of Basis issued by EPA Region IX to the Morongo Casino Cogeneration Facility, September 29, 2010.

Morongo's areas of Indian country are located in the Banning Pass. Under most meteorological conditions, air from the coastal plain to the west is funneled through Banning Pass to the desert area to the east. As a mountain pass area, the meteorology is dissimilar from that of either the coastal plain to the west or the desert area to the east. The winds are more frequent and stronger, with a more westerly component, than those in most of the coastal plain, and the temperatures vary more than in most of the coastal plain but not as much as in the desert area to the east.[3] Thus, in some ways, the Banning Pass is transitional between the coastal and desert areas and in other ways, as a mountain pass, the Banning Pass is simply unlike either area to the west or east.

The meteorological and ozone data for 2006-2009, provided by the Morongo Band of Mission Indians and presented below, indicates the elevated levels of ozone are associated with westerly flow.

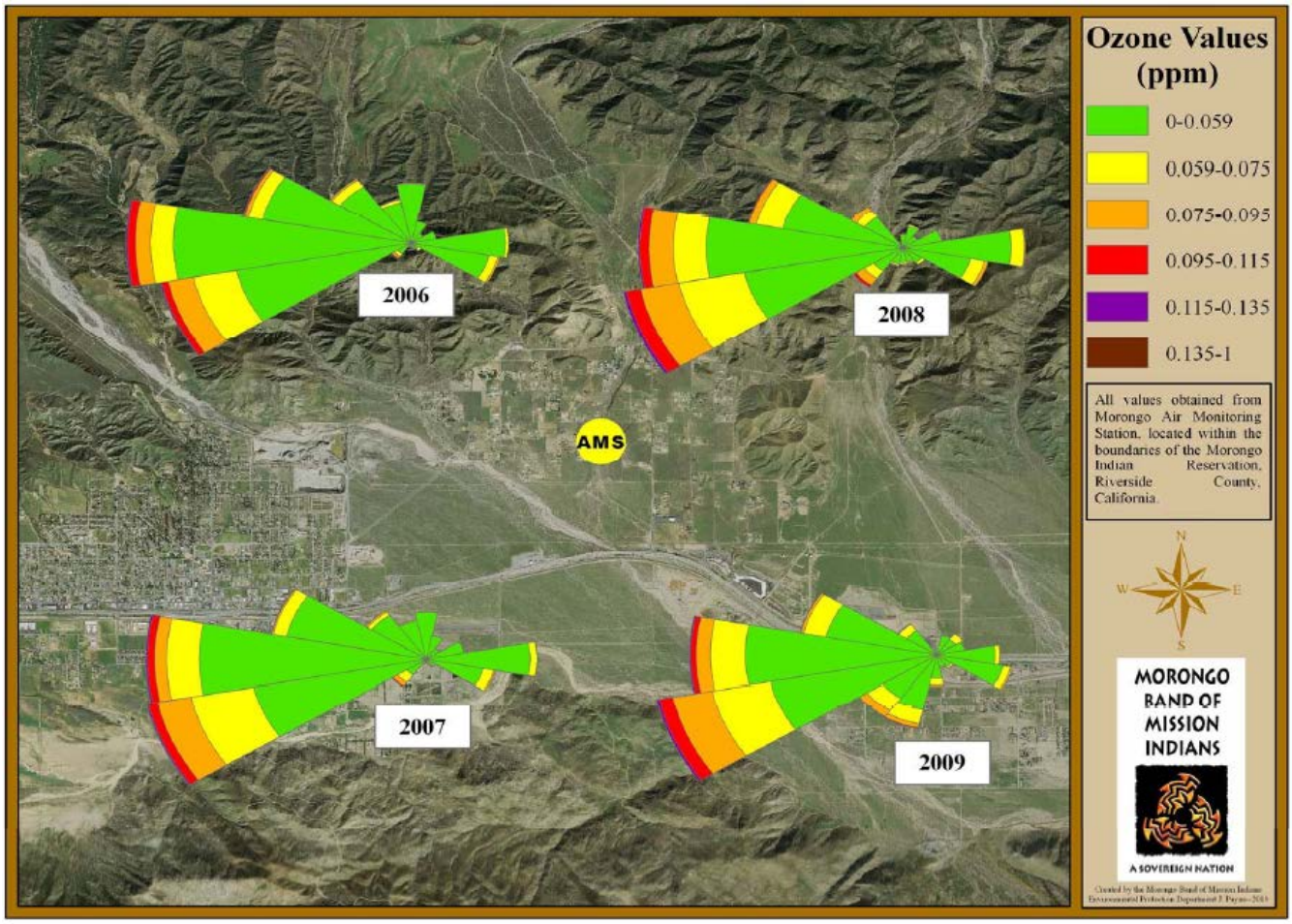


Figure 1: Meteorological and ozone data for 2006-2009.

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

[3] Meteorological information for the Morongo Reservation is from *2005-2009 Weather and Air Quality Summary*, prepared by the Morongo Band of Mission Indians, Environmental Protection Department, Tribal Air Program, August 2010.

airshed and, therefore, the distribution of ozone over the area. Morongo's geographic location is shown in Appendix 1, Map 17.

As noted previously, Morongo's areas of Indian country are located in the Banning Pass. The topographical characteristics of the Banning Pass create very different climatic conditions than found in the coastal plain to the west or the desert area to the east, such as persistently strong westerly air flow that is compressed and channeled by the elevated land mass of the Pass itself and the steep mountain peaks to the north and south.

Factor 5: Jurisdictional boundaries

For each potential nonattainment area, we considered existing jurisdictional boundaries to provide a clearly defined 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, Indian country boundaries, and 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 are considered.

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 Morongo into account in establishing an appropriate nonattainment area boundary for the tribe.

Morongo is a federally recognized tribe located in the western portion of the Riverside-San Bernardino-Ontario metropolitan area. Map 17a in Appendix 2 shows the location of the areas of Indian country. As noted above, Morongo has requested to be designated as a separate nonattainment area and, as also explained earlier in this Technical Analysis, Morongo's areas of Indian country are now classified differently than the rest of the South Coast for the 1997 ozone standard.

EPA's assessment of the jurisdictional factor also considers EPA's December 20, 2011 "Policy for Establishing Separate Air Quality Designations for Areas of Indian country" (Tribal Policy)[4]. The policy stresses the importance of recognizing tribal sovereignty and the jurisdictional status of Indian country in the decision-making process. It also articulates circumstances under which the jurisdictional boundaries factor could bear the most weight when evaluating a tribe's multi-factor analysis.

The policy states that it may be appropriate to apply the most weight to the jurisdiction factor in a situation where a Tribe recommends being designated as a separate nonattainment area from an adjacent nonattainment area when an analysis of the factors indicates that there are no sources in Indian country

[4] http://www.epa.gov/ttn/oarpg/t1/memoranda/20120117indiancountry.pdf

contributing to nonattainment in the adjacent area. Although Morongo's areas of Indian country do contain stationary and mobile sources of ozone precursors, the magnitude of ozone precursor emissions is very small compared to emissions from the adjacent Los Angeles-South Coast Air Basin and Coachella Valley nonattainment areas. Because the analysis of factors does not conclusively indicate that the sources located in Morongo's areas of Indian country contribute to nonattainment in the surrounding area, EPA believes that per the Tribal Policy, the jurisdictional factor should bear the most weight in the decision-making process for designating Morongo's Indian country.

Conclusion

In 2009 and again in 2012, the Morongo requested that its Indian country be designated as a separate nonattainment area for the 2008 ozone NAAQS. Based on the information currently available and the five factor analysis above, EPA is designating Morongo as a separate nonattainment area for the 2008 8-hour ozone standard, as the Morongo Band of Mission Indians nonattainment area.

Air quality data, meteorology and topography indicate that Morongo's areas of Indian country experience transitional conditions characteristic of a mountain pass area through which pollutants are channeled from a highly urbanized metropolitan nonattainment area to the west to the relatively less developed nonattainment area to the east. As such, taking into consideration the three factors of air quality data, meteorology, and topography, EPA could reasonably include the Morongo areas of Indian country in either the nonattainment area to the west, or the nonattainment area to the east as EPA has done in the past originally for the 1-hour ozone standard and more recently for the 1997 8-hour ozone standard, or the Agency could establish a separate nonattainment area for Morongo lands. However, taking into account the minimal amount of emissions associated with activities on the Morongo lands of Indian county and corresponding minimal contribution to regional ozone violations, we conclude that assigning greater weight to the jurisdictional factor is appropriate in this instance under EPA's Tribal Designations Policy. Under the jurisdictional factor, we find that designating Morongo's areas of Indian country as a separate ozone nonattainment area for the 2008 ozone standard to be appropriate in light of the Morongo's request for such an area and in light of the difference in classification of the Morongo lands with respect to either the Los Angeles-South Coast Air Basin or Riverside County (Coachella Valley) for the 1997 ozone standard.

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Technical Analysis for Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation

Figure 1 is a map of the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area (Pechanga nonattainment area). The map provides other relevant information including the location and design value of the air quality monitor on the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation's (Pechanga's) Indian country, county boundaries, and indicates EPA's nonattainment designation. See Map 18 in Appendix 1, and included below in the Factor 1 section, for a more detailed map.

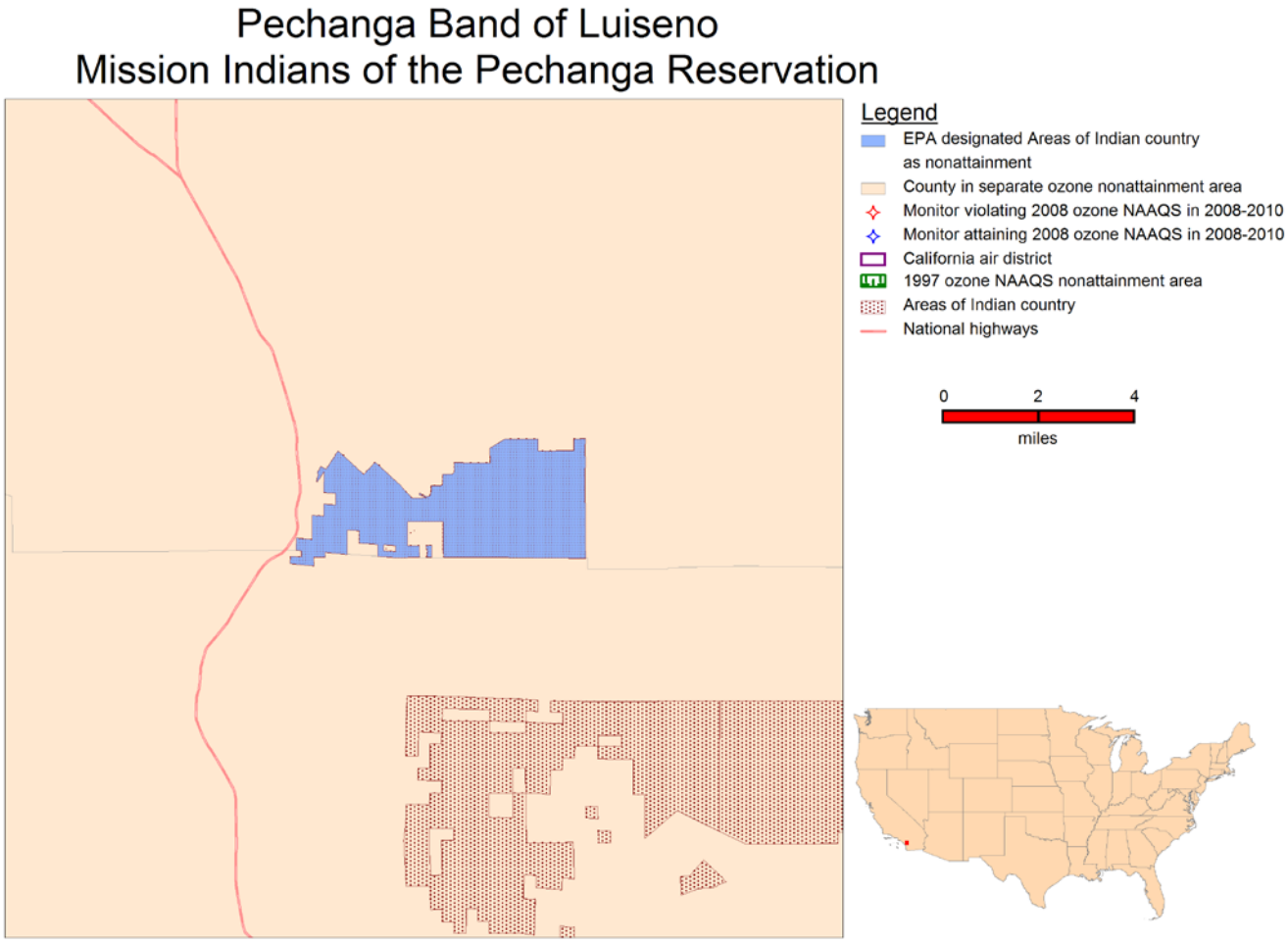


Figure 1

The Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga) is a federally recognized tribe whose Indian country is located primarily in the southern part of the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (MSA), with some land in the northern portion of the San Diego-Carlsbad-San Marcos MSA. Map 18a in Appendix 2 shows the location of the areas of Indian country.

In 2004, EPA established the Los Angeles-South Coast Air Basin nonattainment boundaries for the 1997 ozone NAAQS. The Los Angeles-South Coast Air Basin nonattainment area included the entirety of Orange County, the southwestern portion of Los Angeles County, the southwest portion of San Bernardino County, and the western portion of Riverside County (see Map 6 in Appendix 1). In 2004, all of Pechanga's reservation lands were in the southwestern portion of Riverside County, and Pechanga's Indian country was included in the Los Angeles-South Coast Air Basin nonattainment area. Since the previous designation, Pechanga has acquired lands that extend into San Diego County.

In June 2009, Pechanga recommended that the portions of Pechanga's lands in Riverside and San Diego counties be designated as "nonattainment" for the 2008 ozone NAAQS and as a separate area, or that they be designated as "nonattainment" as part of the San Diego nonattainment area, for the 2008 ozone NAAQS (letter from Mark Macarro, Tribal Chairman, Pechanga Band of Luiseño Indians, to Deborah Jordan, Director, U.S. EPA Region IX Air Division, June 23, 2009). In February 2012, in response to EPA's December 2011 letter conveying our preliminary designations (letter from Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, to Mark A. Macarro, Tribal Chairman, Pechanga Band of Luiseño Indians, December 9, 2011), Pechanga recommended that their reservation lands be designated as "nonattainment" as a separate area or as "attainment" as a separate area for the 2008 ozone NAAQS (letter from Mark Macarro, Tribal Chairman, Pechanga Band of Luiseño Indians, to Jared Blumenfeld, Regional Administrator, U.S. EPA Region IX, February 23, 2012).

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 in nearby areas. EPA has evaluated the 2009 and 2012 recommendations, including the multi-factor analysis, from the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga) based on currently available information. EPA's assessment of the Tribe's separate nonattainment area recommendation and other information was performed in accordance with EPA's December 20, 2011 "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country" (Tribal Policy)[1].

Based on the factors discussed below, EPA is designating Pechanga's Indian country as the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area (Pechanga nonattainment area) for the 2008 ozone NAAQS.

Table 1. Tribe's Recommended and EPA's 2008 ozone NAAQS Nonattainment Designation.

Tribe-Recommended Nonattainment Area of Indian country	EPA's Designated Nonattainment Area of Indian Country
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation

[1] The Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga) has reservation lands that span across two areas designated nonattainment for the 1997 ozone NAAQS: the San Diego County, CA nonattainment area and the Los Angeles-South Coast Air Basin, CA nonattainment area. EPA is designating all of Pechanga's Indian country as the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area for the 2008 ozone NAAQS, separate from the surrounding state areas.

[1] http://www.epa.gov/ttn/oarpg/t1/memoranda/20120117indiancountry.pdf

Factor Assessment

Factor 1: Air Quality Data

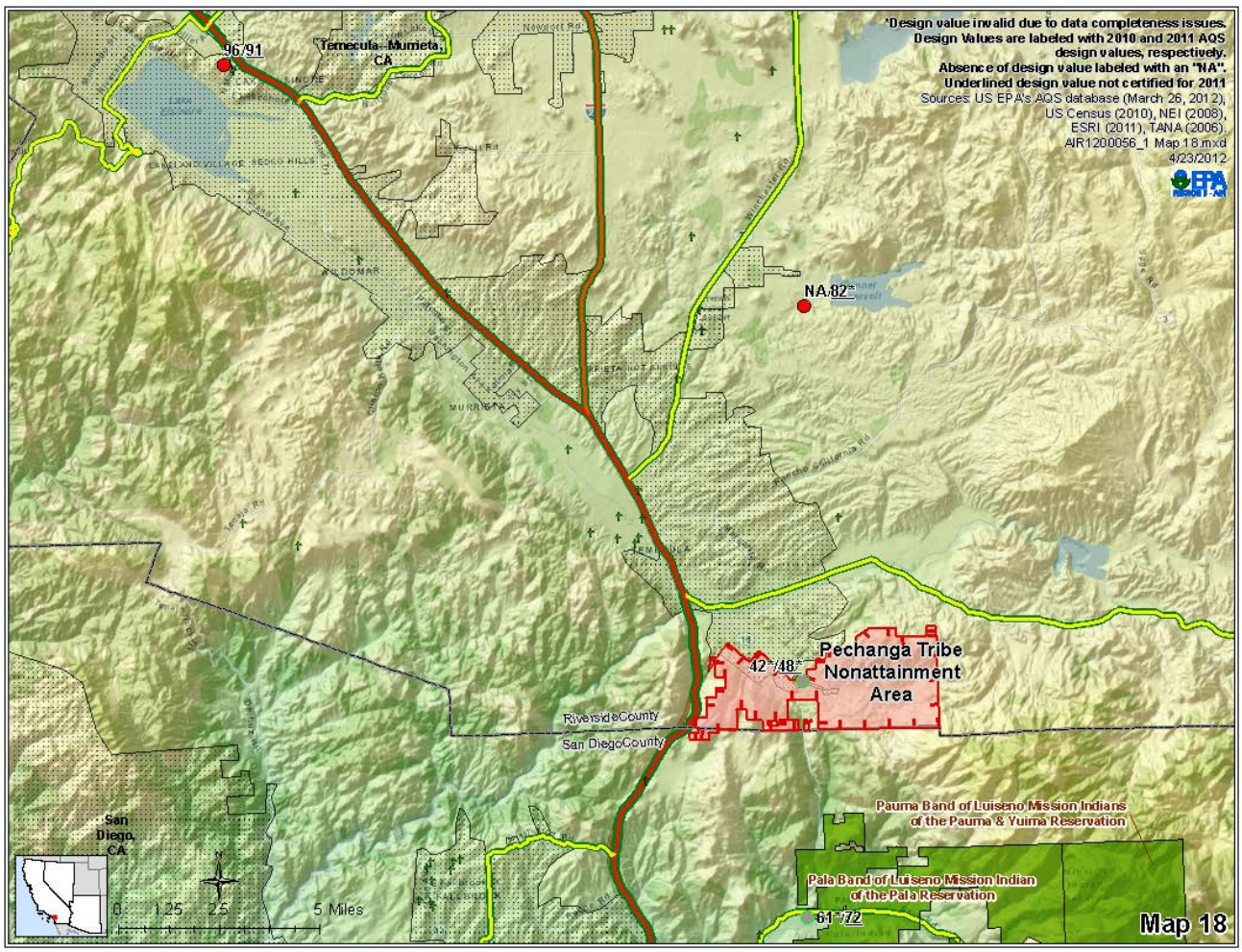
For this factor, we considered 8-hour ozone design values for air quality monitors in and near Pechanga, based on data from the 2008-2010 period (i.e., the 2010 design value, or DV) and preliminary data from the 2009-2011 period (i.e., the preliminary 2011 DV). A monitor's DV is the metric or statistic 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.

Monitors that are eligible for providing design value data include monitors that are sited in accordance with 40 CFR Part 58, Appendix D (Section 4.1), are federal reference method (FRM) or federal equivalent method (FEM) monitors, and meet the requirements of 40 CFR part 58, Appendix A.

Map 18 in Appendix 1 shows ozone monitors in, and surrounding, Pechanga's areas of Indian country. For each monitor, Appendix 1 lists the monitor, the 2008-2010 DV (certified and quality assured in EPA's Air Quality System (AQS) database) and the 2009-2011 DV (data that are not yet certified and quality assured in AQS are underlined). Currently, Pechanga operates one ozone monitor within its Indian country. An issue with this monitor was identified and resolved in the summer of 2011. EPA has analyzed the accuracy of the ozone data from this monitor and has determined that data collected prior to resolution of the issue cannot be used for the current ozone designations. The limited accurate air quality monitoring data available from the Pechanga monitor after the issue was resolved suggest that ozone concentrations at Pechanga are reasonably similar in magnitude and timing to a nearby monitor located north of Temecula. Although only one year of data from the Temecula monitor is available, its 4th maximum 8-hour ozone value for 2011 is 0.082 ppm, which is above the level of the 2008 ozone NAAQS. While data from the Temecula monitor indicates that the area is exceeding the 2008 ozone NAAQS, data are not sufficiently complete to be used for a valid DV. The next closest violating monitor with valid data is Lake Elsinore (AQS ID 060659001), which has a 2008-2010 DV of 0.096 ppm. The Lake Elsinore monitor is approximately 20 miles to the north-northeast from Pechanga's Indian country.

The typical pattern for ozone levels along the southwest coast of California is low ozone levels along the coast from clean coastal air with increasing levels inland as precursors and temperatures increase. At times, ozone and its precursors can be transported along the coast, as described in Factor 3, below. Air monitoring stations show this pattern with coastal monitors in Southern California attaining the 2008 ozone NAAQS (e.g., monitor numbers 060731008, 060592022, and 060591003) and inland monitors in Southern California violating (e.g., monitor numbers 060656001 and 060659001). See Appendix 3. This area is also subject to inland transport from the South Coast Air Basin along the Interstate 15 freeway when winds are from the north. The violating monitor at Lake Elsinore is approximately 25 miles inland, as is Pechanga's Indian country. Therefore, the Lake Elsinore monitor is considered the design value monitor for the purpose of designating Pechanga's areas of Indian country.

The analysis of available air quality data from Pechanga and proximate monitors suggest that Pechanga's areas of Indian country experience similar poor air quality to the surrounding nonattainment areas.



From Appendix 1, Map 18: For map legend describing monitors, emissions, traffic, population, and boundaries, see Appendix 1.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOC), and other emissions-related data that provide information on areas contributing to violating monitors.

Pechanga's areas of Indian country consist of 6,700 acres, and are home to approximately 800 tribal members. Pechanga has one major stationary source of ozone precursor emissions, the Pechanga Casino and Resort, within the tribal boundaries. Other sources of ozone precursor emissions include local traffic to and from the casino/resort, parking structures, golf course, gas station, and a recreational vehicle (RV) park. In its June 23, 2009 letter to EPA, Pechanga provided emission inventories for stationary sources, area sources, and on-road mobile sources. Pechanga estimated the stationary source emissions of NO_x to be 0.012 tons per day and VOC to be 0.0015 tons per day in 2007. Actual emissions from the Pechanga Casino and Resort (a current Clean Air Act Title V major source) reported to EPA were 6.5 tons per year of NO_x in 2010 and less than 1 ton per year of VOC in 2010.[2] In contrast, emissions from the adjacent Los Angeles-South Coast nonattainment area were over 240,000 tons per year of NO_x and over 200,000 tons per year of VOC with a population of over 17 million people, and emissions from the

[2] See letter from Syndi Smallwood to Deborah Jordan, November 4, 2011.

adjacent San Diego County nonattainment area were over 59,000 tons per year of NO_x and over 54,000 tons per year of VOC with a population of over 3 million people. See Technical Analyses for the Los Angeles-South Coast Air Basin and San Diego County in the California Technical Support Document.

Factor 3: Meteorology (weather/transport patterns)

EPA evaluated available meteorological data to help determine how meteorological conditions, such as weather, transport patterns and stagnation conditions, would affect the fate and transport of precursor emissions contributing to ozone formation. Pechanga is located about 25 miles inland and experiences similar complex meteorology and transport patterns as inland parts of western San Diego County. Transport of ozone and its precursors to Pechanga is prevalent from San Diego County, and from the South Coast Air Basin. EPA also reviewed other sources of information that reaffirm that high levels of ozone can occur in inland areas such as Pechanga as a result of transport from the San Diego metropolitan area and the South Coast Air Basin.[3] Transport patterns and meteorology suggest that Pechanga's areas of Indian country experience similar poor air quality to the surrounding nonattainment areas.

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 Pechanga reservation consists of 6,700 acres located in northwestern portion of the Cleveland National Forest, ranging between 1,100 and 2,600 feet in elevation. It is located in the northern portion of the San Diego-Carlsbad-San Marcos MSA and the southern part of the Los Angeles-Long Beach-Santa Ana MSA. The Pechanga's lands do not have any geographical or topographical barriers that would prevent air pollution transport from the surrounding San Diego County or Los Angeles-South Coast Air Basin nonattainment areas. Although the terrain is complex, there are no topographic barriers, suggesting that Pechanga's areas of Indian country may experience similar air quality to the surrounding nonattainment areas.

Factor 5: Jurisdictional boundaries

For each potential nonattainment area, we considered existing jurisdictional boundaries to provide a clearly defined 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, Indian country boundaries, and 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.

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

[3] Bigler-Engler, V, 1995: Analysis of an Ozone Episode during the San Diego Air Quality Study: The Significance of Transport Aloft. *Journal of Applied Meteorology*, 34, 1863-1875). Luria, M, 2005: Local and Transported pollution of San Diego, California. *Atmospheric Environment*, 39, 6765-6776. Boucouvala, D, 2003: Analysis of transport patterns during an SCOS97-NARSTO episode. *Atmospheric Environment*, 37 Supplement No. 2, S73-S94. Meteorological and Photochemical Modeling for the San Diego County 2007, 8 Hour Ozone State Implementation Plan.

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 Pechanga into account in establishing an appropriate designation for its Indian country.

Pechanga is a federally recognized tribe located in the northern portion of the San Diego-Carlsbad-San Marcos MSA and the southern part of the Los Angeles-Long Beach-Santa Ana MSA. Map 18a in Appendix 2 shows the location of areas of Indian country.

EPA's assessment of the jurisdictional factor was performed in accordance with the Tribal Designations Policy. The policy stresses the importance of recognizing tribal sovereignty and the jurisdictional status of Indian country in the decision-making process. It also articulates circumstances under which the jurisdictional boundaries factor could bear the most weight when evaluating a tribe's multi-factor analysis.

The policy states that it may be appropriate to apply the most weight to the jurisdiction factor in a situation where a Tribe recommends being designated as a separate attainment area from an adjacent nonattainment area when a regulatory monitor in Indian country demonstrates that the NAAQS is being met, and there are no sources in Indian country contributing to nonattainment in the adjacent area based on an analysis of factors. As Pechanga does not currently have a regulatory monitor in its areas of Indian country that demonstrates the NAAQS is being met, EPA does not believe a separate attainment area designation is appropriate.

The policy also states that it may be appropriate to apply the most weight to the jurisdiction factor in a situation where a Tribe recommends being designated as a separate nonattainment area from an adjacent nonattainment area when an analysis of the factors indicates that there are no sources in Indian country contributing to nonattainment in the adjacent area. Although Pechanga's areas of Indian country do contain stationary and mobile sources of ozone precursors, the magnitude of ozone precursor emissions is very small compared to emissions from the adjacent Los Angeles-South Coast Air Basin and San Diego County nonattainment areas. Because the analysis of factors does not conclusively indicate that the sources located in Pechanga's areas of Indian country contribute to nonattainment in the surrounding areas, EPA is assigning more weight to Factor 5: Jurisdiction.

Conclusion

Based on the assessment of factors described above, EPA is designating Pechanga's Indian country as nonattainment for the 2008 ozone NAAQS as the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area.

In February 2012, Pechanga requested designation of its Indian country as "nonattainment" for the 2008 ozone NAAQS as a separate area or as "attainment" for the 2008 ozone NAAQS as a separate area. Because Pechanga does not have currently have a regulatory monitor in its areas of Indian country demonstrating that the NAAQS is being met, consistent with the EPA Tribal Designations Policy, EPA disagrees that Pechanga's Indian country should be designated as a separate attainment area. Air quality data, meteorology and topography indicate that Pechanga's areas of Indian country experience similar poor air quality to the surrounding nonattainment areas. Under EPA's Tribal Designations Policy, an area of Indian country may be designated a separate nonattainment area from the adjacent nonattainment area if the area of Indian country has no sources that contribute to nonattainment in the adjacent area.

Although Pechanga's areas of Indian country do contain stationary and mobile sources of ozone precursors, the magnitude of ozone precursor emissions is very small compared to emissions from the adjacent Los Angeles-South Coast Air Basin, CA and San Diego County, CA nonattainment areas. Because the analysis of factors does not conclusively indicate that the sources located in Pechanga's areas of Indian country contribute to nonattainment in the surrounding areas, EPA is assigning more weight to Factor 5: Jurisdiction and designating Pechanga's areas of Indian country a separate nonattainment area from the adjacent nonattainment areas, as the Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation nonattainment area.

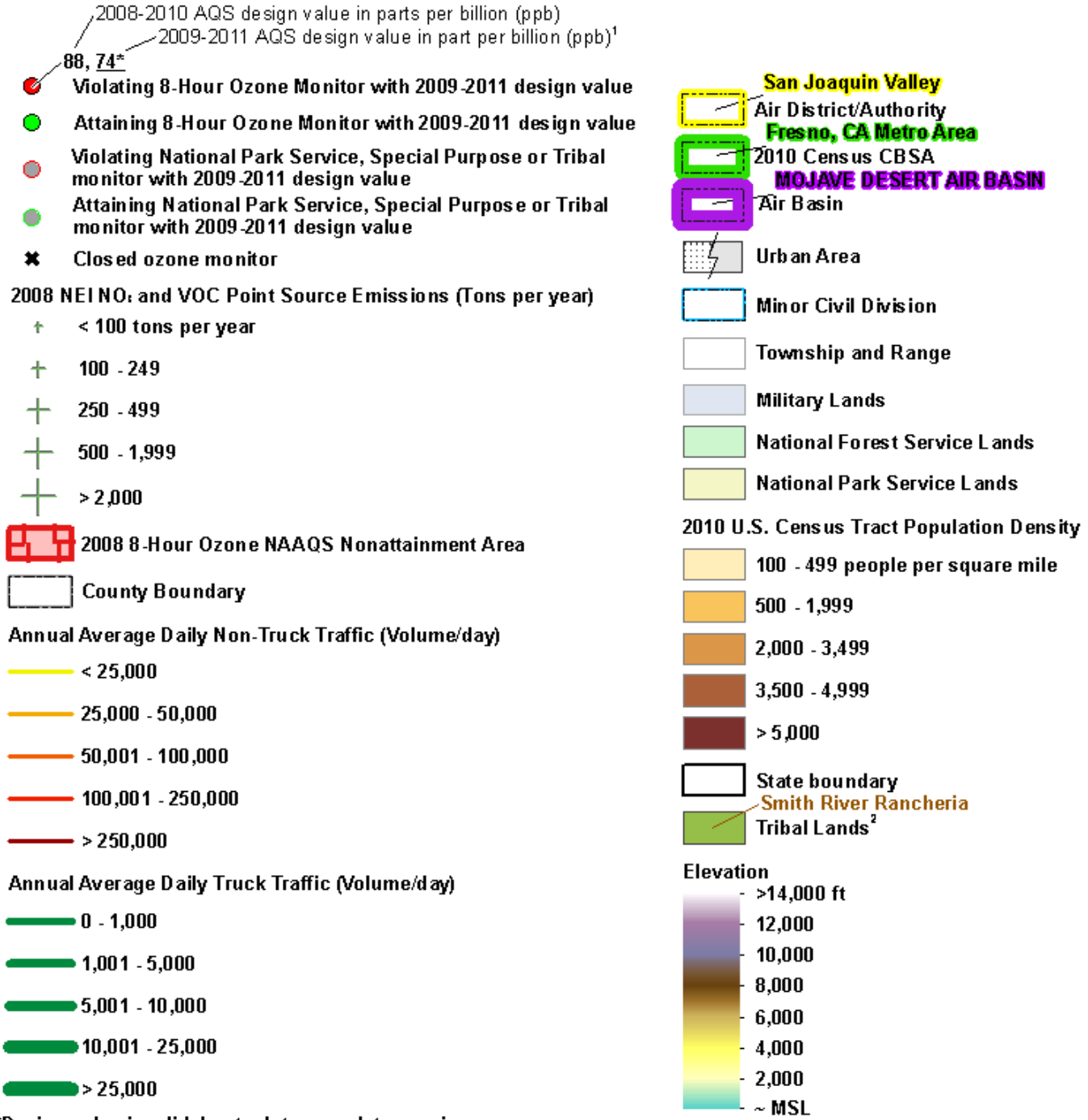
Appendix 1:

Maps showing Monitors, Emissions, Vehicle Traffic, and General Population

Appendix 1: Map Numbering

2008 8-hour ozone NAAQS Nonattainment Area	Map Number
Calaveras County, CA	1, 1b
Chico (Butte County), CA	2
Imperial County, CA	3
Kern County (Eastern Kern), CA	4
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	5
Los Angeles-South Coast Air Basin, CA	6
Mariposa County, CA	7, 7b
Nevada County (Western part), CA	8
Riverside County (Coachella Valley), CA	9
Sacramento Metro, CA	10
San Diego County, CA	11
San Francisco Bay Area, CA	12
San Joaquin Valley, CA	13
San Luis Obispo (Eastern San Luis Obispo), CA	14
Tuscan Buttes, CA	15
Ventura County, CA	16
Morongo Band of Missions Indians (Morongo Tribe)	17
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga Tribe)	18

Legend



***Design value invalid due to data completeness issues.**
Design Values are labeled with 2010 and 2011 design values, respectively.
Absence of design value labeled with "NA".

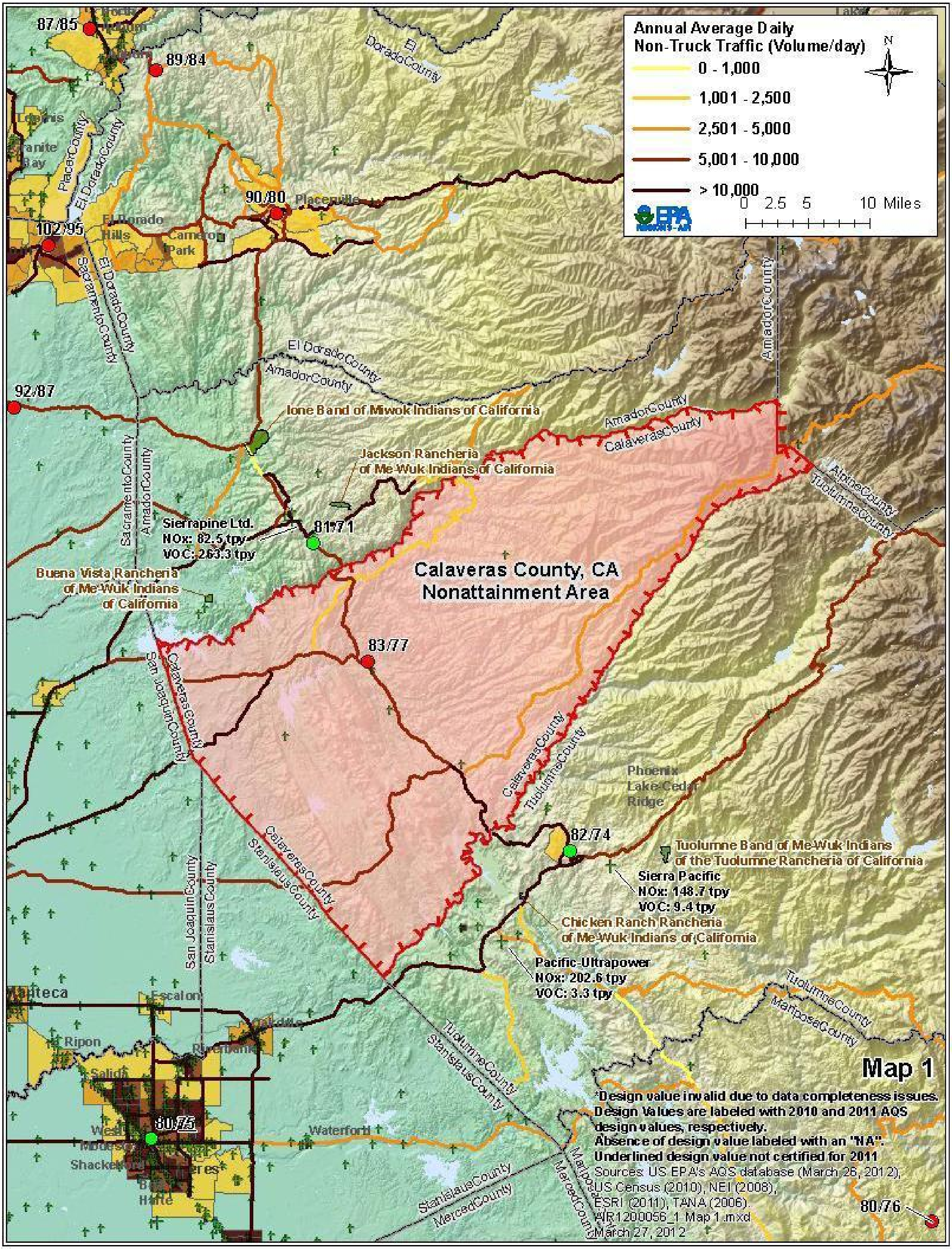
Sources: US EPA's AQS database (March 26, 2012), US EPA's National Emissions Inventory (2008), U.S. Census (2010), ESRI (2012), Teledyne Atlas (2006), U.S. Department of Transportation (2007).

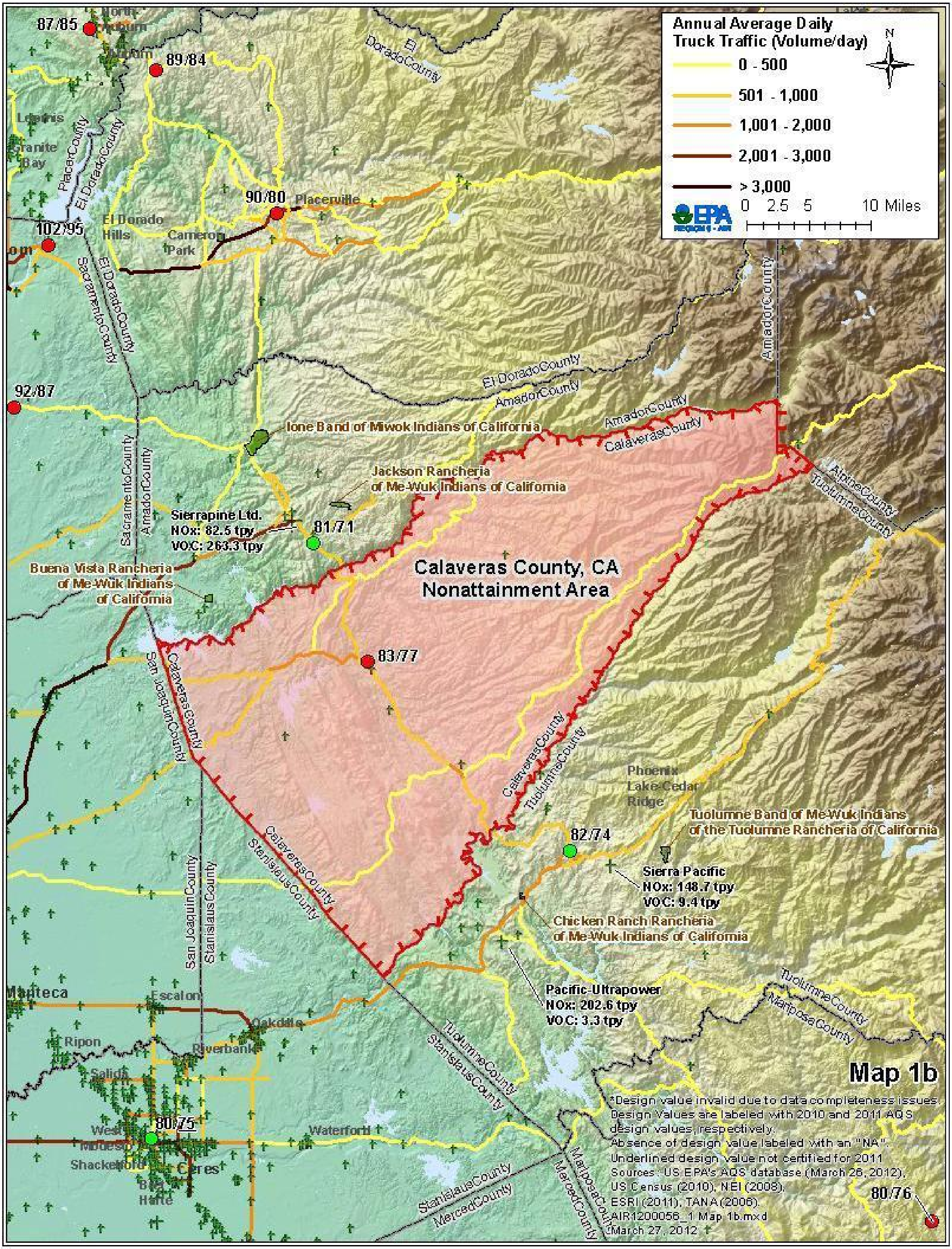
[1] Underlined 2009-2011 monitor design value labels have not been certified by EPA for 2011.

[2] Areas of Indian country displayed here are intended for illustrative purposes only. EPA does not have the authority to define official boundaries for areas of Indian country. Hence, EPA does not guarantee the accuracy or completeness of Indian country boundaries displayed in this map.

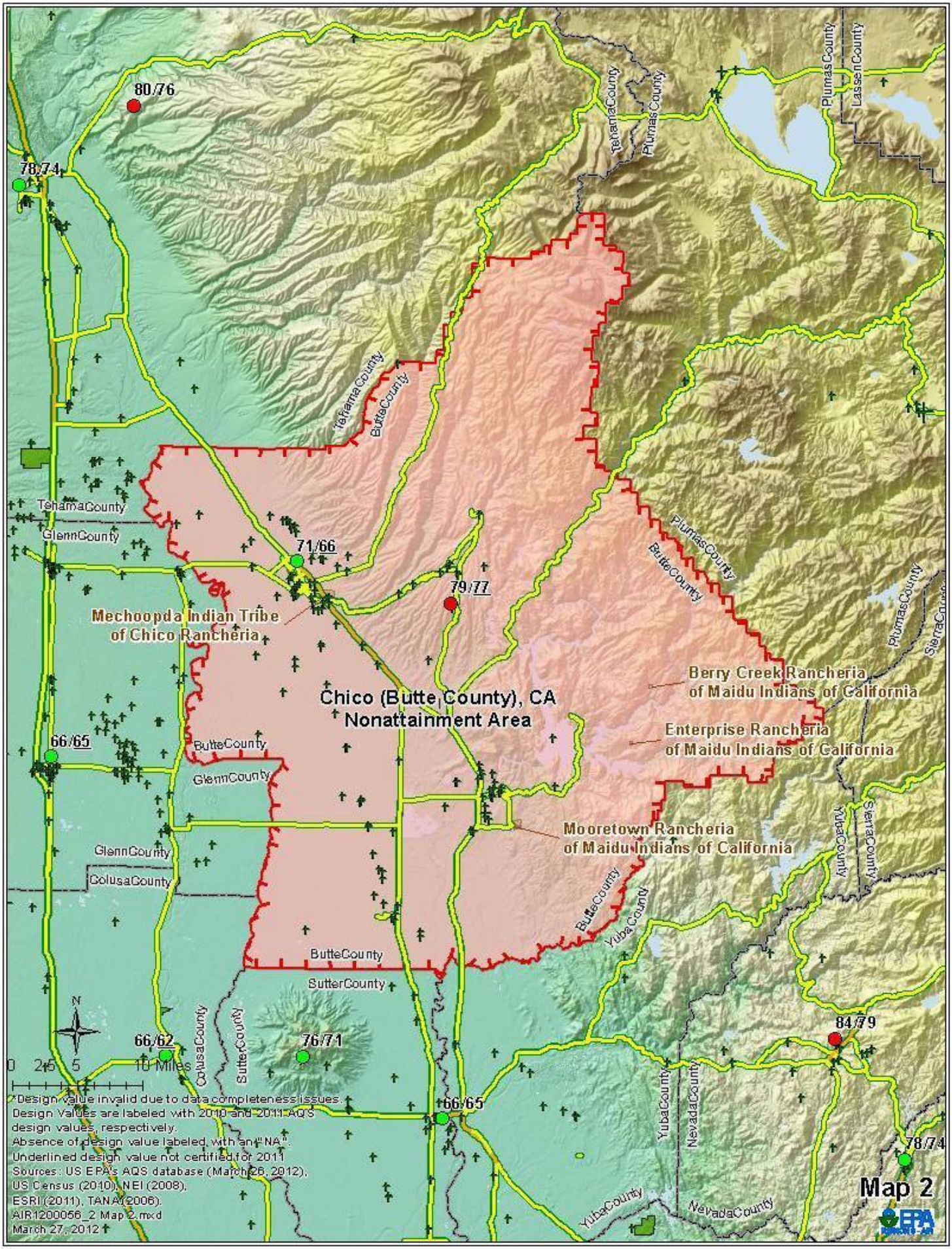
AIR1200056_legend.mxd
March 29, 2012

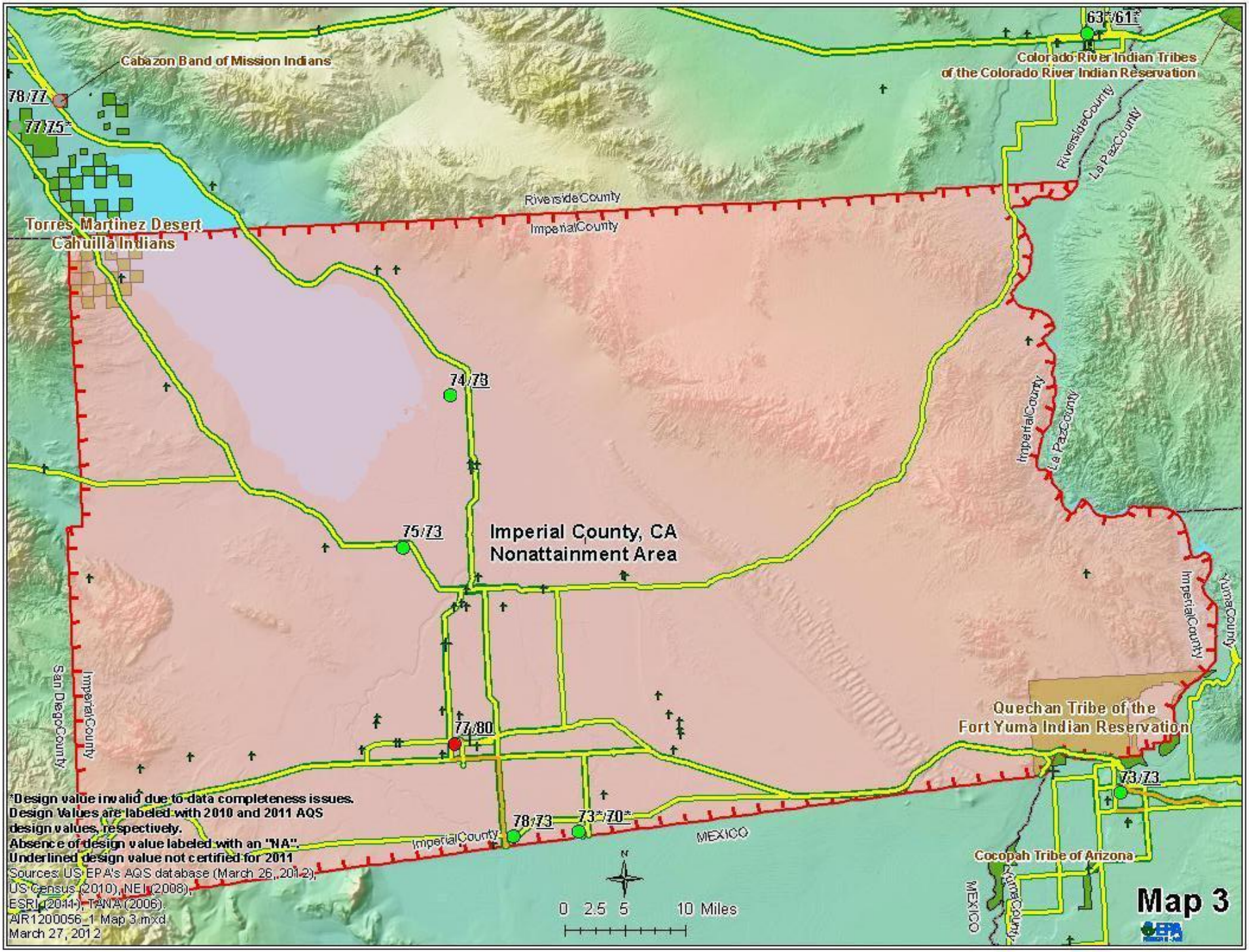
EPA REGION 9 - AIR

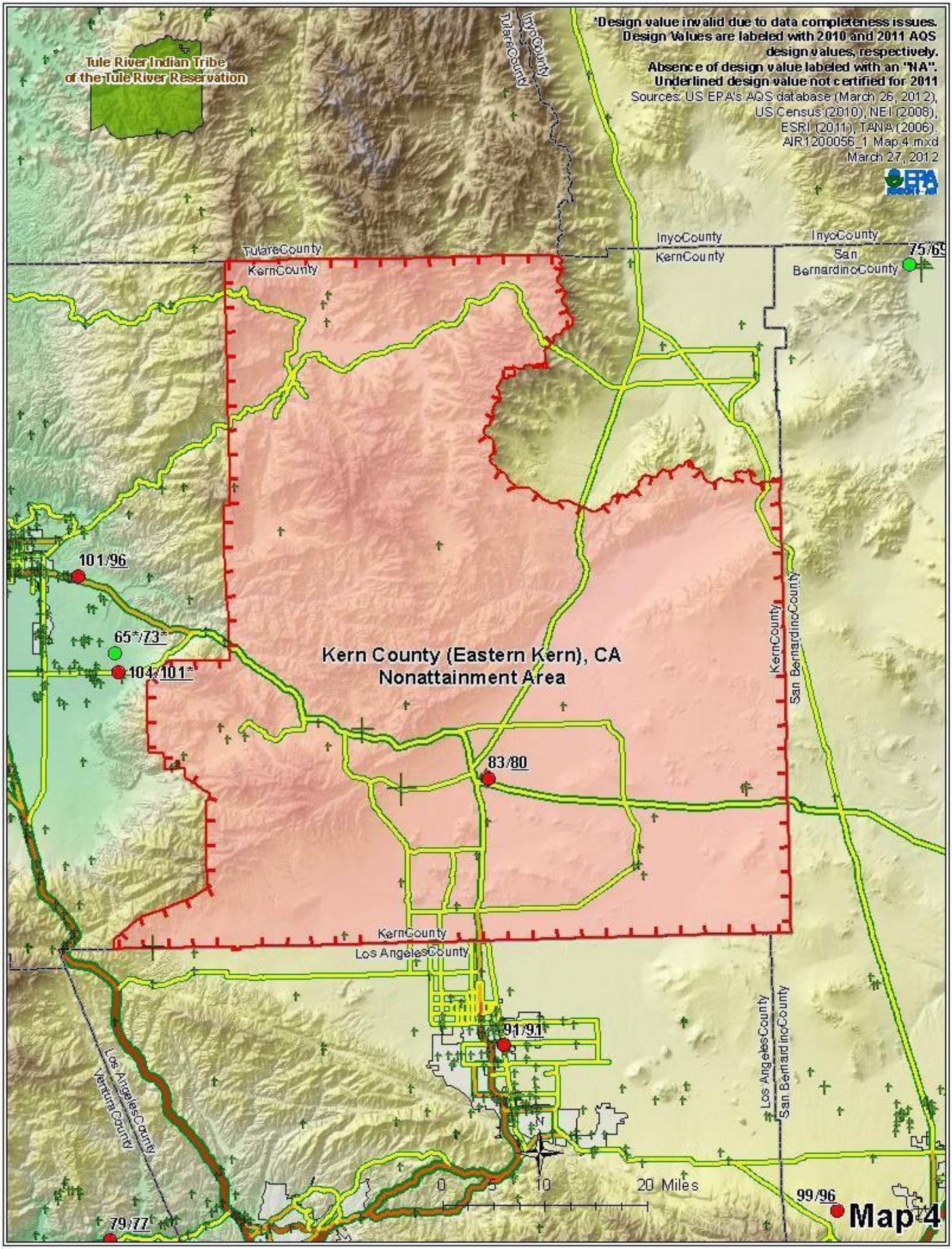

Annual Average Daily
Non-Truck Traffic (Volume/day)
0 - 1,000
1,001 - 2,500
2,501 - 5,000
5,001 - 10,000
> 10,000
0 2.5 5 10 Miles
N
Calaveras County, CA
Nonattainment Area
87/85
89/84
90/80
102/95
92/87
81/71
83/77
82/74
80/75
80/76
Placerville
El Dorado Hills
Cameron Park
Ione Band of Miwok Indians of California
Jackson Rancheria of Me-Wuk Indians of California
Buena Vista Rancheria of Me-Wuk Indians of California
Sierrapine Ltd.
NOx: 82.5 tpy
VOC: 263.3 tpy
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
Sierra Pacific
NOx: 148.7 tpy
VOC: 9.4 tpy
Chicken Ranch Rancheria of Me-Wuk Indians of California
Pacific-Ultrapower
NOx: 202.6 tpy
VOC: 3.3 tpy
Phoenix Lake-Cedar Ridge
Escalon
Ripon
Riverbank
Waterford
Map 1
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 1.mxd
March 27, 2012



Annual Average Daily Truck Traffic (Volume/day)
0 - 500
501 - 1,000
1,001 - 2,000
2,001 - 3,000
> 3,000
N
0 2.5 5 10 Miles
EPA
Calaveras County, CA Nonattainment Area
87/85
89/84
90/80
Placerville
102/95
El Dorado Hills
Cameron Park
Loomis
Granite Bay
PlacerCounty
El DoradoCounty
SacramentoCounty
El DoradoCounty
AmadorCounty
CalaverasCounty
TuolumneCounty
AlpineCounty
San JoaquinCounty
StanislausCounty
MercedCounty
MariposaCounty
92/87
Ione Band of Miwok Indians of California
Jackson Rancheria of Me-Wuk Indians of California
Sierrapine Ltd.
NOx: 82.5 tpy
VOC: 263.3 tpy
81/71
Buena Vista Rancheria of Me-Wuk Indians of California
83/77
Phoenix Lake-Cedar Ridge
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
82/74
Sierra Pacific
NOx: 148.7 tpy
VOC: 9.4 tpy
Chicken Ranch Rancheria of Me-Wuk Indians of California
Pacific-Ultrapower
NOx: 202.6 tpy
VOC: 3.3 tpy
Manteca
Escalon
Oakdale
Ripon
Riverbank
Salida
80/75
Waterford
Ceres
Shackelford
Map 1b
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 1b.mxd
March 27, 2012
80/76


80/76
78/74
71/66
79/77
66/65
66/62
76/71
66/65
84/79
78/74
Mechoopda Indian Tribe
of Chico Rancheria
Chico (Butte County), CA
Nonattainment Area
Berry Creek Rancheria
of Maidu Indians of California
Enterprise Rancheria
of Maidu Indians of California
Mooretown Rancheria
of Maidu Indians of California
TehamaCounty
GlennCounty
ButteCounty
PlumasCounty
SierraCounty
ColusaCounty
SutterCounty
YubaCounty
NevadaCounty
0 2.5 5 10 Miles
N
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011.
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_2 Map 2.mxd
March 27, 2012
Map 2


Cabazon Band of Mission Indians
78/77
77/75*
Torres Martinez Desert Cahuilla Indians
Riverside County
Imperial County
63*/61*
Colorado River Indian Tribes of the Colorado River Indian Reservation
Riverside County
La Paz County
74/73
75/73
Imperial County, CA Nonattainment Area
Imperial County
La Paz County
Yuma County
Imperial County
San Diego County
Imperial County
77/80
Quechan Tribe of the Fort Yuma Indian Reservation
73/73
78/73
73*/70*
Imperial County
MEXICO
Cocopah Tribe of Arizona
Yuma County
MEXICO
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 3.mxd
March 27, 2012
N
0 2.5 5 10 Miles
Map 3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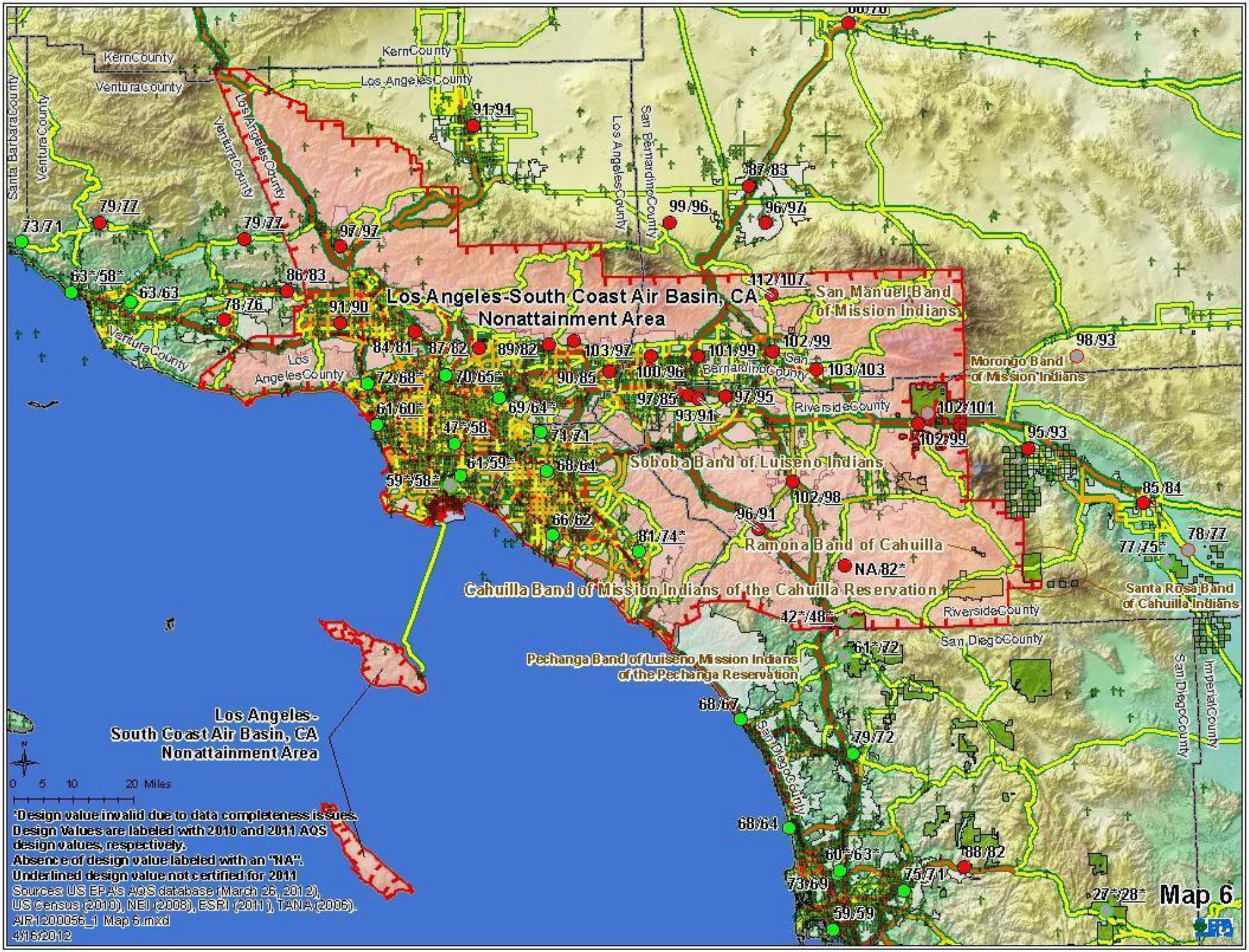
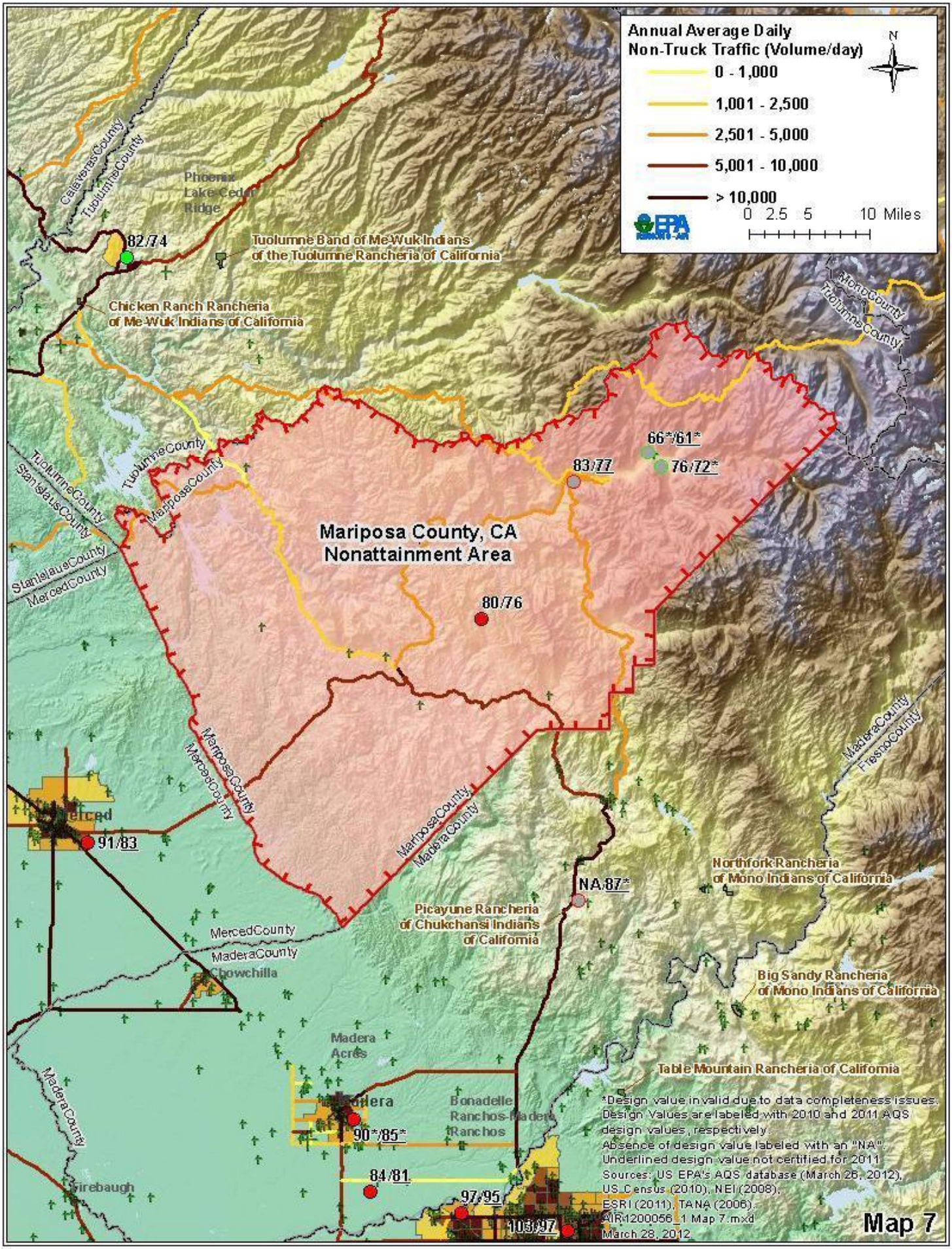
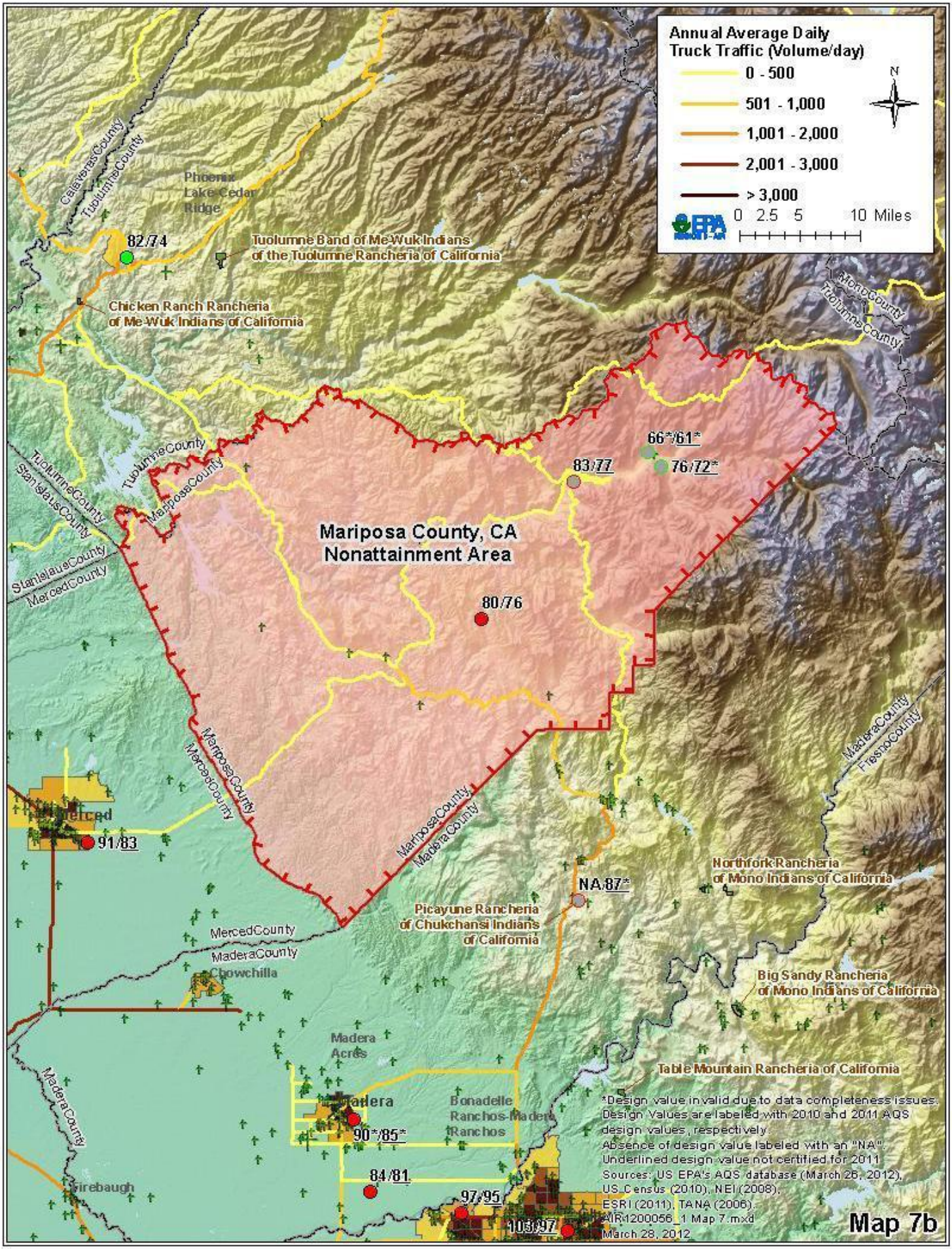
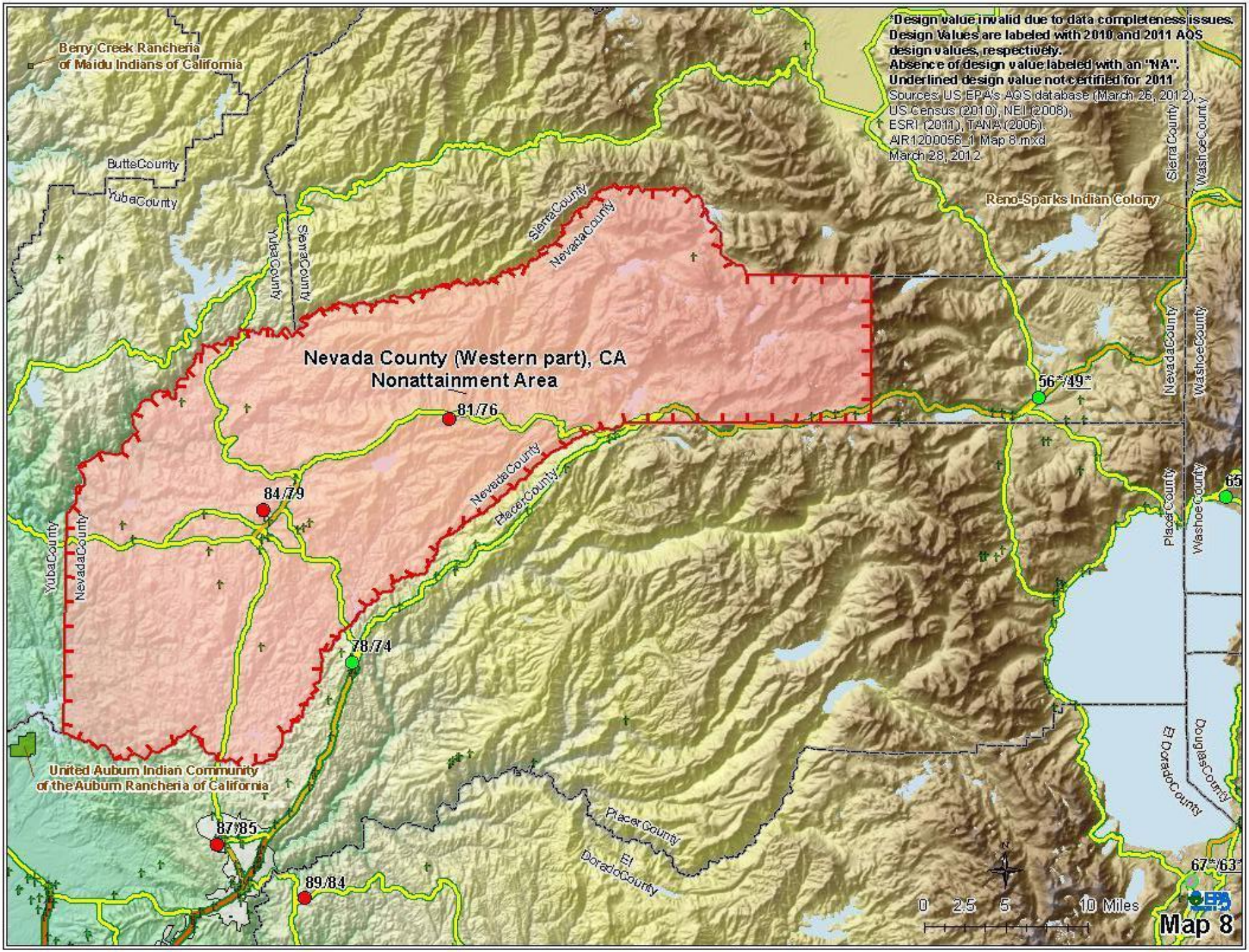
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 4.mxd
March 27, 2012
Tule River Indian Tribe of the Tule River Reservation
TulareCounty
InyoCounty
KernCounty
San BernardinoCounty
Kern County (Eastern Kern), CA Nonattainment Area
101/96
65*/73*
104/101*
83/80
91/91
79/77
99/96
75/69
Los AngelesCounty
VenturaCounty
0 5 10 20 Miles
N
Map 4

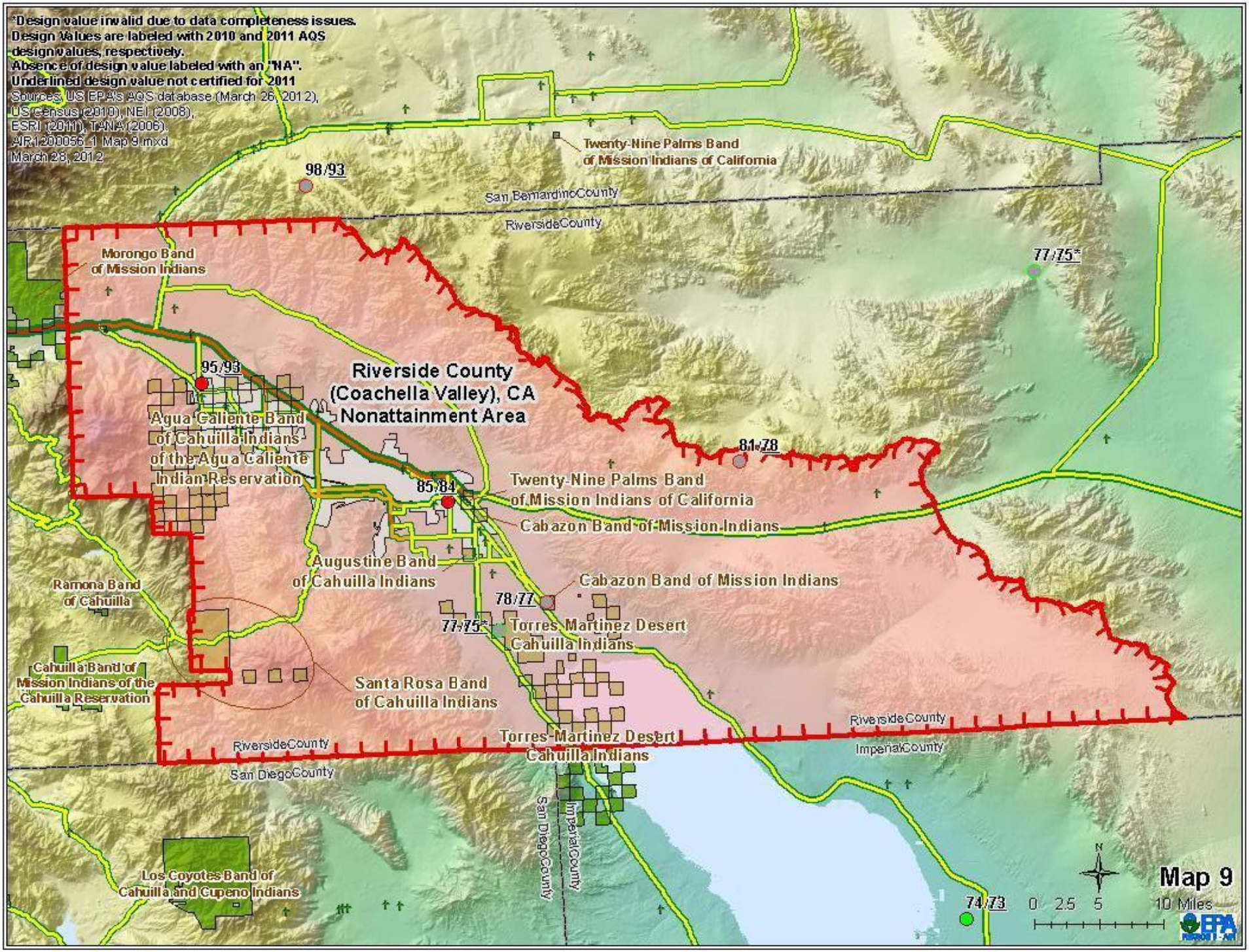

Los Angeles-San Bernardino Counties (West Mojave Desert), CA
Nonattainment Area
Map 5
Twenty-Nine Palms Band of Mission Indians of California
Kern County
Los Angeles County
San Bernardino County
Riverside County
Orange County
Ventura County
101/96
65*/73*
104/101*
83/80
81/78
80/76
91/91
87/83
99/96
96/97
79/77
97/97
86/83
78/76
91/90
84/81
87/82
89/82
103/97
100/96
101/99
102/99
112/107
103/103
98/93
90/85
72/68*
70/65*
69/64*
97/85
97/95
93/91
102/101
102/99
95/93
61/60*
47*/58
74/71
61/59*
68/64
59*/58*
66/62
81/74*
102/98*
96/91
85/84
81/78
77/75*
78/77
NA/82*
42*/48*
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 5.mxd
March 27, 2012

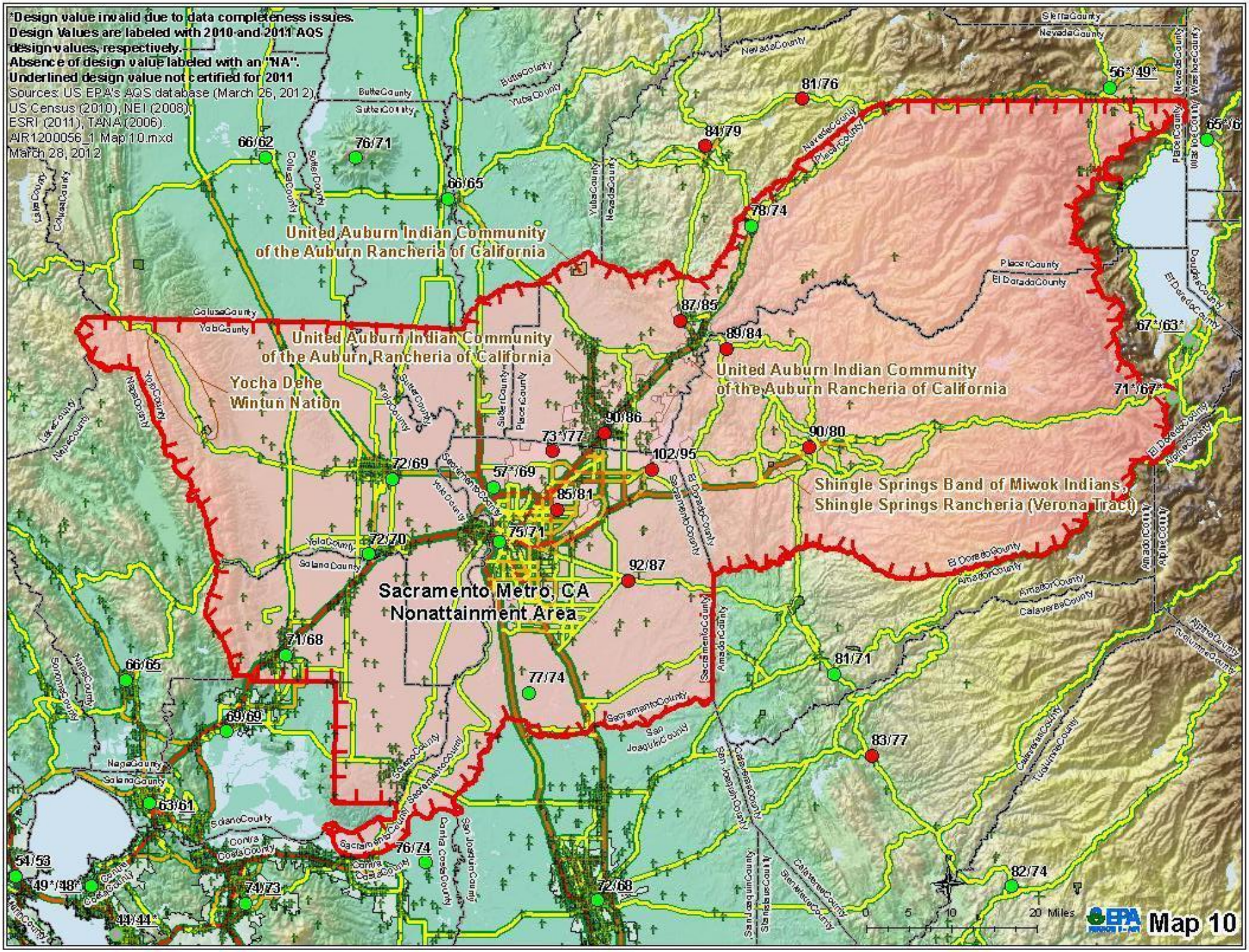

Kern County
Ventura County
Los Angeles County
San Bernardino County
Riverside County
San Diego County
Imperial County
Santa Barbara County
Los Angeles-South Coast Air Basin, CA Nonattainment Area
San Manuel Band of Mission Indians
Morongo Band of Mission Indians
Soboba Band of Luiseno Indians
Ramona Band of Cahuilla
Cahuilla Band of Mission Indians of the Cahuilla Reservation
Santa Rosa Band of Cahuilla Indians
Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation
Los Angeles-South Coast Air Basin, CA Nonattainment Area
0 5 10 20 Miles
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 6.mxd
4/16/2012
Map 6

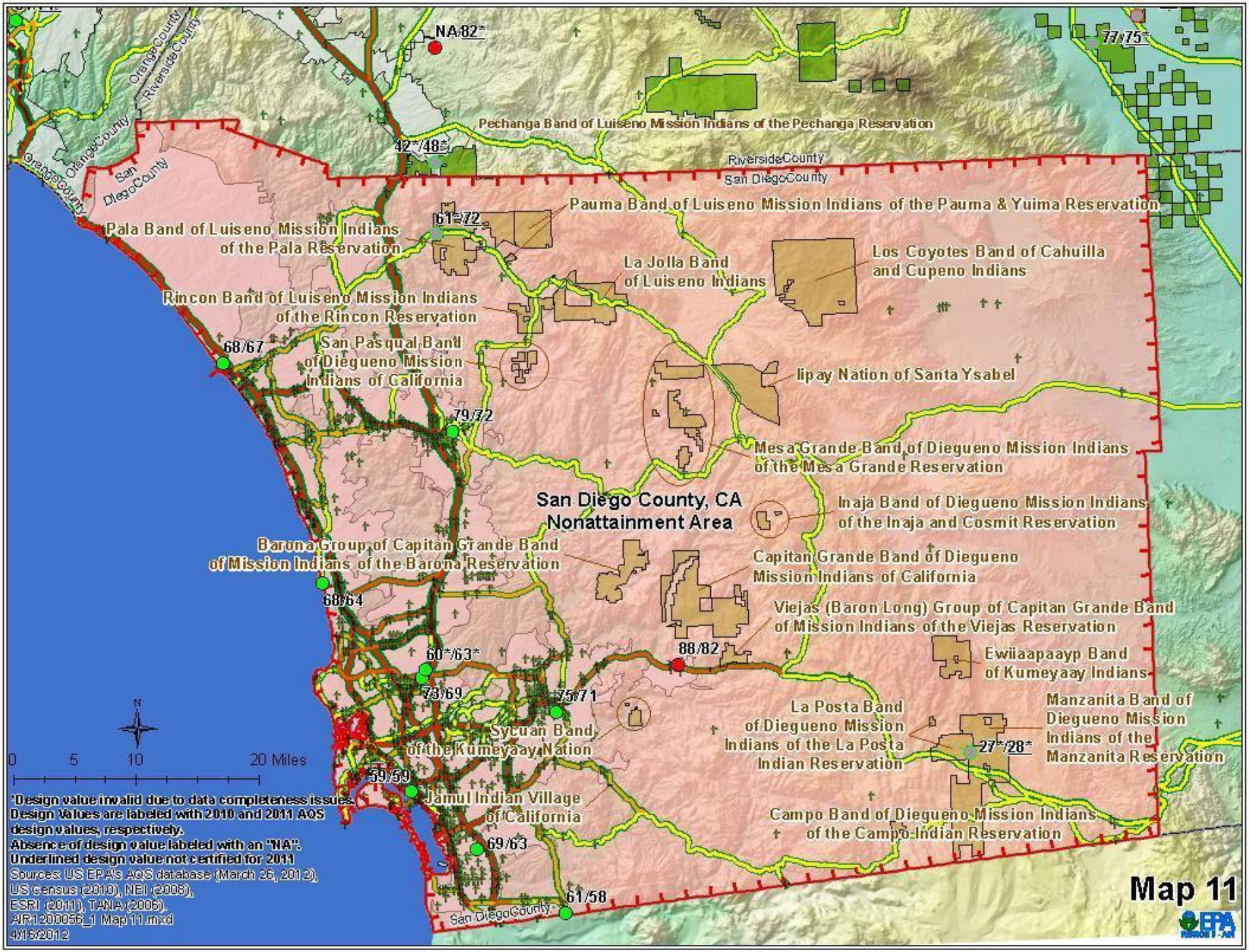

Annual Average Daily
Non-Truck Traffic (Volume/day)
0 - 1,000
1,001 - 2,500
2,501 - 5,000
5,001 - 10,000
> 10,000
N
0 2.5 5 10 Miles
Calaveras County
Tuolumne County
Phoenix Lake-Cedar Ridge
82/74
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
Chicken Ranch Rancheria of Me-Wuk Indians of California
Mono County
Tuolumne County
66*/61*
76/72*
83/77
Tuolumne County
Stanislaus County
Mariposa County
Mariposa County, CA Nonattainment Area
80/76
Stanislaus County
Merced County
Mariposa County
Merced County
Mariposa County
Madera County
Madera County
Fresno County
91/83
NA/87*
Northfork Rancheria of Mono Indians of California
Picayune Rancheria of Chukchansi Indians of California
Merced County
Madera County
Chowchilla
Big Sandy Rancheria of Mono Indians of California
Madera Acres
Table Mountain Rancheria of California
Madera County
Madera
Bonadelle Ranchos-Madera Ranchos
90*/85*
84/81
Firebaugh
97/95
103/97
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011.
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR\200056_1 Map 7.mxd
March 28, 2012
Map 7


Annual Average Daily
Truck Traffic (Volume/day)
0 - 500
501 - 1,000
1,001 - 2,000
2,001 - 3,000
> 3,000
N
0 2.5 5 10 Miles
Calaveras County
Tuolumne County
Phoenix Lake-Cedar Ridge
82/74
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
Chicken Ranch Rancheria of Me-Wuk Indians of California
Mono County
Tuolumne County
66*/61*
83/77
76/72*
Tuolumne County
Stanislaus County
Mariposa County
Mariposa County, CA Nonattainment Area
80/76
Stanislaus County
Merced County
Mariposa County
Merced County
Madera County
Fresno County
Merced
91/83
Mariposa County
Madera County
NA/87*
Northfork Rancheria of Mono Indians of California
Picayune Rancheria of Chukchansi Indians of California
Merced County
Madera County
Chowchilla
Big Sandy Rancheria of Mono Indians of California
Madera Acres
Table Mountain Rancheria of California
Madera County
Madera
Bonadelle Ranchos-Madera Ranchos
90*/85*
84/81
Firebaugh
97/95
103/97
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011.
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR\200056_1 Map 7.mxd
March 28, 2012
Map 7b

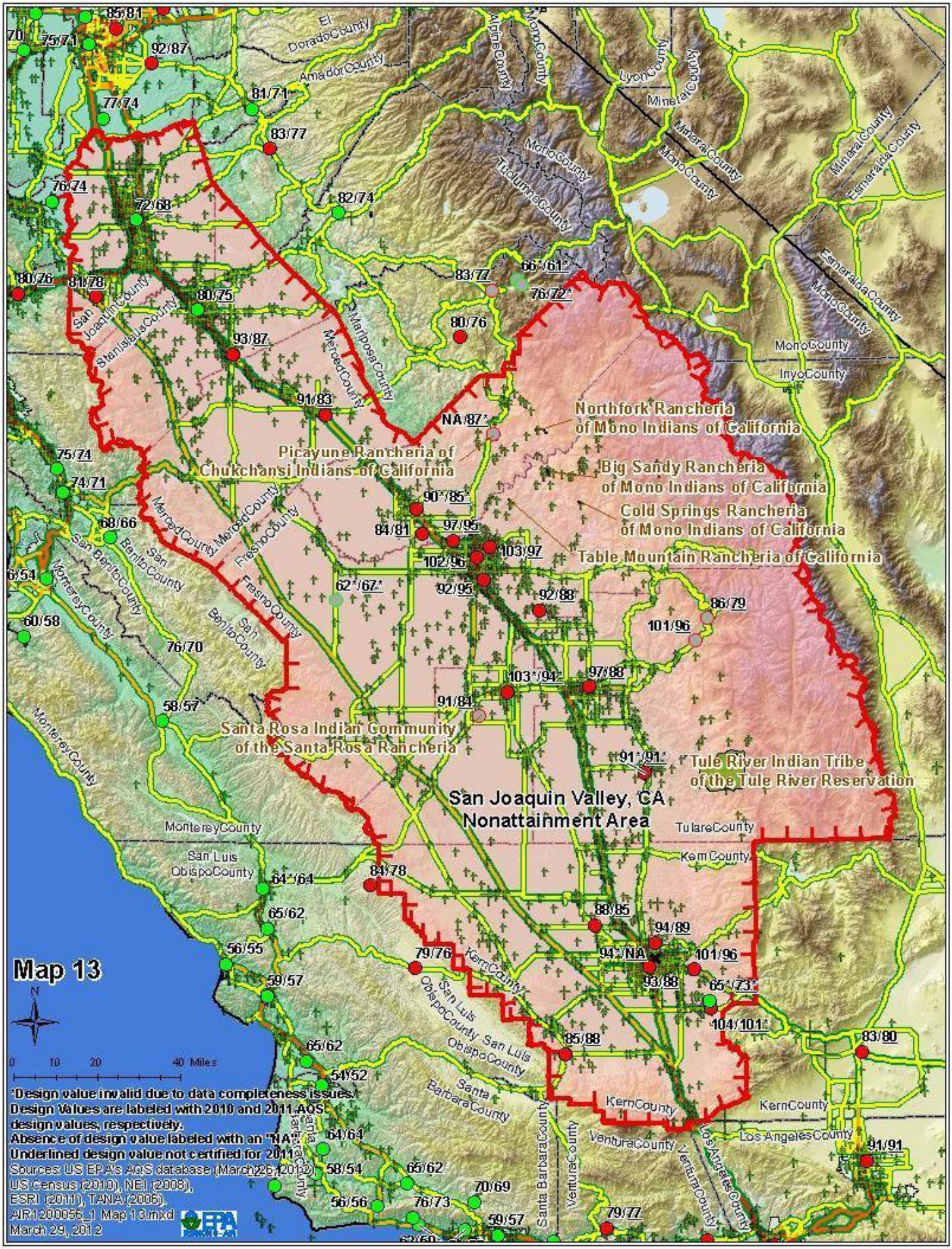

*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 8.mxd
March 28, 2012
Berry Creek Rancheria of Maidu Indians of California
Butte County
Yuba County
Sierra County
Nevada County
Reno-Sparks Indian Colony
Washoe County
Nevada County (Western part), CA Nonattainment Area
81/76
56*/49*
84/79
Placer County
78/74
United Auburn Indian Community of the Auburn Rancheria of California
87/85
89/84
El Dorado County
Douglas County
67*/63*
0 2.5 5 10 Miles
Map 8

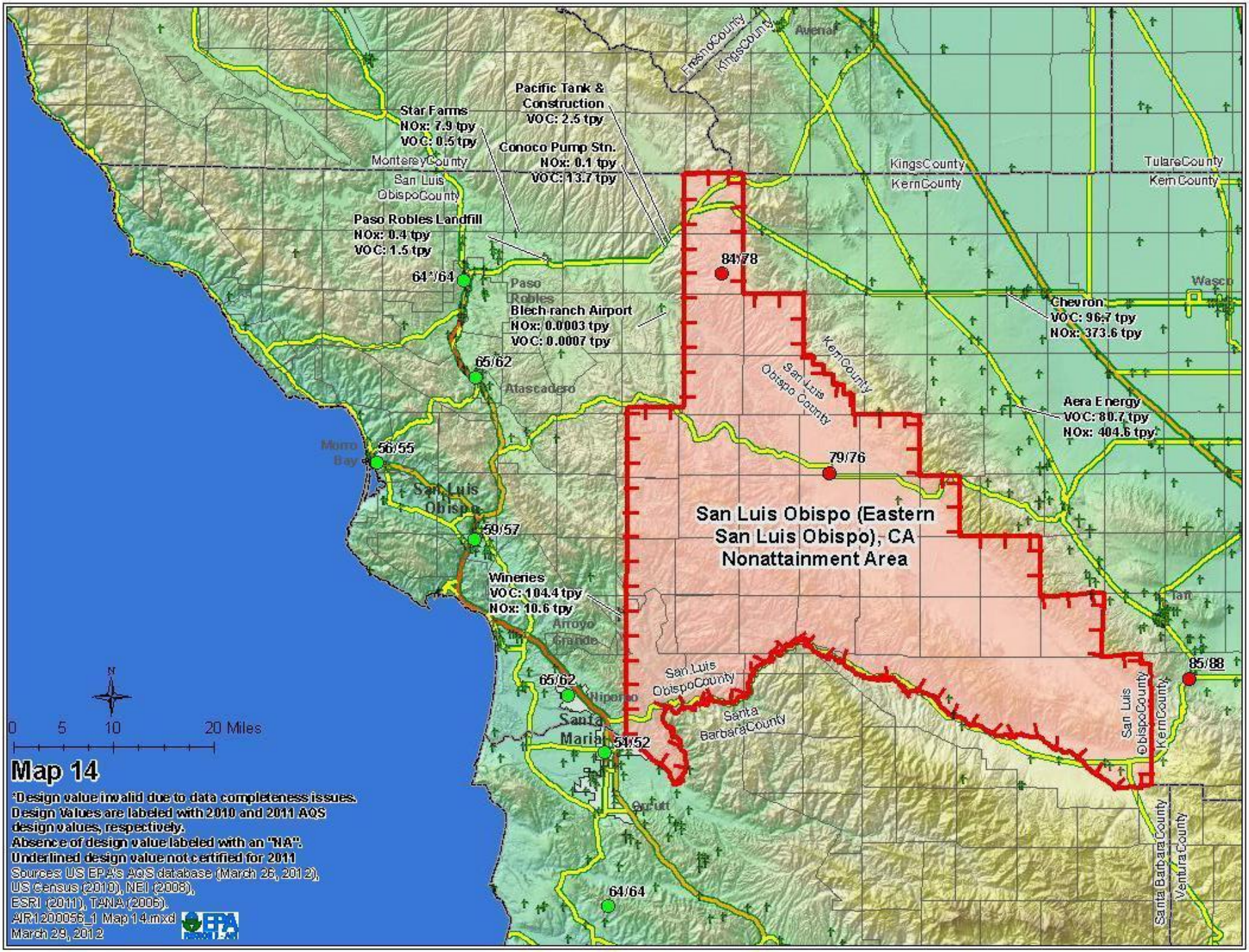

*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR\200056_1 Map 9.mxd
March 28, 2012
Twenty-Nine Palms Band of Mission Indians of California
98/93
San BernardinoCounty
RiversideCounty
Morongo Band of Mission Indians
77/75*
95/93
Riverside County (Coachella Valley), CA Nonattainment Area
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
81/78
85/84
Twenty-Nine Palms Band of Mission Indians of California
Cabazon Band of Mission Indians
Augustine Band of Cahuilla Indians
Ramona Band of Cahuilla
Cabazon Band of Mission Indians
78/77
77/75*
Torres-Martinez Desert Cahuilla Indians
Cahuilla Band of Mission Indians of the Cahuilla Reservation
Santa Rosa Band of Cahuilla Indians
RiversideCounty
ImperialCounty
Torres-Martinez Desert Cahuilla Indians
RiversideCounty
San DiegoCounty
San DiegoCounty
ImperialCounty
Los Coyotes Band of Cahuilla and Cupeno Indians
74/73
N
Map 9
0 2.5 5
10 Miles

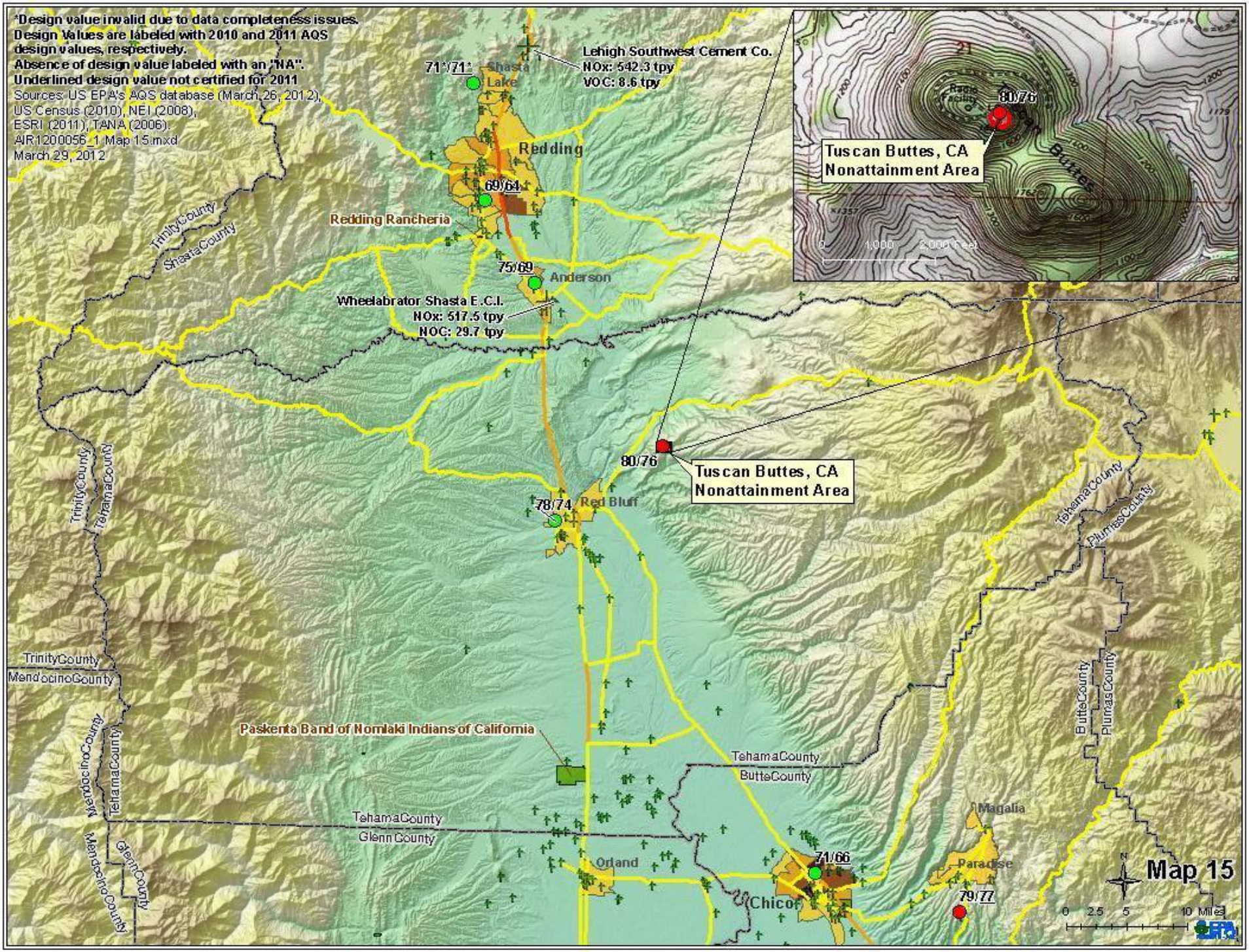

*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 10.mxd
March 28, 2012
United Auburn Indian Community of the Auburn Rancheria of California
Yocha Dehe Wintun Nation
Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract)
Sacramento Metro, CA Nonattainment Area
81/76
56*/49*
84/79
66/62
76/71
66/65
78/74
87/85
89/84
67*/63*
71*/67*
90/86
73*/77
90/80
102/95
72/69
57*/69
85/81
75/71
72/70
92/87
71/68
66/65
77/74
81/71
69/69
83/77
63/61
54/53
49*/48*
76/74
74/73
72/68
82/74
44/44*
0 5 10 20 Miles
Map 10


NA/82*
77/75*
Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation
42*/48*
Orange County
Riverside County
San Diego County
Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation
61*/72
Pala Band of Luiseno Mission Indians of the Pala Reservation
La Jolla Band of Luiseno Indians
Los Coyotes Band of Cahuilla and Cupeno Indians
Rincon Band of Luiseno Mission Indians of the Rincon Reservation
68/67
San Pasqual Band of Diegueno Mission Indians of California
Iipay Nation of Santa Ysabel
79/72
Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation
San Diego County, CA Nonattainment Area
Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit Reservation
Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation
Capitan Grande Band of Diegueno Mission Indians of California
68/64
Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation
88/82
60*/63*
Ewiiaapaayp Band of Kumeyaay Indians
73/69
75/71
La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation
Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation
Sycuan Band of the Kumeyaay Nation
27*/28*
59/59
Jamul Indian Village of California
Campo Band of Diegueno Mission Indians of the Campo Indian Reservation
69/63
61/58
San Diego County
N
0 5 10 20 Miles
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 11.mxd
4/16/2012
Map 11

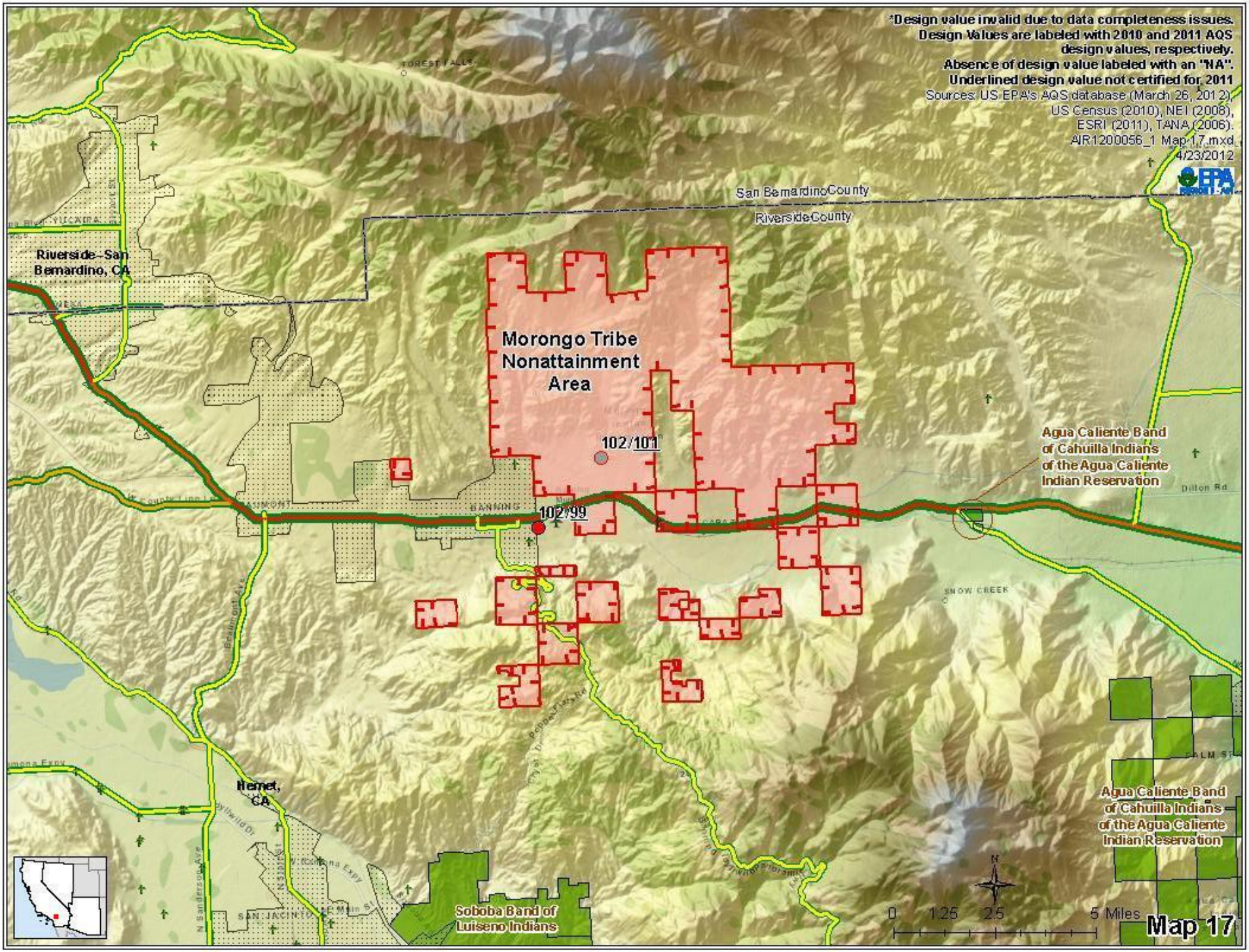

Lytton Rancheria of California
Federated Indians of Graton Rancheria
San Francisco Bay Area, CA Nonattainment Area
Lytton Rancheria of California
San Francisco Bay Area, CA Nonattainment Area
MendocinoCounty
SonomaCounty
LakeCounty
NapaCounty
ColusaCounty
YoloCounty
SutterCounty
PlacerCounty
SolanoCounty
SacramentoCounty
San JoaquinCounty
MarinCounty
ContraCostaCounty
AlamedaCounty
SanMateoCounty
Santa ClaraCounty
SantaCruzCounty
StanislausCounty
MercedCounty
San BenitoCounty
44/41
54/50
66/65
71/68
72/69
57*/69
90/86
73*/77
102
85/81
75/71
92/87
77/74
69/69
63/61
54/53
49*/48*
74/73
76/74
72/68
44/44*
53*/59*
47/47
53/49
69*/64*
80/76
81/78
62/63*
57/56
66/63
61*/62*
73/70
75/74
74/71
46*/49*
56/55
68/66
0 5 10 20 Miles
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 12.mxd
March 28, 2012
Map 12

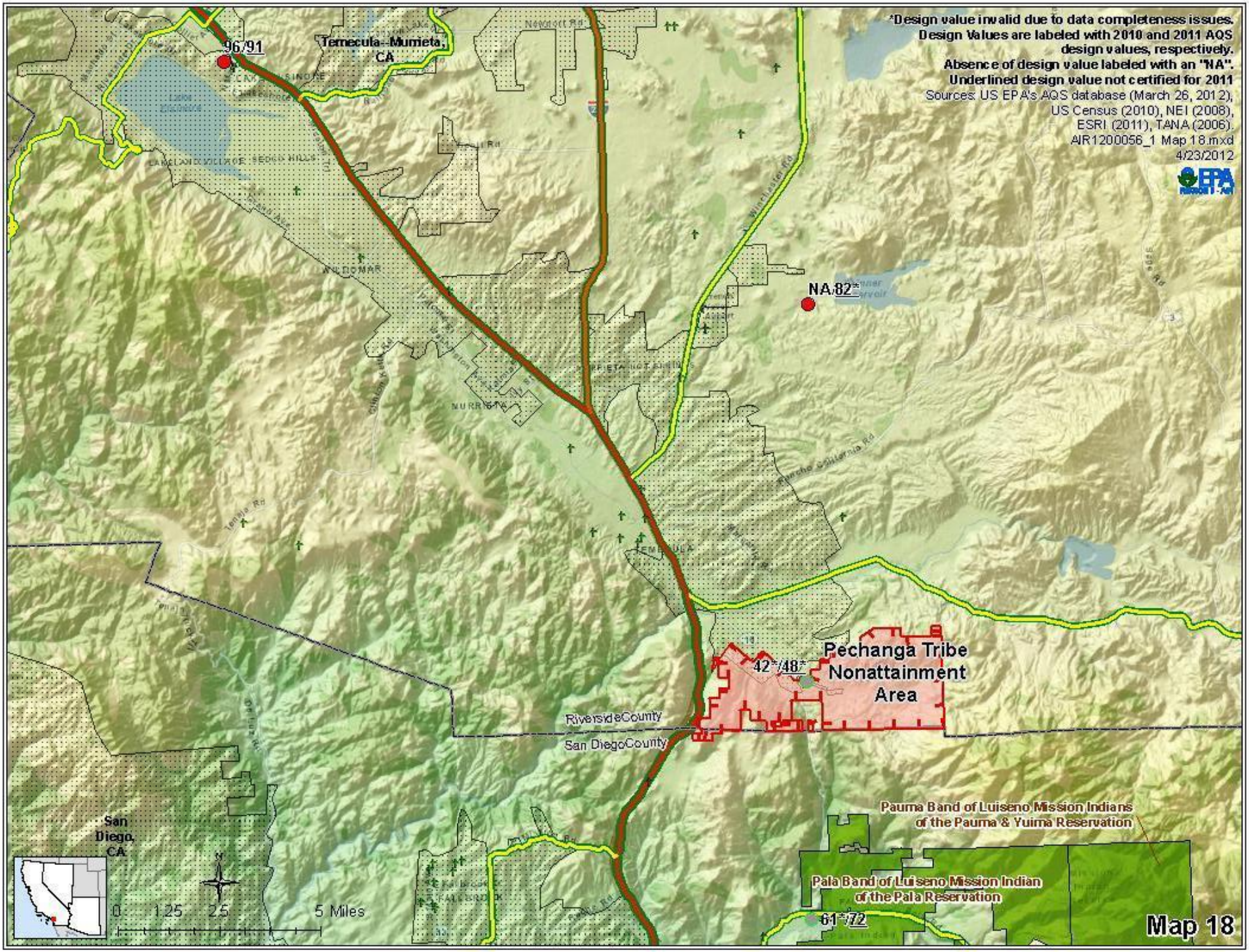

Map 13
N
0 10 20 40 Miles
Northfork Rancheria of Mono Indians of California
Picayune Rancheria of Chukchansi Indians of California
Big Sandy Rancheria of Mono Indians of California
Cold Springs Rancheria of Mono Indians of California
Table Mountain Rancheria of California
Santa Rosa Indian Community of the Santa Rosa Rancheria
Tule River Indian Tribe of the Tule River Reservation
San Joaquin Valley, CA Nonattainment Area
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011.
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 13.mxd
March 29, 2012


Star Farms
NOx: 7.9 tpy
VOC: 0.5 tpy
Pacific Tank & Construction
VOC: 2.5 tpy
Conoco Pump Stn.
NOx: 0.1 tpy
VOC: 13.7 tpy
Paso Robles Landfill
NOx: 0.4 tpy
VOC: 1.5 tpy
Blech ranch Airport
NOx: 0.0003 tpy
VOC: 0.0007 tpy
Chevron
VOC: 96.7 tpy
NOx: 373.6 tpy
Aera Energy
VOC: 80.7 tpy
NOx: 404.6 tpy
Wineries
VOC: 104.4 tpy
NOx: 10.6 tpy
84/78
64*/64
65/62
56/55
79/76
59/57
65/62
85/88
54/52
64/64
San Luis Obispo (Eastern San Luis Obispo), CA Nonattainment Area
Monterey County
San Luis Obispo County
Kings County
Kern County
Tulare County
Fresno County
Santa Barbara County
Ventura County
Paso Robles
Atascadero
Morro Bay
San Luis Obispo
Arroyo Grande
Nipomo
Santa Maria
Orcutt
Taft
Wasco
Avenal
0 5 10 20 Miles
Map 14
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 14.mxd
March 29, 2012


*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 15.mxd
March 29, 2012
Lehigh Southwest Cement Co.
NOx: 542.3 tpy
VOC: 8.6 tpy
71*/71*
Shasta Lake
Redding
69/64
Redding Rancheria
75/69
Anderson
Wheelabrator Shasta E.C.I.
NOx: 517.5 tpy
NOC: 29.7 tpy
80/76
Tuscan Buttes, CA Nonattainment Area
78/74
Red Bluff
Paskenta Band of Nomlaki Indians of California
Orland
71/66
Chico
Paradise
Magalia
79/77
Map 15
0 2.5 5 10 Miles
Trinity County
Shasta County
Tehama County
Mendocino County
Glenn County
Butte County
Plumas County


San Luis Obispo County
Kern County
Kern County
Ventura County
Kern County
Los Angeles County
Santa Barbara County
Ventura County
Los Angeles County
Ventura County
Ventura County, CA
Nonattainment Area
79/77
79/77
73/71
63*/58*
63/63
86/83
78/76
Ventura County
Los Angeles County
N
0 2.5 5 10 Miles
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_2 Map 16.mxd
March 29, 2012
Map 16


*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 17.mxd
4/23/2012
San Bernardino County
Riverside County
Riverside-San Bernardino, CA
Morongo Tribe Nonattainment Area
102/101
102/99
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
Soboba Band of Luiseno Indians
Hemet, CA
0 1.25 2.5 5 Miles
Map 17


*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 18.mxd
4/23/2012
96/91
Temecula--Murrieta, CA
NA/82*
42*/48*
Pechanga Tribe Nonattainment Area
Riverside County
San Diego County
Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation
Pala Band of Luiseno Mission Indian of the Pala Reservation
61*/72
San Diego, CA
0 1.25 2.5 5 Miles
Map 18

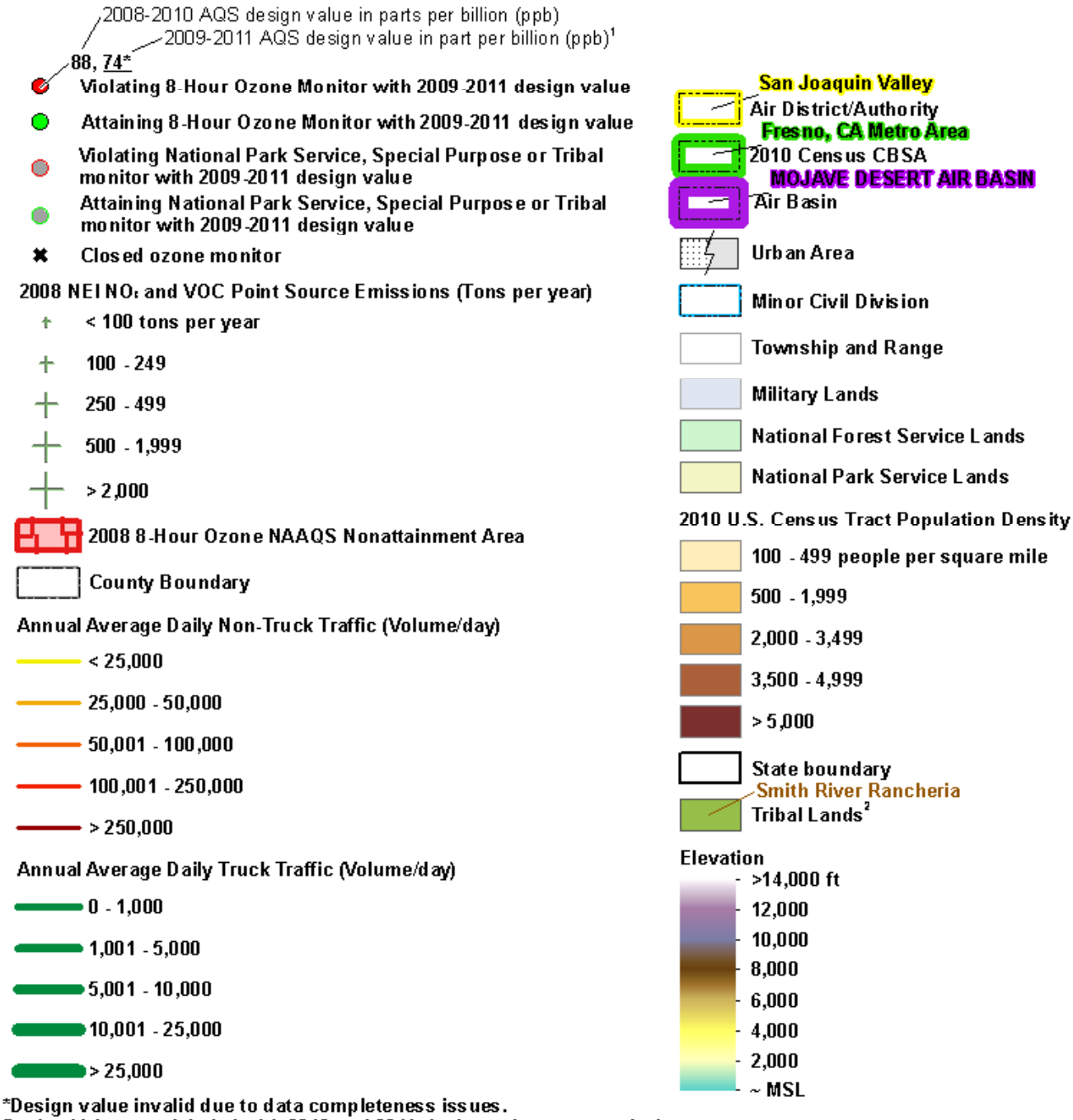
Appendix 2:

Maps showing Jurisdictional Boundaries and Detailed Population

Appendix 2: Map Numbering

2008 8-hour ozone NAAQS Nonattainment Area	Map Number
Calaveras County, CA	1a
Chico (Butte County), CA	2a
Imperial County, CA	3a
Kern County (Eastern Kern), CA	4a
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	5a
Los Angeles-South Coast Air Basin, CA	6a
Mariposa County, CA	7a
Nevada County (Western part), CA	8a
Riverside County (Coachella Valley), CA	9a
Sacramento Metro, CA	10a
San Diego County, CA	11a
San Francisco Bay Area, CA	12a
San Joaquin Valley, CA	13a
San Luis Obispo (Eastern San Luis Obispo), CA	14a
Tuscan Buttes, CA	15a
Ventura County, CA	16a
Morongo Band of Missions Indians (Morongo Tribe)	17a
Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation (Pechanga Tribe)	18a

Legend



***Design value invalid due to data completeness issues.**
Design Values are labeled with 2010 and 2011 design values, respectively.
Absence of design value labeled with "NA".

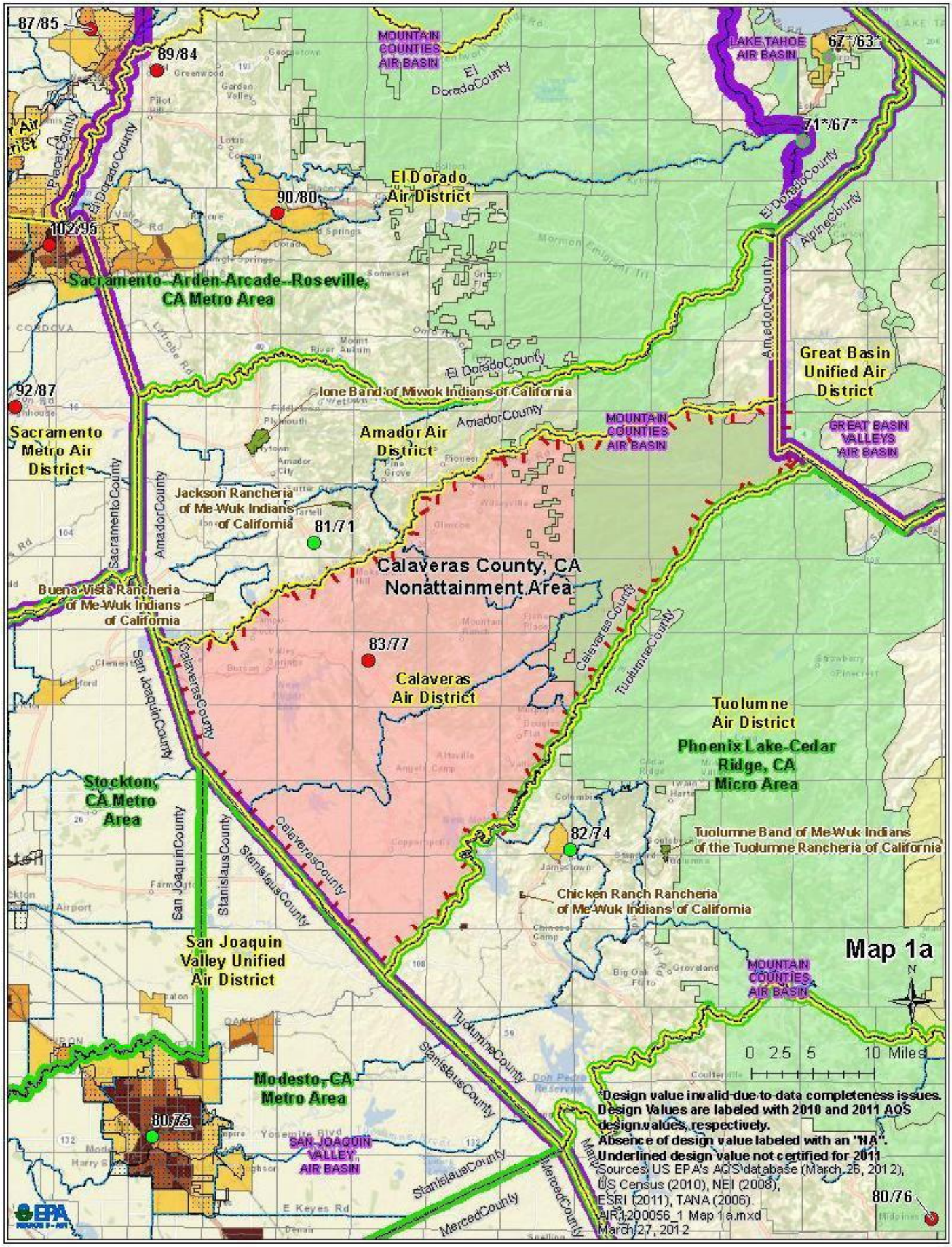
Sources: US EPA's AQS database (March 26, 2012), US EPA's National Emissions Inventory (2008), U.S. Census (2010), ESRI (2012), Teledyne Atlas (2006), U.S. Department of Transportation (2007).

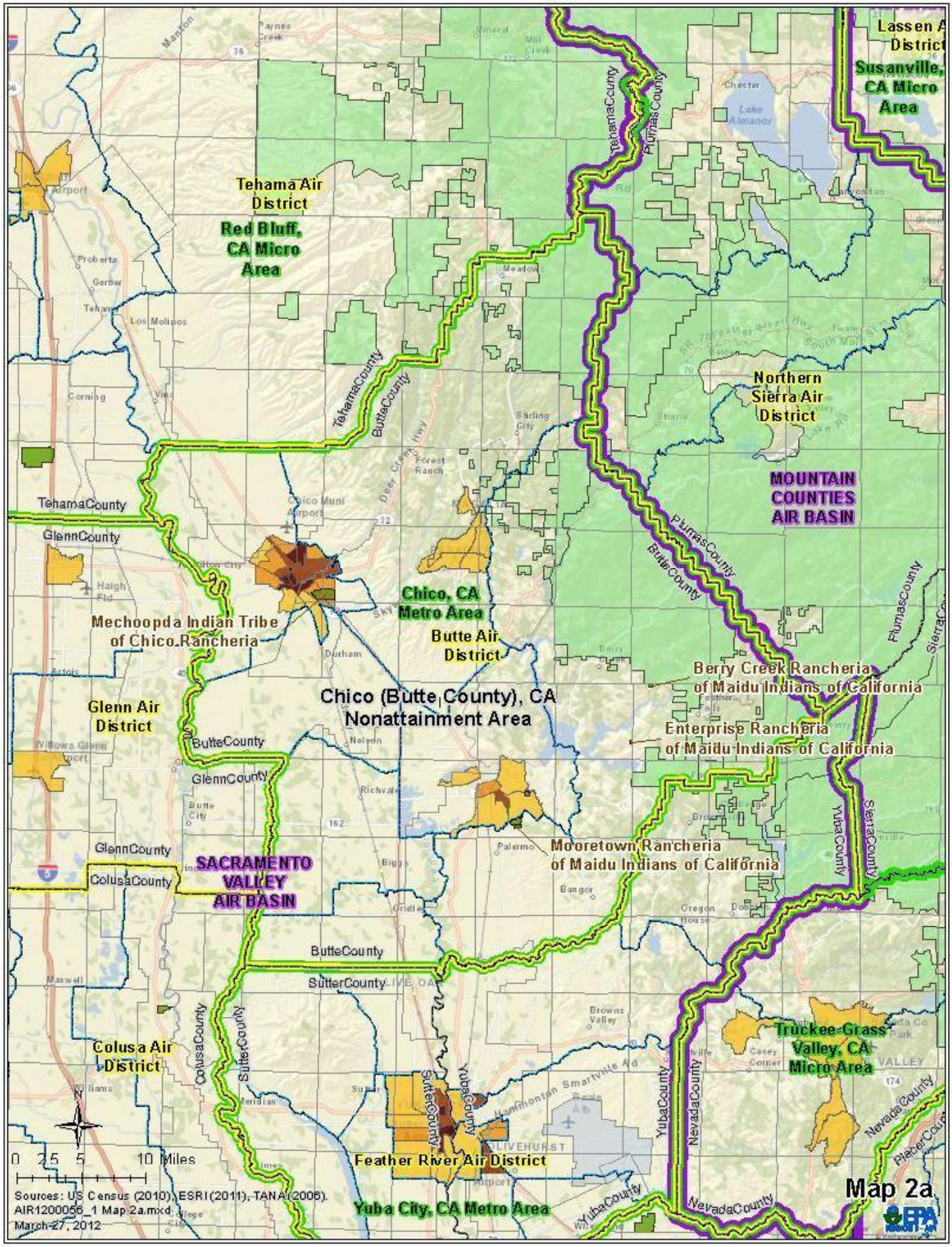
[1] Underlined 2009-2011 monitor design value labels have not been certified by EPA for 2011.

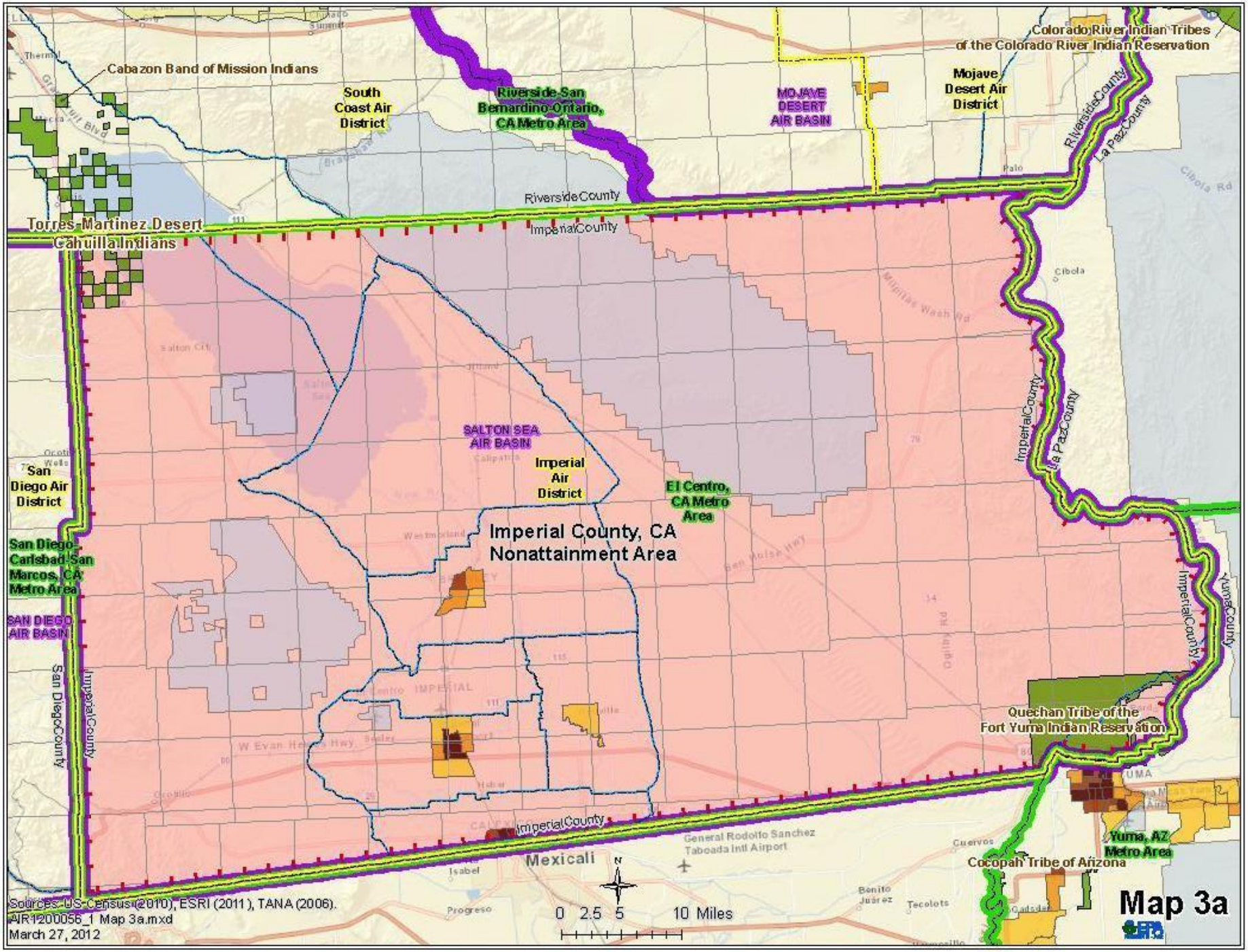
[2] Areas of Indian country displayed here are intended for illustrative purposes only. EPA does not have the authority to define official boundaries for areas of Indian country. Hence, EPA does not guarantee the accuracy or completeness of Indian country boundaries displayed in this map.

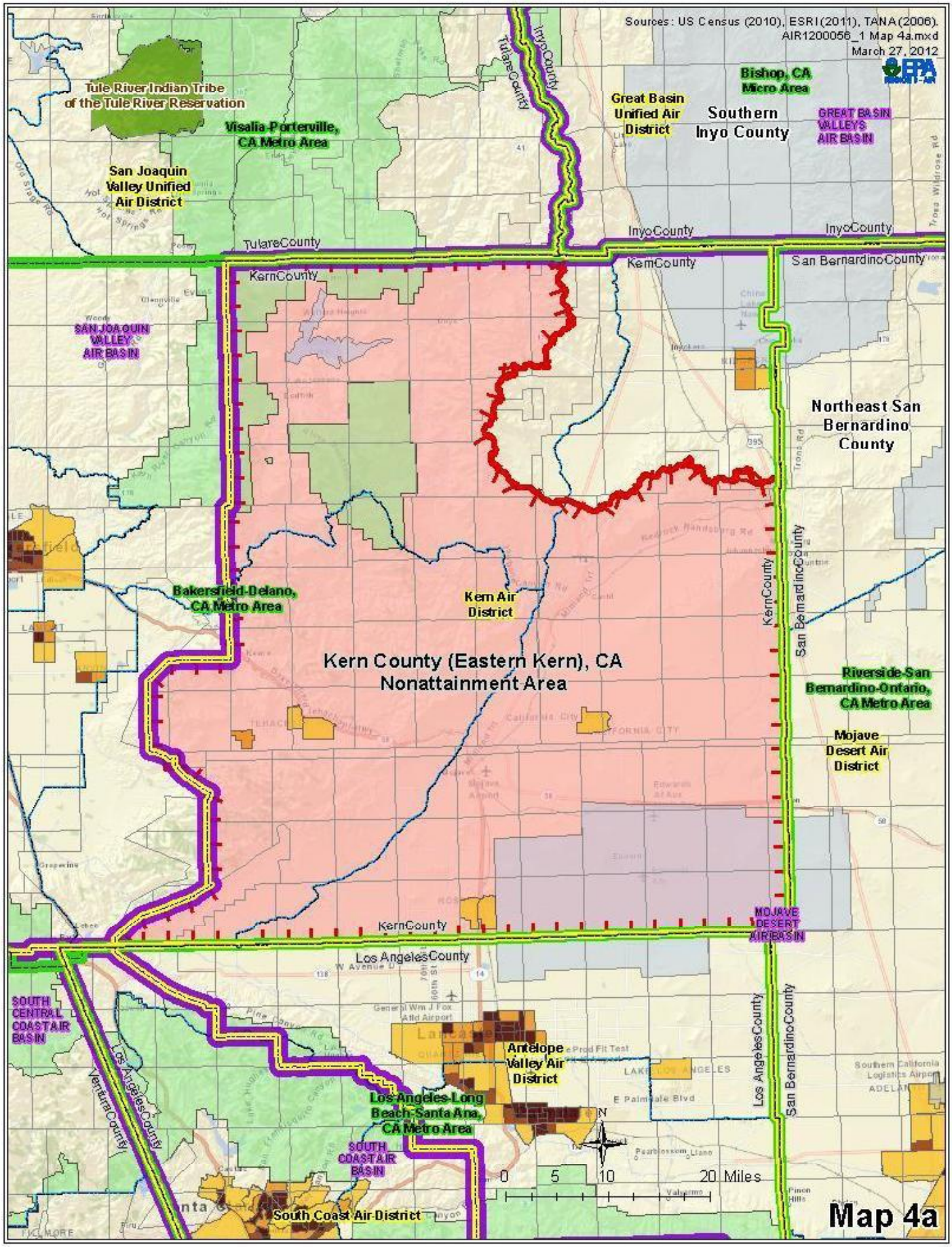
AIR1200056_legend.mxd
March 29, 2012

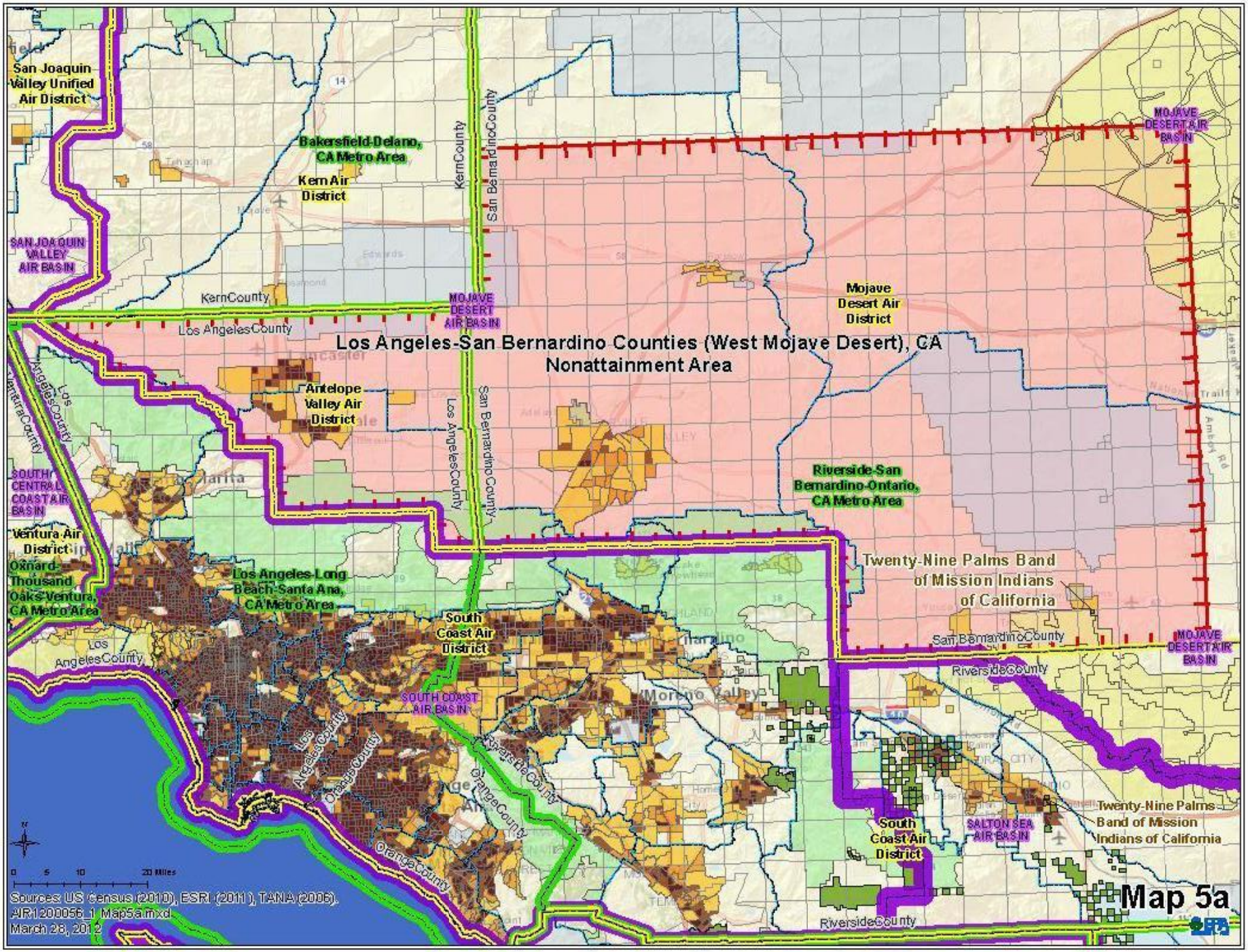
EPA REGION 9 - AIR


87/85
89/84
MOUNTAIN COUNTIES AIR BASIN
LAKE TAHOE AIR BASIN
67*/63*
71*/67*
El Dorado County
Placer County
El Dorado Air District
90/80
102/95
Sacramento-Arden-Arcade-Roseville, CA Metro Area
Alpine County
Amador County
Great Basin Unified Air District
92/87
Sacramento Metro Air District
Ione Band of Miwok Indians of California
Amador Air District
MOUNTAIN COUNTIES AIR BASIN
GREAT BASIN VALLEYS AIR BASIN
Jackson Rancheria of Me-Wuk Indians of California
81/71
Sacramento County
Calaveras County, CA Nonattainment Area
Buena Vista Rancheria of Me-Wuk Indians of California
83/77
Calaveras Air District
Tuolumne County
Tuolumne Air District
Phoenix Lake-Cedar Ridge, CA Micro Area
San Joaquin County
Stockton, CA Metro Area
82/74
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
Stanislaus County
Chicken Ranch Rancheria of Me-Wuk Indians of California
Map 1a
San Joaquin Valley Unified Air District
MOUNTAIN COUNTIES AIR BASIN
N
0 2.5 5 10 Miles
Modesto, CA Metro Area
80/75
SAN JOAQUIN VALLEY AIR BASIN
Merced County
80/76
Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR\200056_1 Map 1a.mxd
March 27, 2012

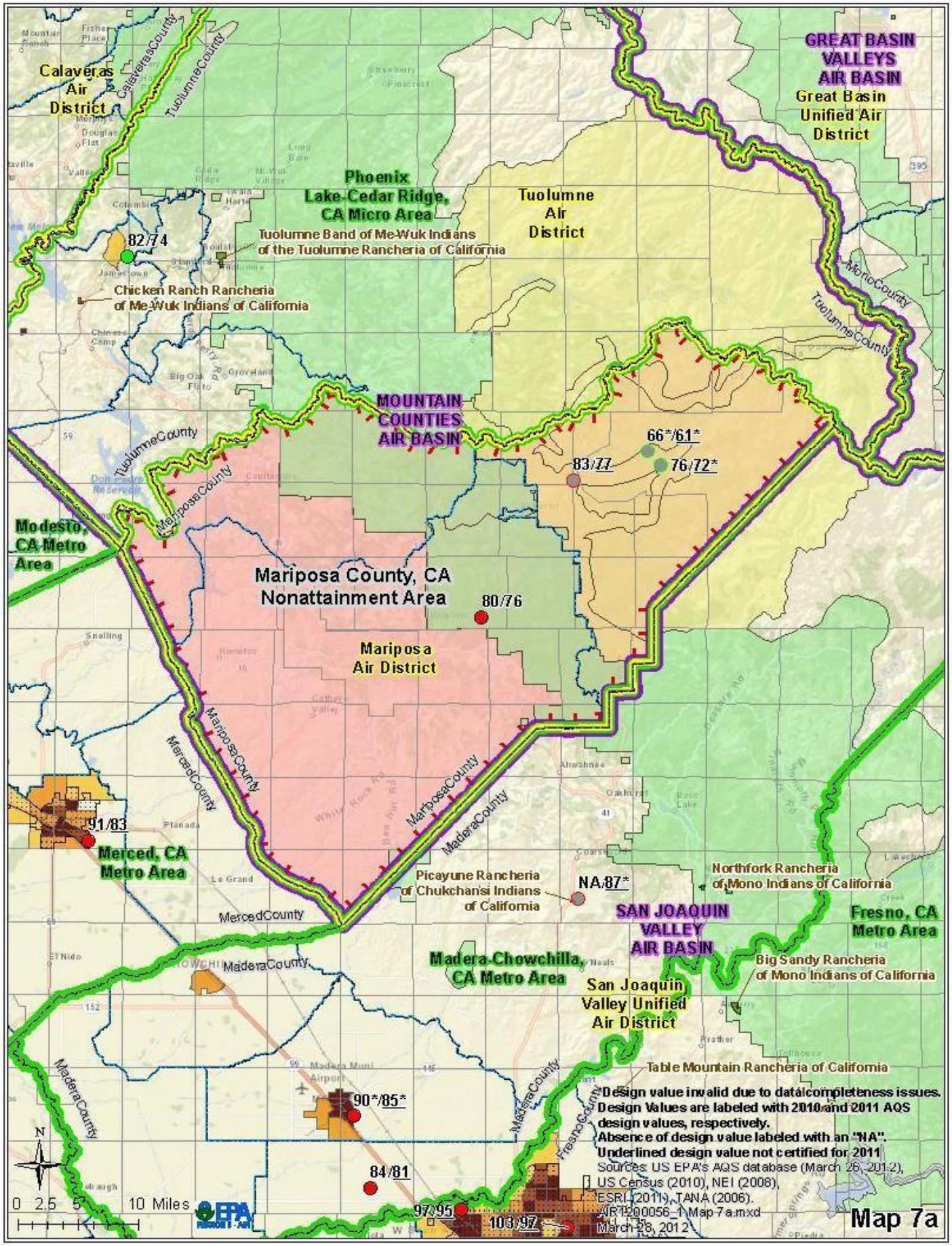

Lassen A
District
Susanville,
CA Micro
Area
Tehama Air
District
Red Bluff,
CA Micro
Area
Northern
Sierra Air
District
MOUNTAIN
COUNTIES
AIR BASIN
Chico, CA
Metro Area
Butte Air
District
Mechoopda Indian Tribe
of Chico Rancheria
Chico (Butte County), CA
Nonattainment Area
Berry Creek Rancheria
of Maidu Indians of California
Enterprise Rancheria
of Maidu Indians of California
Mooretown Rancheria
of Maidu Indians of California
Glenn Air
District
SACRAMENTO
VALLEY
AIR BASIN
Colusa Air
District
Truckee-Grass
Valley, CA
Micro Area
Feather River Air District
Yuba City, CA Metro Area
TehamaCounty
GlennCounty
ButteCounty
PlumasCounty
SierraCounty
ColusaCounty
SutterCounty
YubaCounty
NevadaCounty
PlacerCounty
0 2.5 5 10 Miles
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 2a.mxd
March 27, 2012
Map 2a

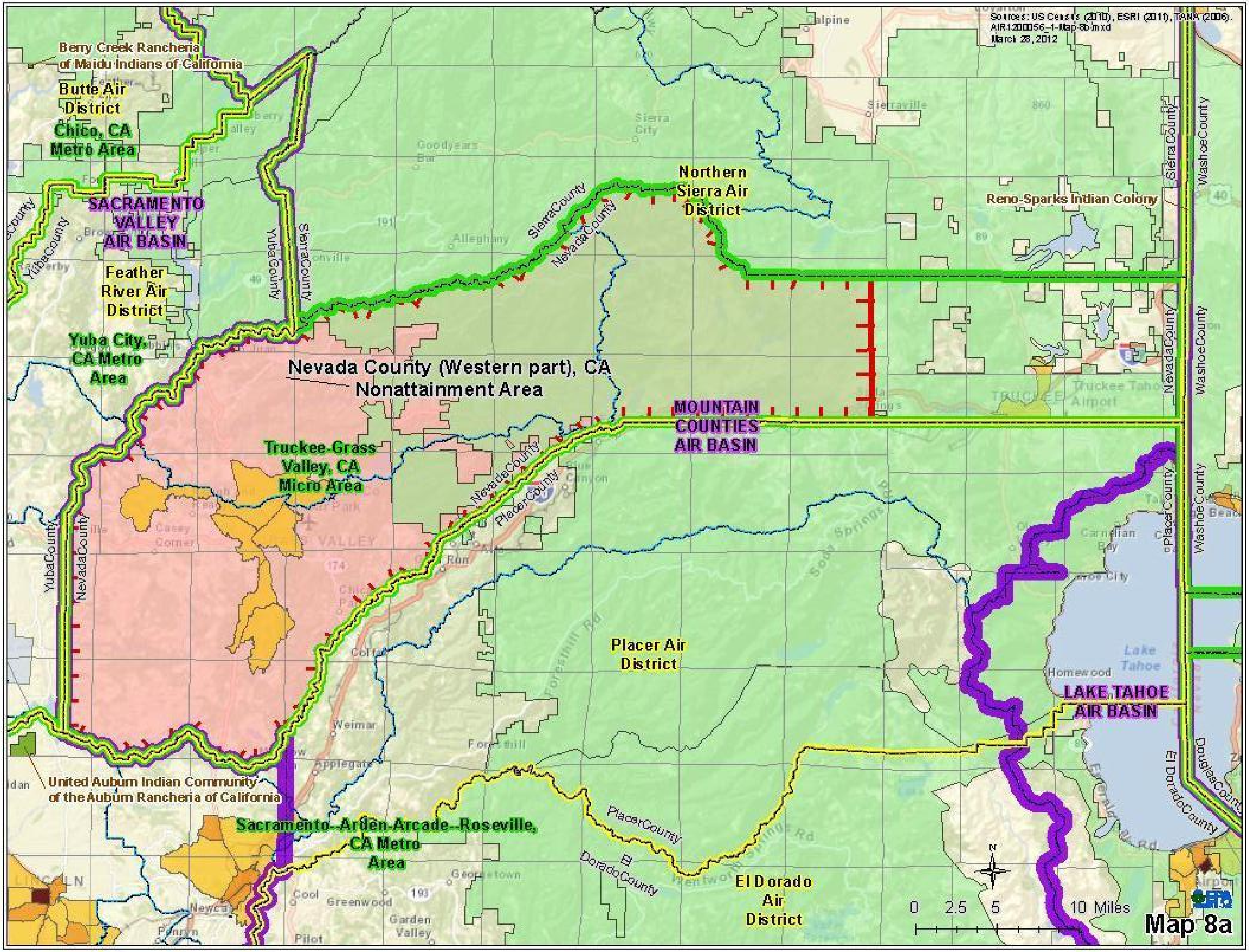

Cabazon Band of Mission Indians
South Coast Air District
Riverside-San Bernardino-Ontario, CA Metro Area
MOJAVE DESERT AIR BASIN
Mojave Desert Air District
Colorado River Indian Tribes of the Colorado River Indian Reservation
RiversideCounty
La PazCounty
RiversideCounty
ImperialCounty
Torres-Martinez Desert Cahuilla Indians
SALTON SEA AIR BASIN
Imperial Air District
El Centro, CA Metro Area
Imperial County, CA Nonattainment Area
San Diego Air District
San Diego-Carlsbad-San Marcos, CA Metro Area
SAN DIEGO AIR BASIN
San DiegoCounty
ImperialCounty
ImperialCounty
La PazCounty
ImperialCounty
YumaCounty
Quechan Tribe of the Fort Yuma Indian Reservation
Yuma, AZ Metro Area
Cocopah Tribe of Arizona
ImperialCounty
Mexicali
General Rodolfo Sanchez Taboada Intl Airport
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 3a.mxd
March 27, 2012
0 2.5 5 10 Miles
Map 3a

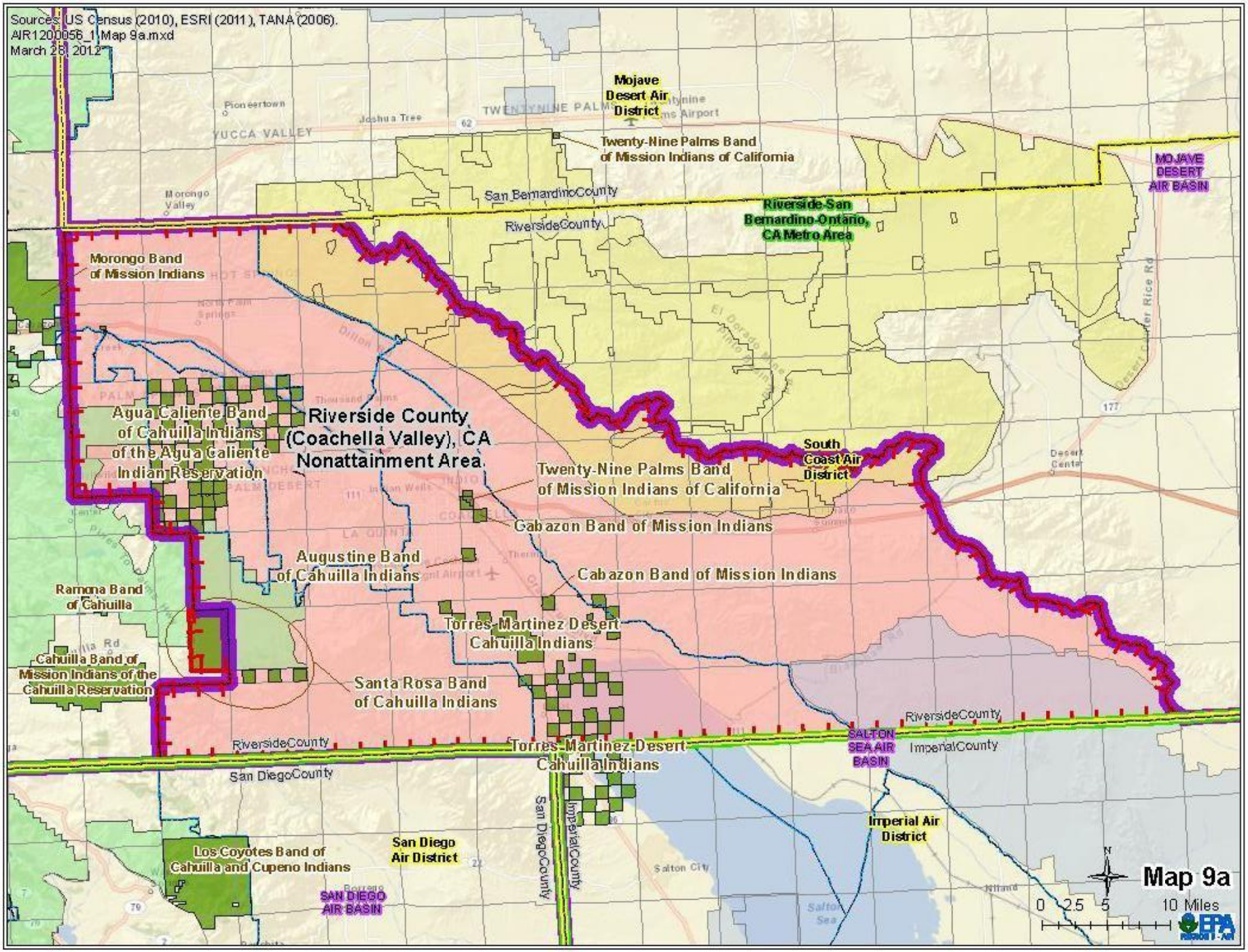

Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 4a.mxd
March 27, 2012
Tule River Indian Tribe of the Tule River Reservation
Visalia-Porterville, CA Metro Area
San Joaquin Valley Unified Air District
Great Basin Unified Air District
Bishop, CA Micro Area
Southern Inyo County
GREAT BASIN VALLEYS AIR BASIN
TulareCounty
InyoCounty
KernCounty
San BernardinoCounty
SAN JOAQUIN VALLEY AIR BASIN
Northeast San Bernardino County
Bakersfield-Delano, CA Metro Area
Kern Air District
Kern County (Eastern Kern), CA Nonattainment Area
Riverside-San Bernardino-Ontario, CA Metro Area
Mojave Desert Air District
MOJAVE DESERT AIR BASIN
Los AngelesCounty
SOUTH CENTRAL COAST AIR BASIN
Antelope Valley Air District
Los Angeles-Long Beach-Santa Ana, CA Metro Area
SOUTH COAST AIR BASIN
South Coast Air District
VenturaCounty
0 5 10 20 Miles
Map 4a

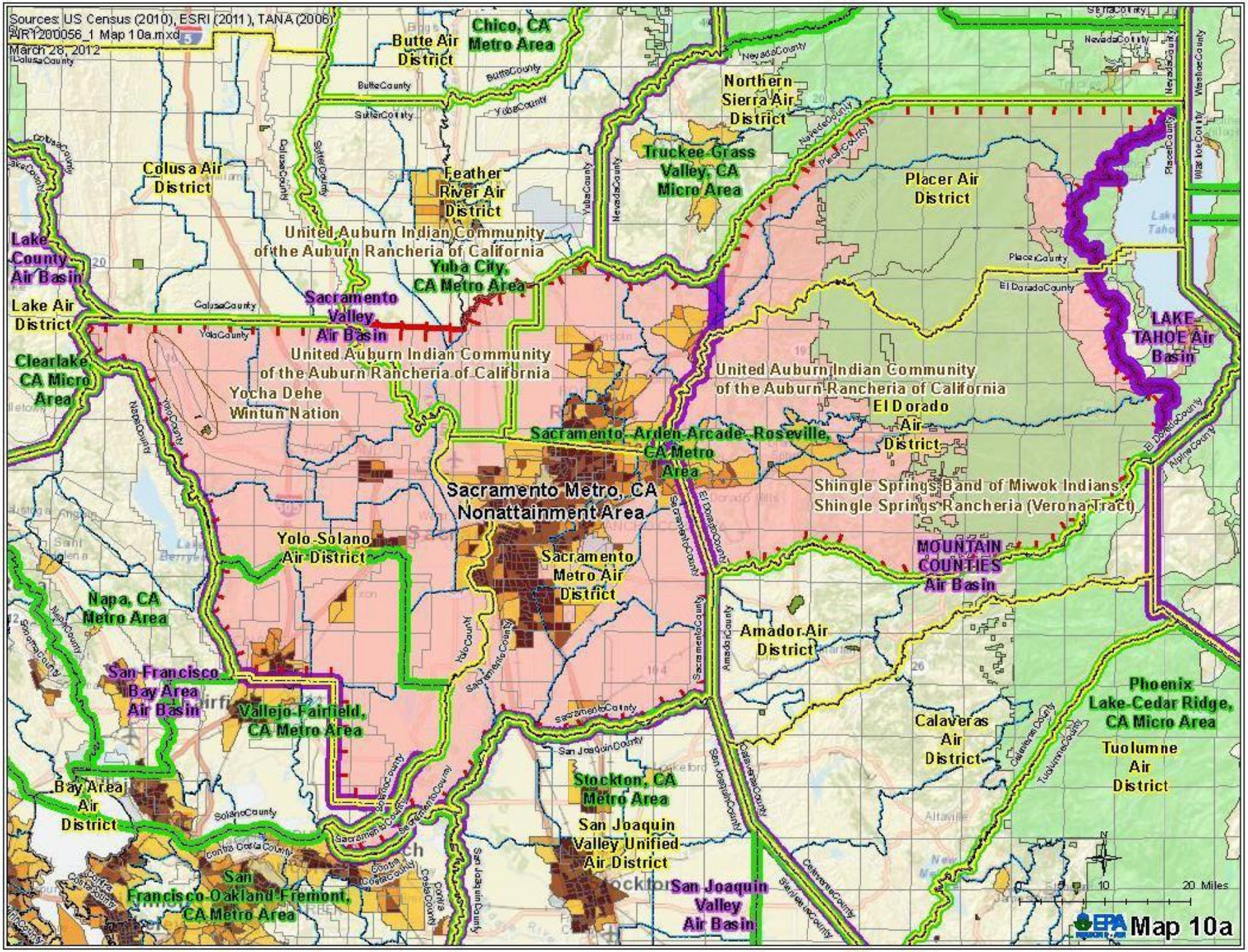

San Joaquin Valley Unified Air District
Bakersfield-Delano, CA Metro Area
Kern Air District
KernCounty
San BernardinoCounty
MOJAVE DESERT AIR BASIN
SAN JOAQUIN VALLEY AIR BASIN
Mojave Desert Air District
Los AngelesCounty
Los Angeles-San Bernardino Counties (West Mojave Desert), CA Nonattainment Area
Antelope Valley Air District
VenturaCounty
SOUTH CENTRAL COAST AIR BASIN
Riverside-San Bernardino-Ontario, CA Metro Area
Ventura Air District
Oxnard-Thousand Oaks-Ventura, CA Metro Area
Los Angeles-Long Beach-Santa Ana, CA Metro Area
South Coast Air District
Twenty-Nine Palms Band of Mission Indians of California
SOUTH COAST AIR BASIN
RiversideCounty
OrangeCounty
SALTON SEA AIR BASIN
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map5a.mxd
March 28, 2012
Map 5a

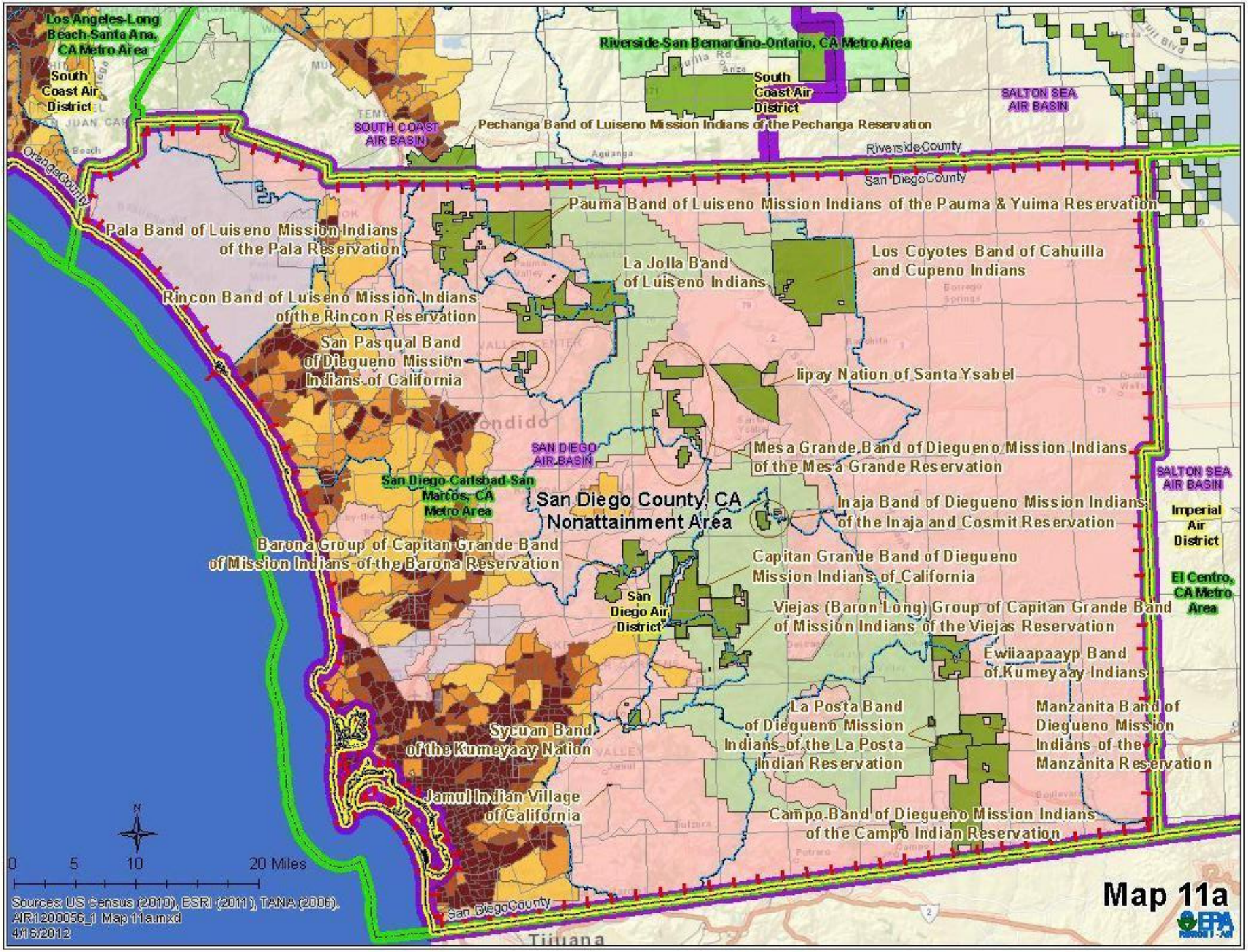

San Joaquin Valley Unified Air District
Bakersfield-Delano, CA Metro Area
Kern Air District
KernCounty
Los AngelesCounty
Lancaster
SOUTH CENTRAL COAST AIR BASIN
Ventura Air District
Antelope Valley Air District
MOJAVE DESERT AIR BASIN
Mojave Desert Air District
Oxnard-Thousand Oaks-Ventura, CA Metro Area
Riverside-San Bernardino-Ontario, CA Metro Area
Los Angeles-Long Beach-Santa Ana, CA Metro Area
San Manuel Band of Mission Indians
Morongo Band of Mission Indians
SOUTH COAST AIR BASIN
South Coast Air District
Los Angeles-South Coast Air Basin, CA Nonattainment Area
Soboba Band of Luiseno Indians
Santa Rosa Band of Cahuilla Indians
Ramona Band of Cahuilla
Cahuilla Band of Mission Indians of the Cahuilla Reservation
Santa Barbara-Santa Maria-Goleta, CA Metro Area
Santa Barbara Air District
Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation
San Diego Air District
San Diego-Carlsbad-San Marcos, CA Metro Area
SAN DIEGO AIR BASIN
0 5 10 20 Miles
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 6a.mxd
4/16/2012
Map 6a

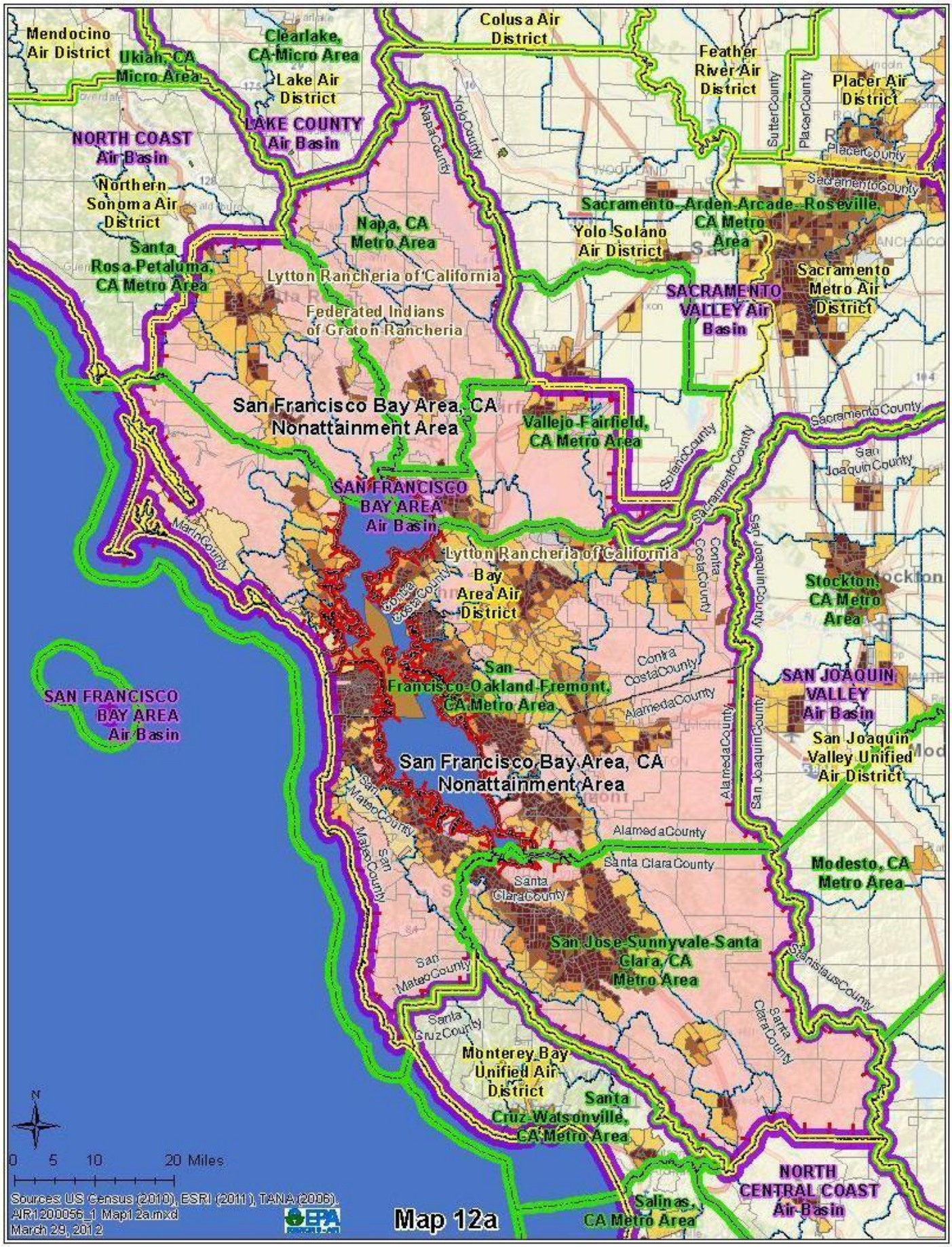

GREAT BASIN VALLEYS AIR BASIN
Great Basin Unified Air District
Calaveras Air District
Phoenix Lake-Cedar Ridge, CA Micro Area
Tuolumne Air District
Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
82/74
Chicken Ranch Rancheria of Me-Wuk Indians of California
MOUNTAIN COUNTIES AIR BASIN
66*/61*
83/77
76/72*
Modesto, CA Metro Area
Mariposa County, CA Nonattainment Area
80/76
Mariposa Air District
91/83
Merced, CA Metro Area
Picayune Rancheria of Chukchansi Indians of California
NA/87*
Northfork Rancheria of Mono Indians of California
SAN JOAQUIN VALLEY AIR BASIN
Fresno, CA Metro Area
Madera-Chowchilla, CA Metro Area
Big Sandy Rancheria of Mono Indians of California
San Joaquin Valley Unified Air District
Table Mountain Rancheria of California
90*/85*
84/81
97/95
103/97
Design value invalid due to data/completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR\200056_1 Map 7a.mxd March 28, 2012
0 2.5 5 10 Miles
N
Map 7a

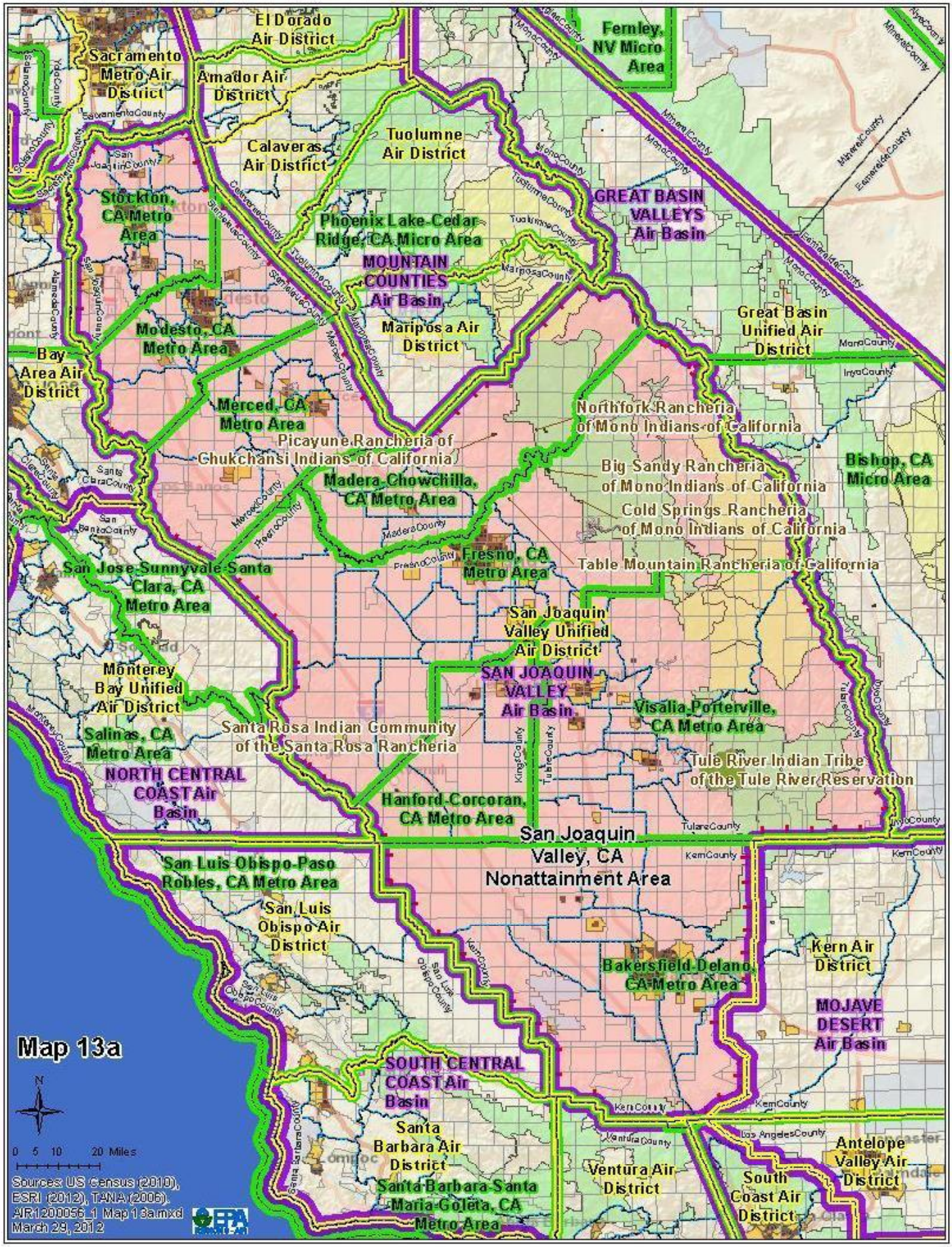

Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056-1-Map-8b.mxd
March 28, 2012
Berry Creek Rancheria of Maidu Indians of California
Butte Air District
Chico, CA Metro Area
SACRAMENTO VALLEY AIR BASIN
Feather River Air District
Yuba City, CA Metro Area
Northern Sierra Air District
Reno-Sparks Indian Colony
Nevada County (Western part), CA Nonattainment Area
MOUNTAIN COUNTIES AIR BASIN
Truckee-Grass Valley, CA Micro Area
Placer Air District
LAKE TAHOE AIR BASIN
United Auburn Indian Community of the Auburn Rancheria of California
Sacramento--Arden-Arcade--Roseville, CA Metro Area
El Dorado Air District
YubaCounty
SierraCounty
NevadaCounty
PlacerCounty
WashoeCounty
El DoradoCounty
DouglasCounty
0 2.5 5 10 Miles
Map 8a

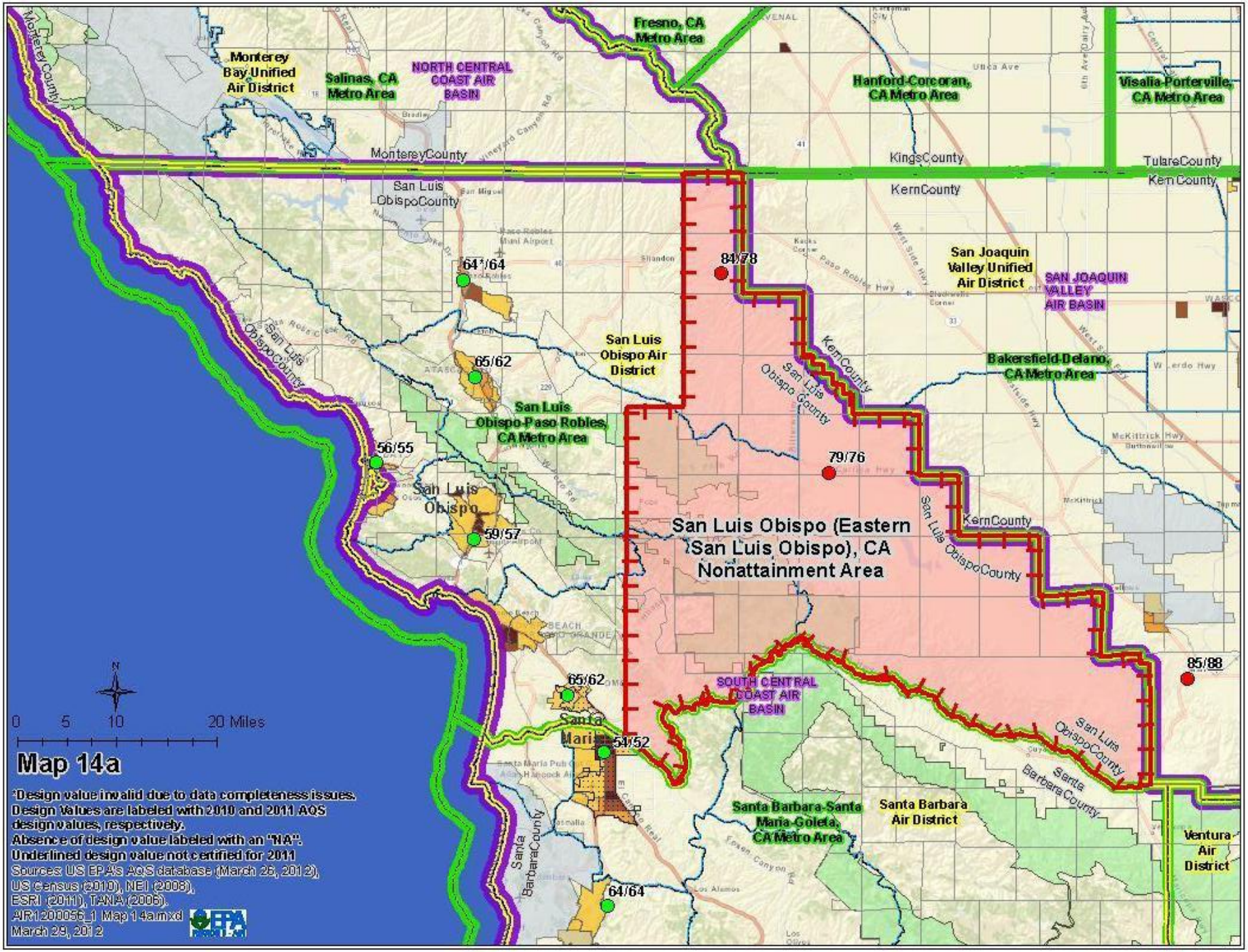

Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR120056_1 Map 9a.mxd
March 28, 2012
Mojave Desert Air District
Twenty-Nine Palms Band of Mission Indians of California
MOJAVE DESERT AIR BASIN
Riverside-San Bernardino-Ontario, CA Metro Area
San BernardinoCounty
RiversideCounty
Morongo Band of Mission Indians
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
Riverside County (Coachella Valley), CA Nonattainment Area
South Coast Air District
Twenty-Nine Palms Band of Mission Indians of California
Cabazon Band of Mission Indians
Augustine Band of Cahuilla Indians
Cabazon Band of Mission Indians
Ramona Band of Cahuilla
Torres-Martinez Desert Cahuilla Indians
Cahuilla Band of Mission Indians of the Cahuilla Reservation
Santa Rosa Band of Cahuilla Indians
RiversideCounty
SALTON SEA AIR BASIN
ImperialCounty
RiversideCounty
Torres-Martinez Desert Cahuilla Indians
San DiegoCounty
San DiegoCounty
ImperialCounty
Imperial Air District
San Diego Air District
Los Coyotes Band of Cahuilla and Cupeno Indians
SAN DIEGO AIR BASIN
Map 9a
0 2.5 5 10 Miles

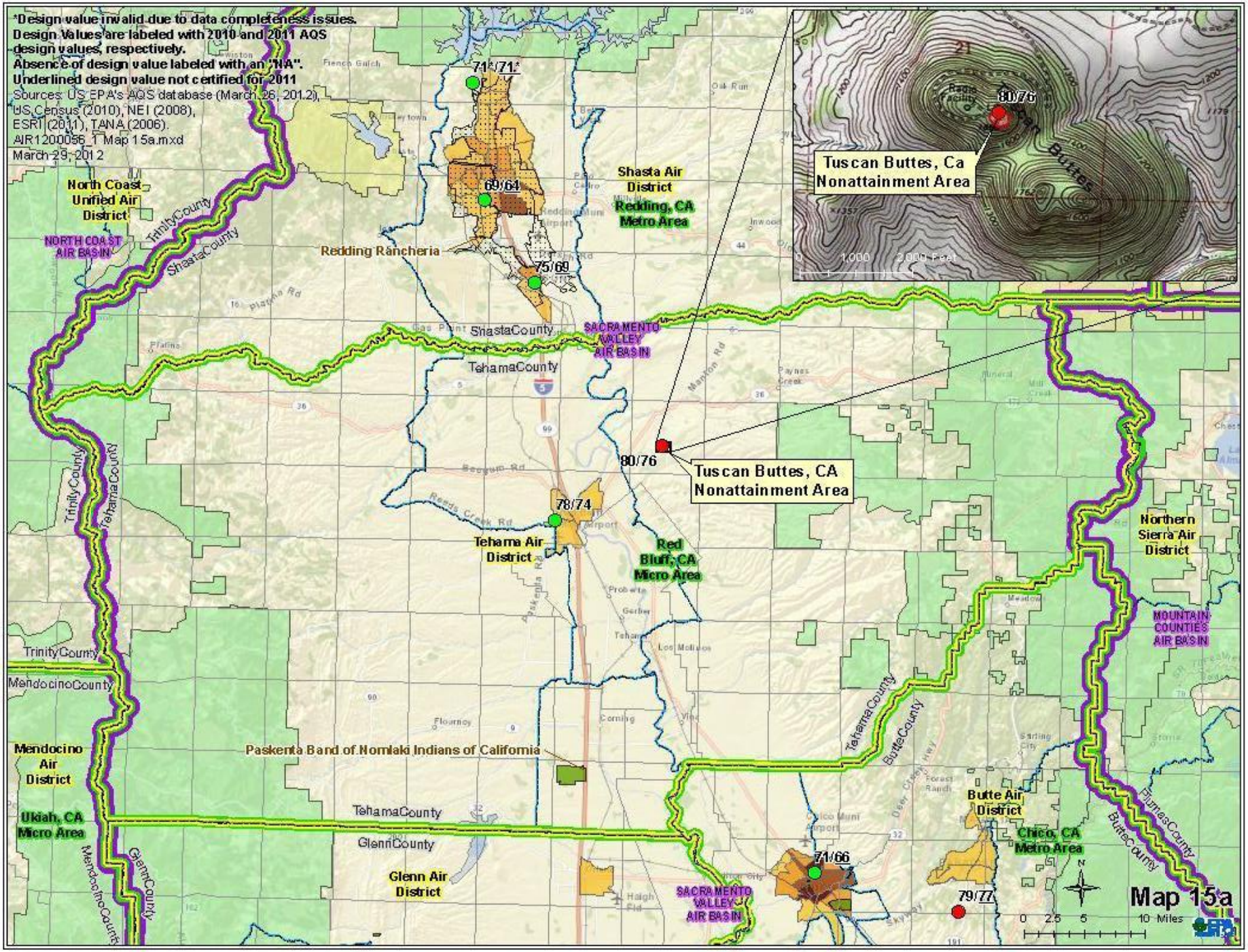

Sources: US Census (2010), ESRI (2011), TANA (2006)
AIR1200056_1 Map 10a.mxd
March 28, 2012
Chico, CA Metro Area
Butte Air District
Northern Sierra Air District
Truckee-Grass Valley, CA Micro Area
Placer Air District
Colusa Air District
Feather River Air District
United Auburn Indian Community of the Auburn Rancheria of California
Yuba City, CA Metro Area
Lake County Air Basin
Lake Air District
Sacramento Valley Air Basin
Clearlake CA Micro Area
Yocha Dehe Wintun Nation
LAKE TAHOE Air Basin
El Dorado Air District
Sacramento-Arden-Arcade-Roseville, CA Metro Area
Sacramento Metro, CA Nonattainment Area
Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract)
Yolo-Solano Air District
Sacramento Metro Air District
MOUNTAIN COUNTIES Air Basin
Napa, CA Metro Area
Amador Air District
San Francisco Bay Area Air Basin
Vallejo-Fairfield, CA Metro Area
Phoenix Lake-Cedar Ridge, CA Micro Area
Calaveras Air District
Tuolumne Air District
Bay Area Air District
Stockton, CA Metro Area
San Joaquin Valley Unified Air District
San Francisco-Oakland-Fremont, CA Metro Area
San Joaquin Valley Air Basin
10
20 Miles
Map 10a

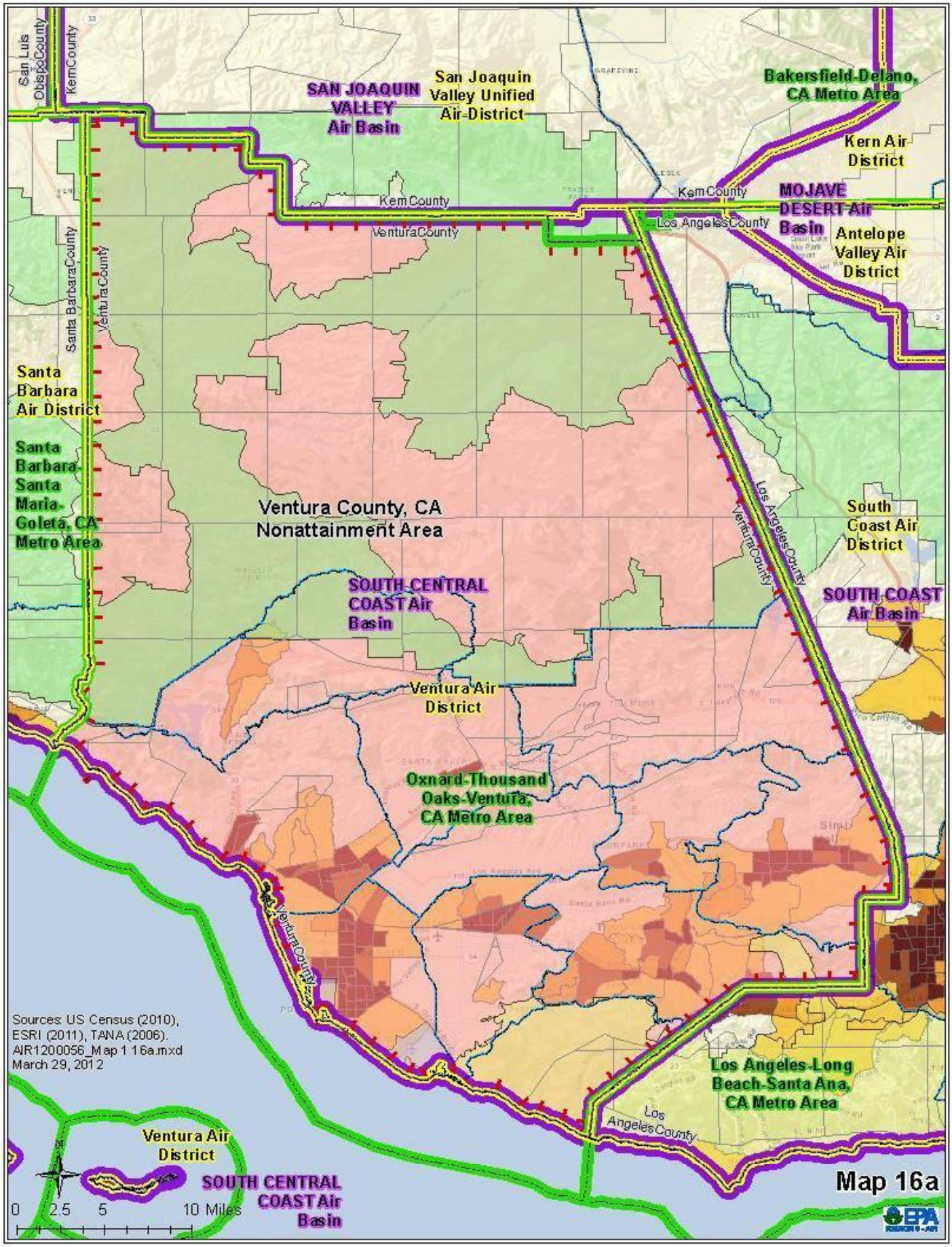

Los Angeles-Long Beach-Santa Ana, CA Metro Area
South Coast Air District
SOUTH COAST AIR BASIN
Riverside-San Bernardino-Ontario, CA Metro Area
South Coast Air District
SALTON SEA AIR BASIN
Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation
Riverside County
San Diego County
Orange County
Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation
Pala Band of Luiseno Mission Indians of the Pala Reservation
La Jolla Band of Luiseno Indians
Los Coyotes Band of Cahuilla and Cupeno Indians
Rincon Band of Luiseno Mission Indians of the Rincon Reservation
San Pasqual Band of Diegueno Mission Indians of California
Iipay Nation of Santa Ysabel
SAN DIEGO AIR BASIN
Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation
SALTON SEA AIR BASIN
San Diego-Carlsbad-San Marcos, CA Metro Area
San Diego County, CA Nonattainment Area
Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit Reservation
Imperial Air District
Barona Group of Capitan Grande Band of Mission Indians of the Barona Reservation
Capitan Grande Band of Diegueno Mission Indians of California
El Centro, CA Metro Area
San Diego Air District
Viejas (Baron Long) Group of Capitan Grande Band of Mission Indians of the Viejas Reservation
Ewiiaapaayp Band of Kumeyaay Indians
La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation
Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation
Sycuan Band of the Kumeyaay Nation
Jamul Indian Village of California
Campo Band of Diegueno Mission Indians of the Campo Indian Reservation
N
0 5 10 20 Miles
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 11a.mxd
4/16/2012
San Diego County
Tijuana
Map 11a

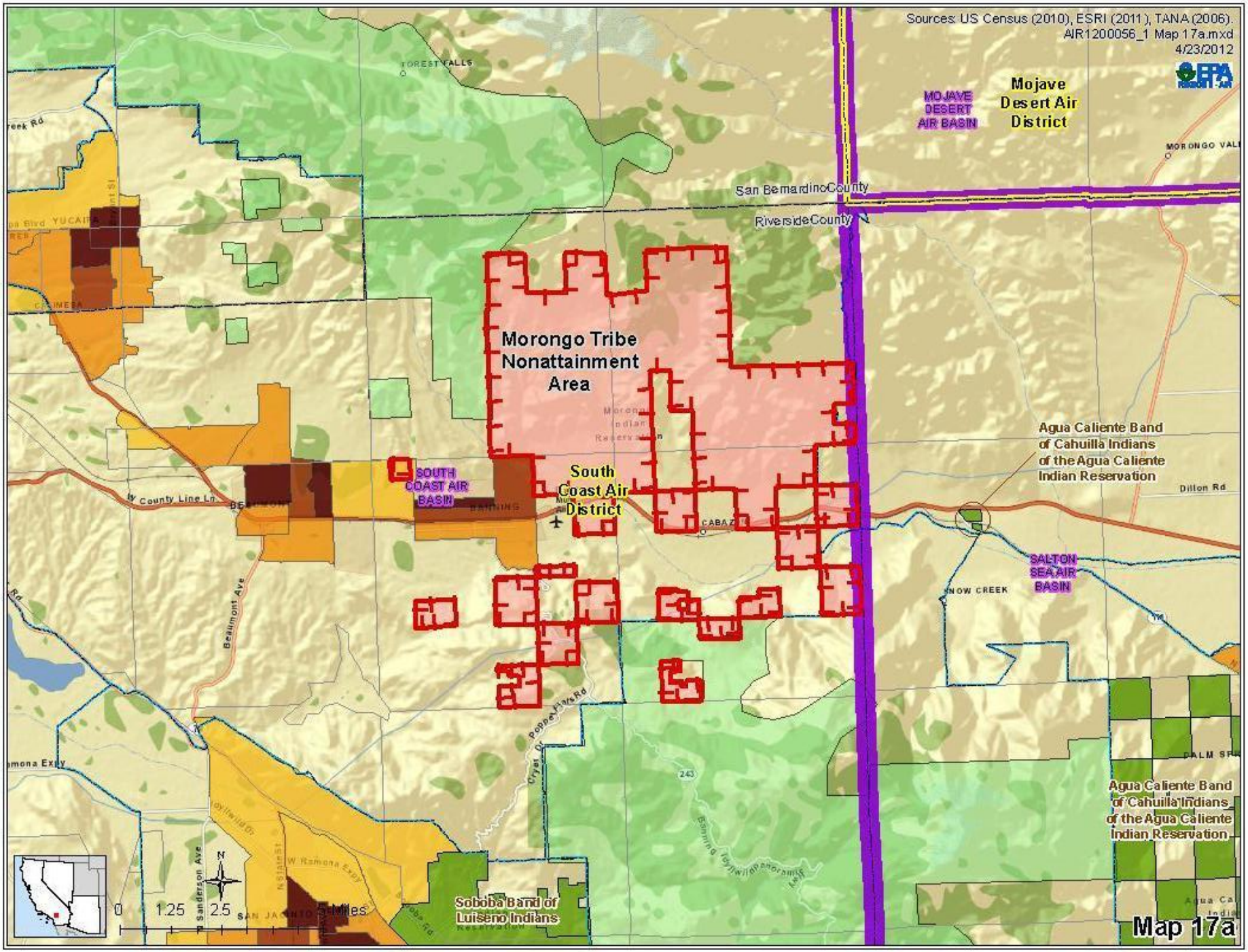

Mendocino Air District
Ukiah, CA Micro Area
Clearlake, CA Micro Area
Lake Air District
LAKE COUNTY Air Basin
NORTH COAST Air Basin
Northern Sonoma Air District
Santa Rosa-Petaluma, CA Metro Area
Colusa Air District
Feather River Air District
Placer Air District
Napa, CA Metro Area
Lytton Rancheria of California
Federated Indians of Graton Rancheria
Yolo-Solano Air District
Sacramento--Arden-Arcade--Roseville, CA Metro Area
SACRAMENTO VALLEY Air Basin
Sacramento Metro Air District
San Francisco Bay Area, CA Nonattainment Area
Vallejo-Fairfield, CA Metro Area
SAN FRANCISCO BAY AREA Air Basin
Lytton Rancheria of California
Bay Area Air District
Stockton, CA Metro Area
SAN FRANCISCO BAY AREA Air Basin
San Francisco-Oakland-Fremont, CA Metro Area
SAN JOAQUIN VALLEY Air Basin
San Joaquin Valley Unified Air District
San Francisco Bay Area, CA Nonattainment Area
Modesto, CA Metro Area
San Jose-Sunnyvale-Santa Clara, CA Metro Area
Monterey Bay Unified Air District
Santa Cruz-Watsonville, CA Metro Area
NORTH CENTRAL COAST Air Basin
Salinas, CA Metro Area
Marin County
Napa County
Yolo County
Sutter County
Placer County
Sacramento County
Solano County
San Joaquin County
Contra Costa County
Alameda County
San Mateo County
Santa Clara County
Santa Cruz County
Stanislaus County
N
0 5 10 20 Miles
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map12a.mxd
March 29, 2012
Map 12a

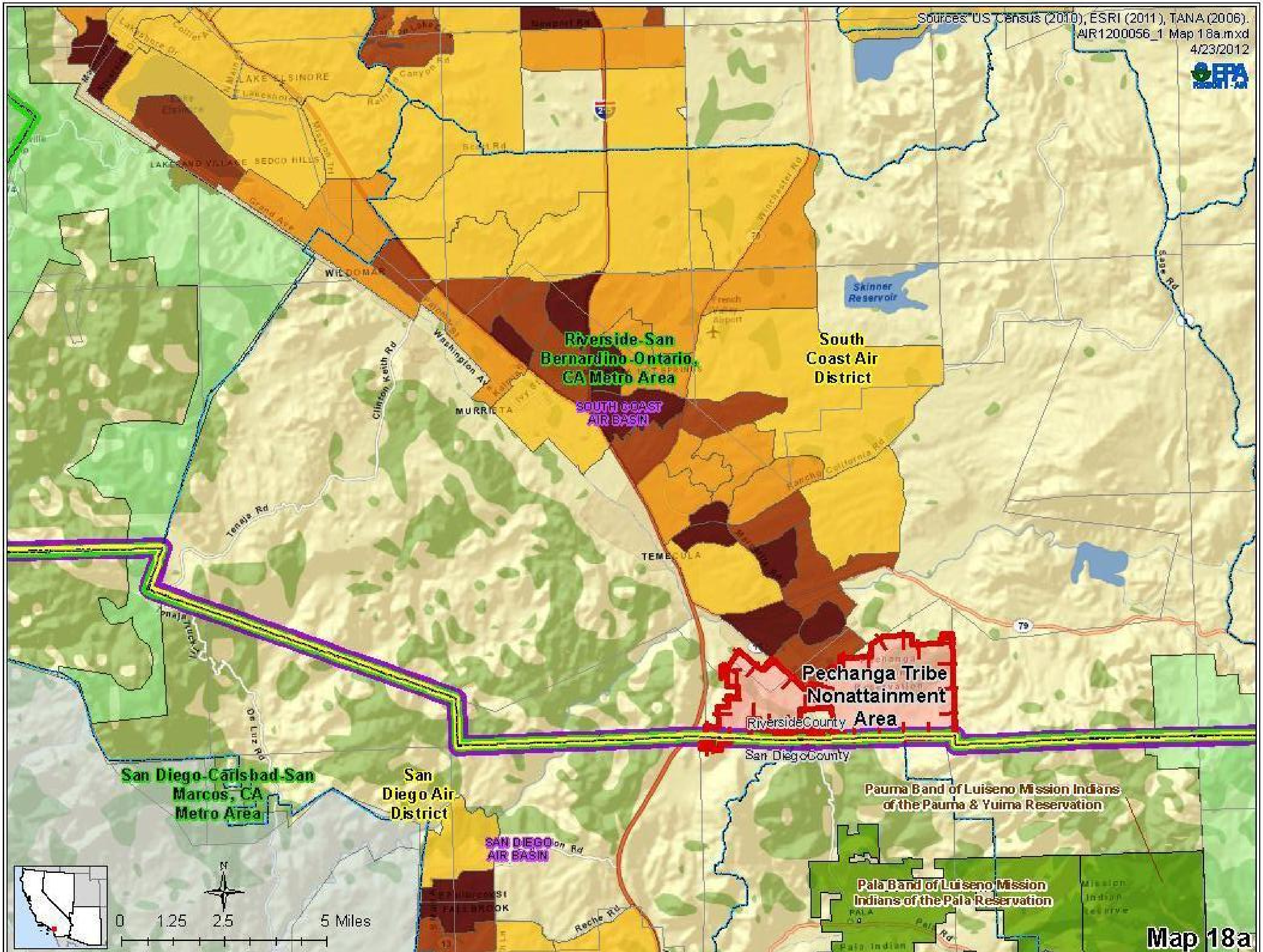

El Dorado Air District
Sacramento Metro Air District
Amador Air District
Fernley, NV Micro Area
Calaveras Air District
Tuolumne Air District
Stockton, CA Metro Area
GREAT BASIN VALLEYS Air Basin
Phoenix Lake-Cedar Ridge, CA Micro Area
MOUNTAIN COUNTIES Air Basin
Mariposa Air District
Great Basin Unified Air District
Modesto, CA Metro Area
Bay Area Air District
Merced, CA Metro Area
Northfork Rancheria of Mono Indians of California
Picayune Rancheria of Chukchansi Indians of California
Bishop, CA Micro Area
Big Sandy Rancheria of Mono Indians of California
Madera-Chowchilla, CA Metro Area
Cold Springs Rancheria of Mono Indians of California
Fresno, CA Metro Area
Table Mountain Rancheria of California
San Jose-Sunnyvale-Santa Clara, CA Metro Area
San Joaquin Valley Unified Air District
Monterey Bay Unified Air District
SAN JOAQUIN VALLEY Air Basin
Visalia-Porterville, CA Metro Area
Santa Rosa Indian Community of the Santa Rosa Rancheria
Salinas, CA Metro Area
Tule River Indian Tribe of the Tule River Reservation
NORTH CENTRAL COAST Air Basin
Hanford-Corcoran, CA Metro Area
San Joaquin Valley, CA Nonattainment Area
San Luis Obispo-Paso Robles, CA Metro Area
San Luis Obispo Air District
Kern Air District
Bakersfield-Delano, CA Metro Area
MOJAVE DESERT Air Basin
SOUTH CENTRAL COAST Air Basin
Santa Barbara Air District
Ventura Air District
Antelope Valley Air District
South Coast Air District
Santa Barbara-Santa Maria-Goleta, CA Metro Area
Map 13a
N
0 5 10 20 Miles
Sources: US Census (2010), ESRI (2012), TANA (2006).
AIR1200056_1 Map 13a.mxd
March 29, 2012


Monterey Bay Unified Air District
Salinas, CA Metro Area
NORTH CENTRAL COAST AIR BASIN
Fresno, CA Metro Area
Hanford-Corcoran, CA Metro Area
Visalia-Porterville, CA Metro Area
MontereyCounty
KingsCounty
TulareCounty
KernCounty
San Luis ObispoCounty
64*/64
84/78
San Joaquin Valley Unified Air District
SAN JOAQUIN VALLEY AIR BASIN
San Luis Obispo Air District
65/62
Bakersfield-Delano, CA Metro Area
San Luis Obispo-Paso Robles, CA Metro Area
56/55
79/76
San Luis Obispo
59/57
San Luis Obispo (Eastern San Luis Obispo), CA Nonattainment Area
85/88
SOUTH CENTRAL COAST AIR BASIN
65/62
Santa Maria
54/52
Santa BarbaraCounty
Santa Barbara-Santa Maria-Goleta, CA Metro Area
Santa Barbara Air District
Ventura Air District
64/64
0 5 10 20 Miles
Map 14a
*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 14a.mxd
March 29, 2012


*Design value invalid due to data completeness issues.
Design Values are labeled with 2010 and 2011 AQS design values, respectively.
Absence of design value labeled with an "NA".
Underlined design value not certified for 2011
Sources: US EPA's AQS database (March 26, 2012), US Census (2010), NEI (2008), ESRI (2011), TANA (2006).
AIR1200056_1 Map 15a.mxd
March 29, 2012
71*/71*
69/64
75/69
80/76
78/74
71/66
79/77
Redding Rancheria
Shasta Air District
Redding, CA Metro Area
North Coast Unified Air District
NORTH COAST AIR BASIN
SACRAMENTO VALLEY AIR BASIN
Tehama Air District
Red Bluff, CA Micro Area
Northern Sierra Air District
MOUNTAIN COUNTIES AIR BASIN
Butte Air District
Chico, CA Metro Area
Glenn Air District
Mendocino Air District
Ukiah, CA Micro Area
Paskenta Band of Nomlaki Indians of California
Tuscan Buttes, CA Nonattainment Area
Tuscan Buttes, Ca Nonattainment Area
ShastaCounty
TehamaCounty
TrinityCounty
MendocinoCounty
GlennCounty
ButteCounty
Map 15a
0 2.5 5 10 Miles


San Luis Obispo County
Kern County
SAN JOAQUIN VALLEY Air Basin
San Joaquin Valley Unified Air District
Bakersfield-Delano, CA Metro Area
Kern Air District
Kern County
MOJAVE DESERT Air Basin
Los Angeles County
Ventura County
Antelope Valley Air District
Santa Barbara County
Ventura County
Santa Barbara Air District
Santa Barbara-Santa Maria-Goleta, CA Metro Area
Ventura County, CA Nonattainment Area
South Coast Air District
Los Angeles County
Ventura County
SOUTH CENTRAL COAST Air Basin
SOUTH COAST Air Basin
Ventura Air District
Oxnard-Thousand Oaks-Ventura, CA Metro Area
Ventura County
Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_Map 1 16a.mxd
March 29, 2012
Los Angeles-Long Beach-Santa Ana, CA Metro Area
Los Angeles County
Ventura Air District
SOUTH CENTRAL COAST Air Basin
0 2.5 5 10 Miles
Map 16a
EPA


Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 17a.mxd
4/23/2012
Mojave Desert Air District
MOJAVE DESERT AIR BASIN
San Bernardino County
Riverside County
Morongo Tribe Nonattainment Area
South Coast Air District
SOUTH COAST AIR BASIN
Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation
SALTON SEA AIR BASIN
Soboba Band of Luiseno Indians
0 1.25 2.5 5 Miles
Map 17a


Sources: US Census (2010), ESRI (2011), TANA (2006).
AIR1200056_1 Map 18a.mxd
4/23/2012
EPA
LAKE ELSINORE
LAKELAND VILLAGE
SEDCO HILLS
WILDOMAR
MURRIETA
TEMECULA
Washington Av
Clinton Keith Rd
Tenaja Rd
De Luz Rd
Skinner Reservoir
Riverside-San Bernardino-Ontario, CA Metro Area
SOUTH COAST AIR BASIN
South Coast Air District
Pechanga Tribe Nonattainment Area
RiversideCounty
San DiegoCounty
San Diego-Carlsbad-San Marcos, CA Metro Area
San Diego Air District
SAN DIEGO AIR BASIN
FALLBROOK
Reche Rd
Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation
Pala Band of Luiseno Mission Indians of the Pala Reservation
79
N
0 1.25 2.5 5 Miles
Map 18a

Appendix 3: Air Quality Monitoring Data Table

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	**Calaveras County**	**Calaveras**	**060090001**	**77**	**2009-2011 AQS DV**
California	**Chico (Butte County)**	**Butte**	**060070007**	**79**	**2008-2010 AQS DV**
California	Chico (Butte County)	Butte	060070002	71	2008-2010 AQS DV
California	**Imperial County**	**Imperial**	**060250005**	**78**	**2008-2010 AQS DV**
California	Imperial County	Imperial	060251003	77	2008-2010 AQS DV
California	Imperial County	Imperial	060254003	75	2008-2010 AQS DV
California	Imperial County	Imperial	060254004	74	2008-2010 AQS DV
California	Imperial County	Imperial	060250006	73*	2008-2010 AQS DV
California	Kern County (Eastern Kern)	Kern	060290011	83	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	Los Angeles	060379033	91	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060710012	99	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060714001	96	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060710306	87	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060710001	80	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060719002[a]	98	2008-2010 AQS DV
California	Los Angeles - San Bernardino (West Mojave)	San Bernardino	060711001[b]	81	2008-2010 AQS DV
California	**Los Angeles South Coast Air Basin**	**Los Angeles**	**060370016**	**103**	**2008-2010 AQS DV**
California	Los Angeles South Coast Air Basin	Los Angeles	060376012	97	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060371201	91	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060371701	90	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060370002	89	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060372005	87	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060371002	84	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060370113	72	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060371103	70	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060371602	69	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060374002	61	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060375005	61	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Los Angeles	060374006	59*	2008-2010 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	Los Angeles South Coast Air Basin	Los Angeles	060371302	47*	2008-2010 AQS DV
California	**Los Angeles South Coast Air Basin**	**Orange**	**060592022**	**81**	**2008-2010 AQS DV**
California	Los Angeles South Coast Air Basin	Orange	060595001	74	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Orange	060590007	68	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Orange	060591003	66	2008-2010 AQS DV
California	**Los Angeles South Coast Air Basin**	**Riverside**	**060656001**	**102**	**2008-2010 AQS DV**
California	**Los Angeles South Coast Air Basin**	**Riverside**	**060650012**	**102**	**2008-2010 AQS DV**
California	Los Angeles South Coast Air Basin	Riverside	060650004	97	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Riverside	060658001	97	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Riverside	060659001	96	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	Riverside	060658005	93	2008-2010 AQS DV
California	**Los Angeles South Coast Air Basin**	**San Bernardino**	**060710005**	**112**	**2008-2010 AQS DV**
California	Los Angeles South Coast Air Basin	San Bernardino	060714003	103	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	San Bernardino	060719004	102	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	San Bernardino	060712002	101	2008-2010 AQS DV
California	Los Angeles South Coast Air Basin	San Bernardino	060711004	100	2008-2010 AQS DV
California	**Mariposa County**	**Mariposa**	**060430006**	**76**	**2009-2011 AQS DV**
California	Mariposa County	Mariposa	060430003[a]	77	2009-2011 AQS DV
California	Mariposa County	Mariposa	060431005[b]	72*	2009-2011 AQS DV
California	Mariposa County	Mariposa	060431004[b]	61*	2009-2011 AQS DV
California	**Nevada County (Western Part)**	**Nevada**	**060570005**	**79**	**2009-2011 AQS DV**
California	Nevada County (Western Part)	Nevada	060570007	76	2009-2011 AQS DV
California	Riverside County (Coachella Valley)	Riverside	060655001	95	2008-2010 AQS DV
California	Riverside County (Coachella Valley)	Riverside	060652002	85	2008-2010 AQS DV
California	Riverside County (Coachella Valley)	Riverside	060650008[b]	81	2008-2010 AQS DV
California	Riverside County (Coachella Valley)	Riverside	TT5681010	78	2008-2010 AQS DV
California	Riverside County (Coachella Valley)	Riverside	TT5951999	77	2008-2010 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	**Sacramento Metro**	**El Dorado**	**060170020**	**84**	**2009-2011 AQS DV**
California	Sacramento Metro	El Dorado	060170010	80	2009-2011 AQS DV
California	Sacramento Metro	El Dorado	060170012	67*	2009-2011 AQS DV
California	**Sacramento Metro**	**Placer**	**060610006**	**86**	**2009-2011 AQS DV**
California	Sacramento Metro	Placer	060610002	85	2009-2011 AQS DV
California	Sacramento Metro	Placer	060610004	74	2009-2011 AQS DV
California	**Sacramento Metro**	**Sacramento**	**060670012**	**95**	**2009-2011 AQS DV**
California	Sacramento Metro	Sacramento	060675003	87	2009-2011 AQS DV
California	Sacramento Metro	Sacramento	060670006	81	2009-2011 AQS DV
California	Sacramento Metro	Sacramento	060670002	77	2009-2011 AQS DV
California	Sacramento Metro	Sacramento	060670011	74	2009-2011 AQS DV
California	Sacramento Metro	Sacramento	060670010	71	2009-2011 AQS DV
California	Sacramento Metro	Sacramento	060670014	69	2009-2011 AQS DV
California	**Sacramento Metro**	**Solano**	**060953003**	**68**	**2009-2011 AQS DV**
California	**Sacramento Metro**	**Yolo**	**061130004**	**70**	**2009-2011 AQS DV**
California	Sacramento Metro	Yolo	061131003	69	2009-2011 AQS DV
California	**San Diego County**	**San Diego**	**060731006**	**82**	**2009-2011 AQS DV**
California	San Diego County	San Diego	060731002	72	2009-2011 AQS DV
California	San Diego County	San Diego	060730003	71	2009-2011 AQS DV
California	San Diego County	San Diego	060730006	69	2009-2011 AQS DV
California	San Diego County	San Diego	060731008	67	2009-2011 AQS DV
California	San Diego County	San Diego	060731001	64	2009-2011 AQS DV
California	San Diego County	San Diego	060730001	63	2009-2011 AQS DV
California	San Diego County	San Diego	060731010	59	2009-2011 AQS DV
California	San Diego County	San Diego	060732007	58	2009-2011 AQS DV
California	San Diego County	San Diego	060731016	63*	2009-2011 AQS DV
California	San Diego County	San Diego	TT5831201	72	2009-2011 AQS DV
California	San Diego County	San Diego	TT5771011	27*	2009-2011 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	**San Francisco Bay Area**	**Alameda**	**060010007**	**80**	**2008-2010 AQS DV**
California	San Francisco Bay Area	Alameda	060011001	62	2008-2010 AQS DV
California	San Francisco Bay Area	Alameda	060010009	53	2008-2010 AQS DV
California	San Francisco Bay Area	Alameda	060012004	44	2008-2010 AQS DV
California	San Francisco Bay Area	Alameda	060012001	69*	2008-2010 AQS DV
California	San Francisco Bay Area	Alameda	060010011	33*	2008-2010 AQS DV
California	**San Francisco Bay Area**	**Contra Costa**	**060131002**	**76**	**2008-2010 AQS DV**
California	San Francisco Bay Area	Contra Costa	060130002	74	2008-2010 AQS DV
California	San Francisco Bay Area	Contra Costa	060131004	49*	2008-2010 AQS DV
California	**San Francisco Bay Area**	**Marin**	**060410001**	**54**	**2008-2010 AQS DV**
California	**San Francisco Bay Area**	**Napa**	**060550003**	**66**	**2008-2010 AQS DV**
California	**San Francisco Bay Area**	**San Francisco**	**060750005**	**47**	**2008-2010 AQS DV**
California	**San Francisco Bay Area**	**San Mateo**	**060811001**	**57**	**2008-2010 AQS DV**
California	**San Francisco Bay Area**	**Santa Clara**	**060852006**	**75**	**2008-2010 AQS DV**
California	San Francisco Bay Area	Santa Clara	060850002	74	2008-2010 AQS DV
California	San Francisco Bay Area	Santa Clara	060851001	73	2008-2010 AQS DV
California	San Francisco Bay Area	Santa Clara	060850005	66	2008-2010 AQS DV
California	San Francisco Bay Area	Santa Clara	060852009	61*	2008-2010 AQS DV
California	San Francisco Bay Area	Solano	060950005	69	2008-2010 AQS DV
California	San Francisco Bay Area	Solano	060950004	63	2008-2010 AQS DV
California	**San Francisco Bay Area**	**Sonoma**	**060970003**	**54**	**2008-2010 AQS DV**
California	**San Joaquin Valley**	**Fresno**	**060195001**	**103**	**2008-2010 AQS DV**
California	San Joaquin Valley	Fresno	060190008	102	2008-2010 AQS DV
California	San Joaquin Valley	Fresno	060190242	97	2008-2010 AQS DV
California	San Joaquin Valley	Fresno	060190007	92	2008-2010 AQS DV
California	San Joaquin Valley	Fresno	060194001	92	2008-2010 AQS DV
California	San Joaquin Valley	Fresno	060192009	62*	2008-2010 AQS DV
California	**San Joaquin Valley**	**Kern**	**060295001**	**104**	**2008-2010 AQS DV**
California	San Joaquin Valley	Kern	060290007	101	2008-2010 AQS DV
California	San Joaquin Valley	Kern	060290232	94	2008-2010 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	San Joaquin Valley	Kern	060290014	93	2008-2010 AQS DV
California	San Joaquin Valley	Kern	060296001	88	2008-2010 AQS DV
California	San Joaquin Valley	Kern	060290008	85	2008-2010 AQS DV
California	San Joaquin Valley	Kern	060290010	94*	2008-2010 AQS DV
California	San Joaquin Valley	Kern	060295002	65*	2008-2010 AQS DV
California	San Joaquin Valley	Kings	060311004	103*	2008-2010 AQS DV
California	San Joaquin Valley	Kings	TT5420500	91	2008-2010 AQS DV
California	**San Joaquin Valley**	**Madera**	**060390004**	**84**	**2008-2010 AQS DV**
California	San Joaquin Valley	Madera	060392010	90*	2008-2010 AQS DV
California	**San Joaquin Valley**	**Merced**	**060470003**	**91**	**2008-2010 AQS DV**
California	**San Joaquin Valley**	**San Joaquin**	**060773005**	**81**	**2008-2010 AQS DV**
California	San Joaquin Valley	San Joaquin	060771002	72	2008-2010 AQS DV
California	**San Joaquin Valley**	**Stanislaus**	**060990006**	**93**	**2008-2010 AQS DV**
California	San Joaquin Valley	Stanislaus	060990005	80	2008-2010 AQS DV
California	**San Joaquin Valley**	**Tulare**	**061072002**	**97**	**2008-2010 AQS DV**
California	San Joaquin Valley	Tulare	061072010	91*	2008-2010 AQS DV
California	San Joaquin Valley	Tulare	061070009[a]	101	2008-2010 AQS DV
California	San Joaquin Valley	Tulare	061070006[b]	86	2008-2010 AQS DV
California	**San Luis Obispo**	**San Luis Obispo**	**060798005**	**78**	**2009-2011 AQS DV**
California	San Luis Obispo	San Luis Obispo	060798006	76	2009-2011 AQS DV
California	**Tuscan Buttes**	**Tehama**	**061030004**	**76**	**2009-2011 AQS DV**
California	**Ventura County**	**Ventura**	**061112002**	**86**	**2008-2010 AQS DV**
California	Ventura County	Ventura	061110009	79	2008-2010 AQS DV
California	Ventura County	Ventura	061111004	79	2008-2010 AQS DV
California	Ventura County	Ventura	061110007	78	2008-2010 AQS DV
California	Ventura County	Ventura	061113001	63	2008-2010 AQS DV
California	Ventura County	Ventura	061112003	63*	2008-2010 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	Morongo Band of Missions Indians	Riverside	TT5821016	102	2008-2010 AQS DV
California	Pechanga Band of Luiseño Mission Indians of the Pechanga Reservation	Riverside	TT5860009	42*	2008-2010 AQS DV
California	**-**	**Amador**	**060050002**	**71**	**2009-2011 AQS DV**
California	**-**	**Colusa**	**060111002**	**66**	**2008-2010 AQS DV**
California	-	El Dorado	060170013	63*	2009-2011 AQS DV
California	**-**	**Glenn**	**060210003**	**66**	**2008-2010 AQS DV**
California	**-**	**Humboldt**	**060231004**	**47**	**2008-2010 AQS DV**
California	**-**	**Inyo**	**060270101**[b]	**72**	**2008-2010 AQS DV**
California	**-**	**Lake**	**060333001**	**61**	**2008-2010 AQS DV**
California	**-**	**Mendocino**	**060450008**	**53**	**2008-2010 AQS DV**
California	**-**	**Monterey**	**060530002**	**58**	**2009-2011 AQS DV**
California	-	Monterey	060530008	57	2009-2011 AQS DV
California	-	Monterey	060531003	54	2009-2011 AQS DV
California	-	Nevada	060571001	49*	2009-2011 AQS DV
California	-	Riverside	060659003	63*	2008-2010 AQS DV
California	-	Riverside	060651004[b]	77	2008-2010 AQS DV
California	**-**	**San Benito**	**060690002**	**66**	**2009-2011 AQS DV**
California	-	San Benito	060690003[a]	70	2009-2011 AQS DV
California	-	San Bernardino	060711234	75	2008-2010 AQS DV
California	-	San Luis Obispo	060790005	64	2009-2011 AQS DV
California	-	San Luis Obispo	060794002	62	2009-2011 AQS DV
California	-	San Luis Obispo	060798001	62	2009-2011 AQS DV
California	-	San Luis Obispo	060792006	57	2009-2011 AQS DV
California	-	San Luis Obispo	060793001	55	2009-2011 AQS DV

State	2008 8-hour ozone NAAQS Nonattainment Area (if applicable)	County	AQS ID	DV	DV Source (2008-2010 AQS, or 2009-2011 AQS with certified 2011 data)
California	**-**	**Santa Barbara**	**060831025**	**73**	**2009-2011 AQS DV**
California	-	Santa Barbara	060831021	71	2009-2011 AQS DV
California	-	Santa Barbara	060831014	69	2009-2011 AQS DV
California	-	Santa Barbara	060831013	64	2009-2011 AQS DV
California	-	Santa Barbara	060833001	62	2009-2011 AQS DV
California	-	Santa Barbara	060834003	61	2009-2011 AQS DV
California	-	Santa Barbara	060830008	59	2009-2011 AQS DV
California	-	Santa Barbara	060830011	57	2009-2011 AQS DV
California	-	Santa Barbara	060832011	57	2009-2011 AQS DV
California	-	Santa Barbara	060831018	56	2009-2011 AQS DV
California	-	Santa Barbara	060832004	54	2009-2011 AQS DV
California	-	Santa Barbara	060831008	52	2009-2011 AQS DV
California	**-**	**Santa Cruz**	**060870007**	**55**	**2009-2011 AQS DV**
California	-	Santa Cruz	060870003	49*	2009-2011 AQS DV
California	**-**	**Shasta**	**060890007**	**75**	**2008-2010 AQS DV**
California	-	Shasta	060890004	69	2008-2010 AQS DV
California	-	Shasta	060890009	71*	2008-2010 AQS DV
California	-	Shasta	060893003[a]	70	2008-2010 AQS DV
California	**-**	**Siskiyou**	**060932001**	**60**	**2008-2010 AQS DV**
California	-	Sonoma	060971003	44	2008-2010 AQS DV
California	**-**	**Sutter**	**061010004**	**71**	**2009-2011 AQS DV**
California	-	Sutter	061010003	65	2009-2011 AQS DV
California	-	Tehama	061030005	74	2009-2011 AQS DV
California	**-**	**Tuolumne**	**061090005**	**74**	**2009-2011 AQS DV**

[a] = Clean Air Status and Trends Network (CASTNET) monitor.

[b] = Other National Park Service monitors.

* = Design Value (DV) does not meet data completeness requirements.

- = monitor is not within a nonattainment area

AQS IDs that start with "TT" are tribal monitors.

BOLD = DV monitor for the County

RED = DV for the Nonattainment Area

BOLD AND RED = DV monitor for the Nonattainment Area and the County

Grouped by monitors within a Nonattainment Area, then by County.