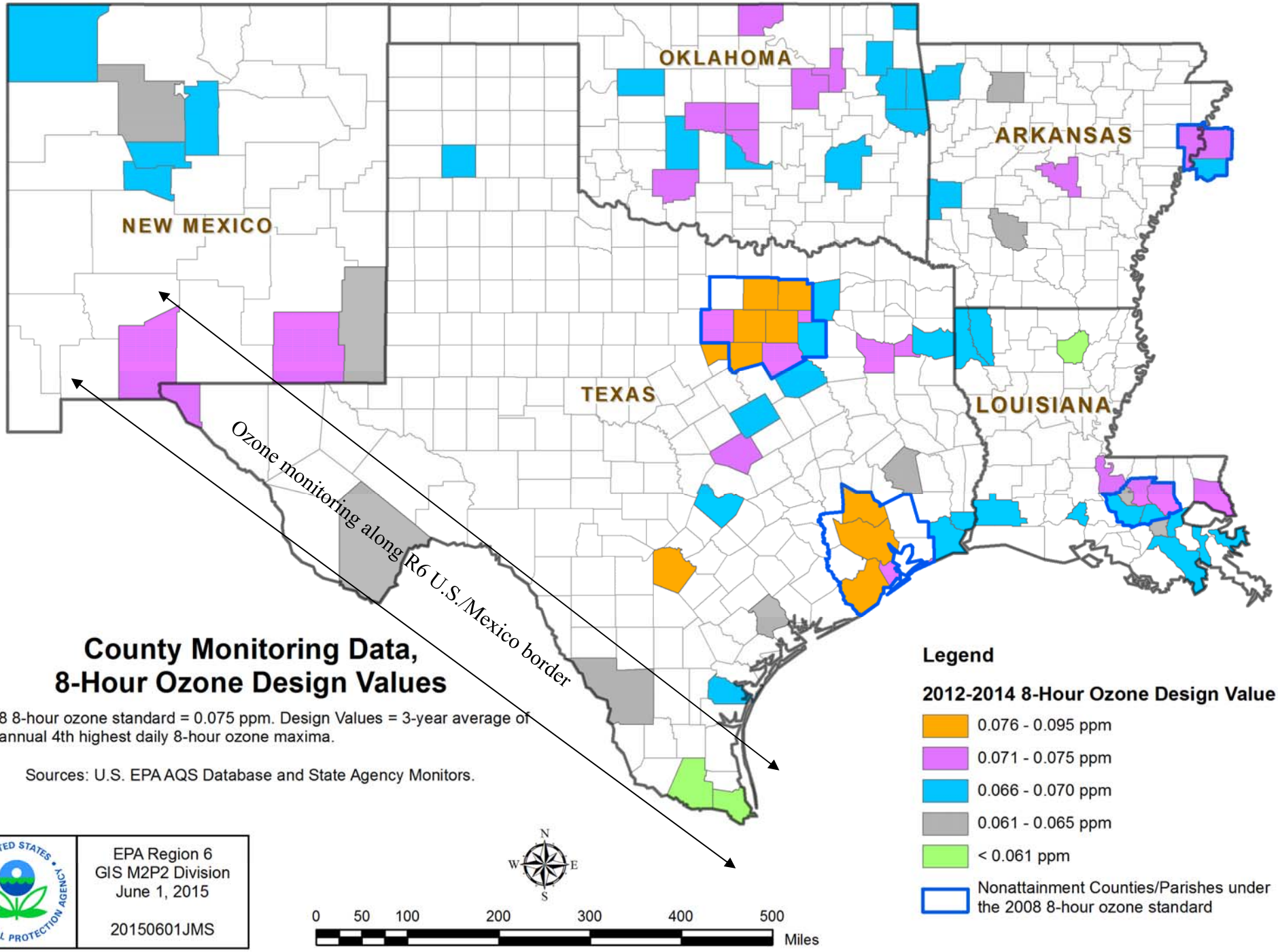
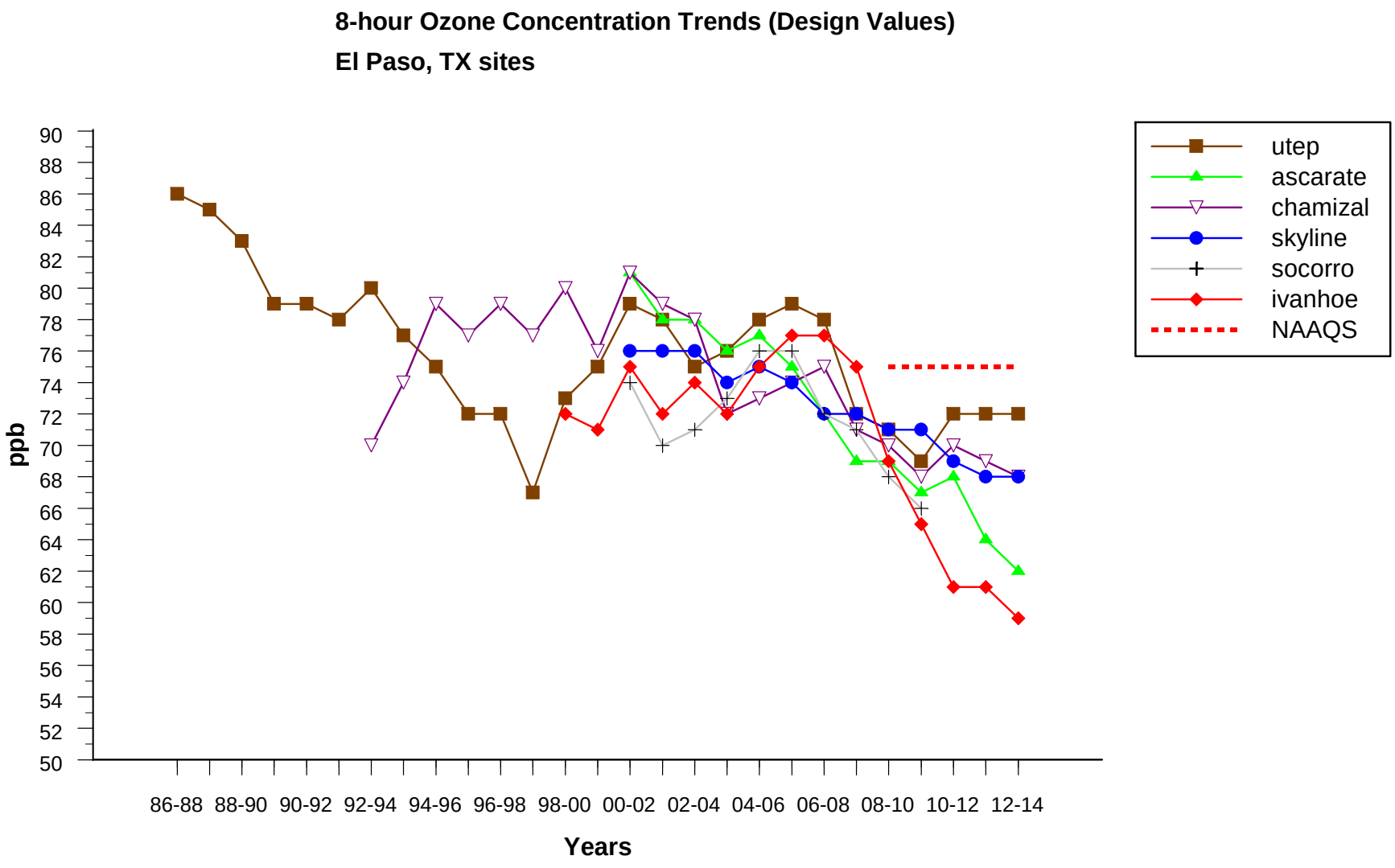
Trends Analysis of 8-Hour Ambient Ozone Concentration Data along the U.S./Mexico Border in EPA Region 6

Region 6 Ground Level Ozone Concentrations

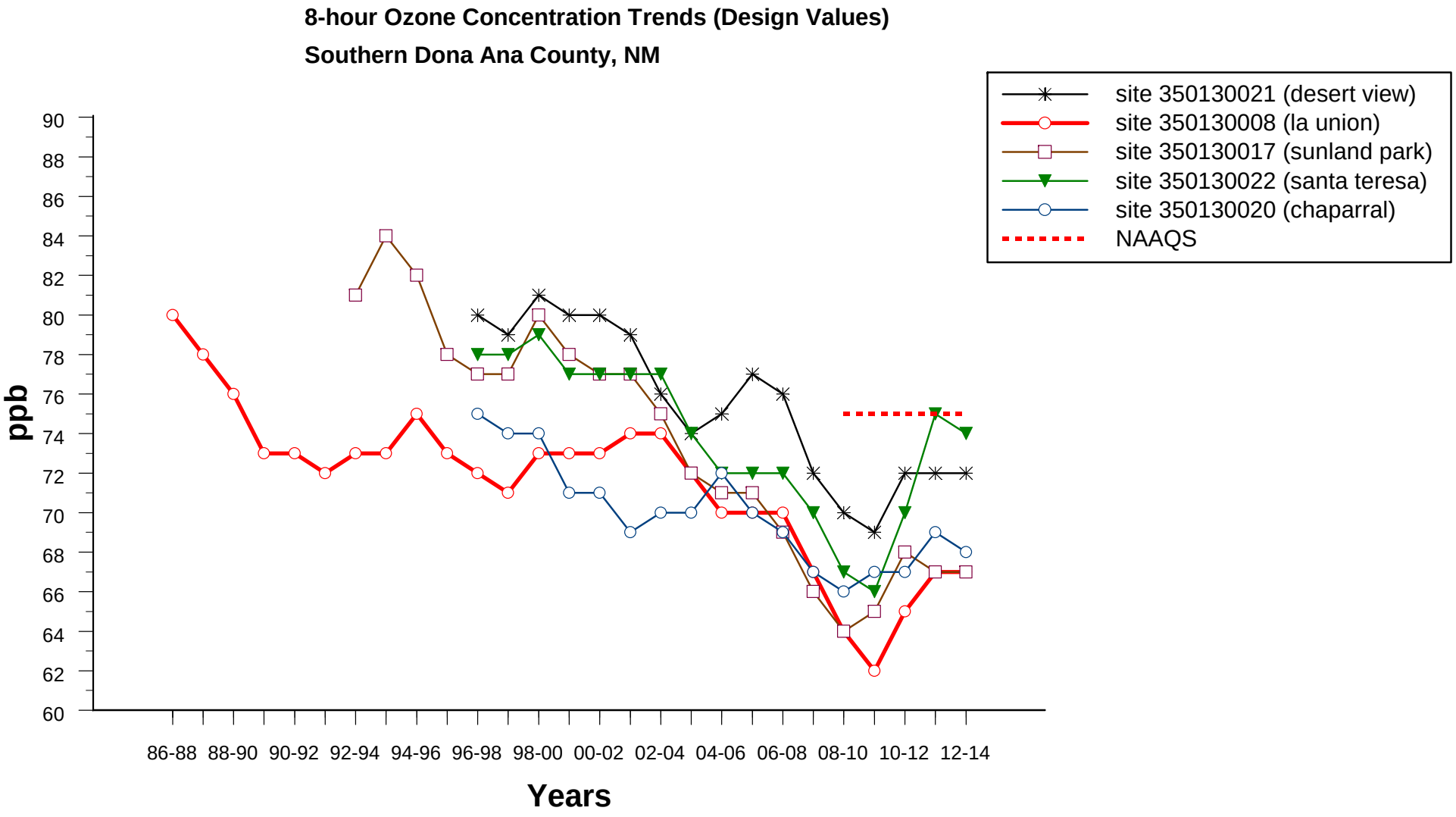


8-hour ozone design value analysis in Region 6 U.S./Mexico border areas based on 2012-2014 data (current active ozone monitors)				
Current Areas > 75 ppb	Additional Areas if NAAQS reduced to 70 ppb	Additional Areas if NAAQS reduced to 65 ppb	Additional Areas if NAAQS reduced to 60 ppb	
0	**+2**	**+0**	**+3**	
Areas > 75 ppb	Areas > 70 ppb	Areas > 65 ppb	Areas > 60 ppb	Areas <= 60 ppb
No areas above 75 ppb	Southern Dona Ana Co., NM (74)		Big Bend National Park, TX NPS (65)	Brownsville, TX (58)
	El Paso, TX (72)		Las Cruces, NM (65)	Mission, TX (57)
			Laredo, TX (61)	



2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) = 75 ppb

Design Values = 3-year average of annual 4th highest 8-hour ozone daily maxima

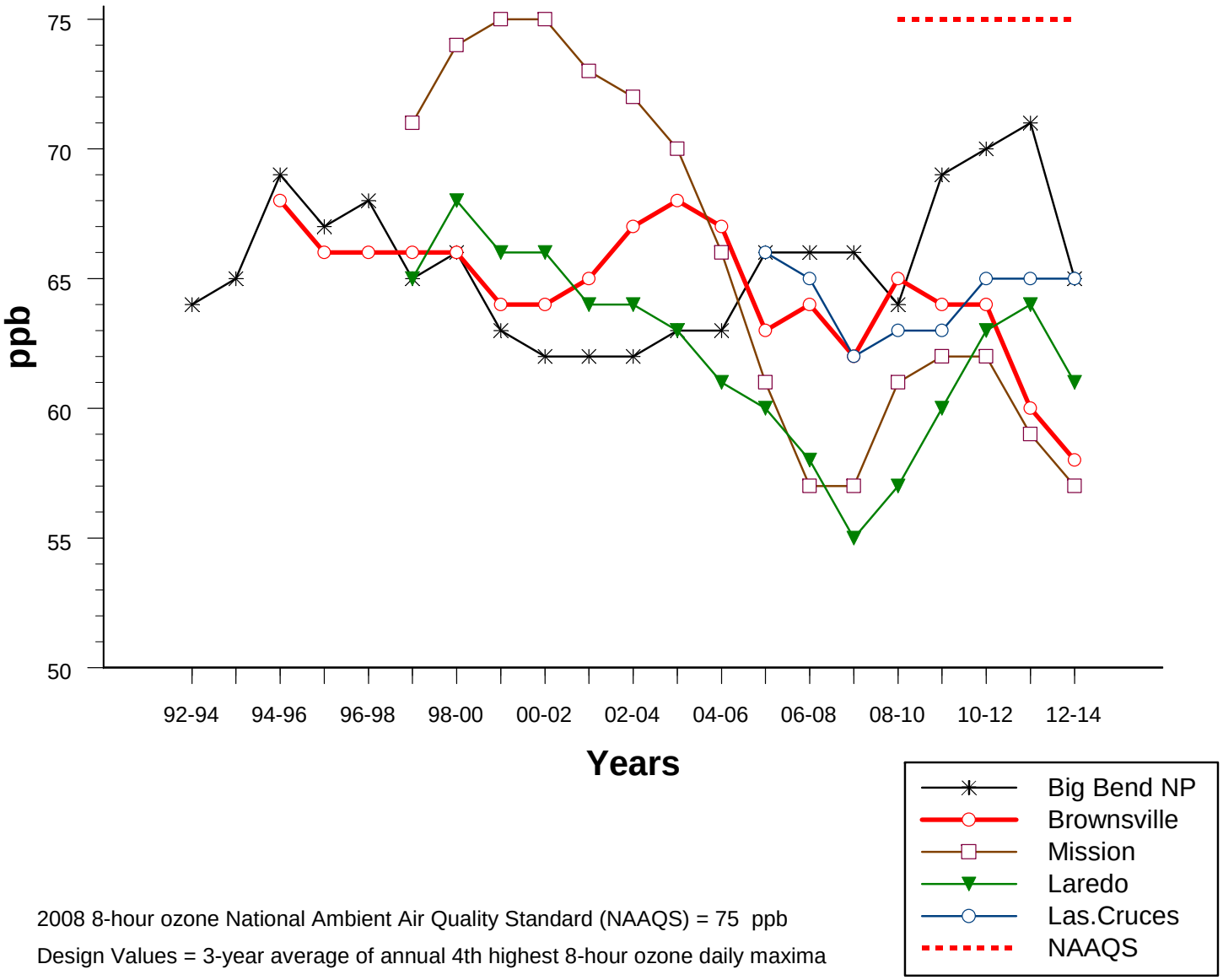


2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) = 75 ppb

Design Values = 3-year average of annual 4th highest 8-hour ozone daily maxima

8-hour Ozone Concentration Trends (Design Values)

Texas Border Areas outside El Paso and Las Cruces, NM



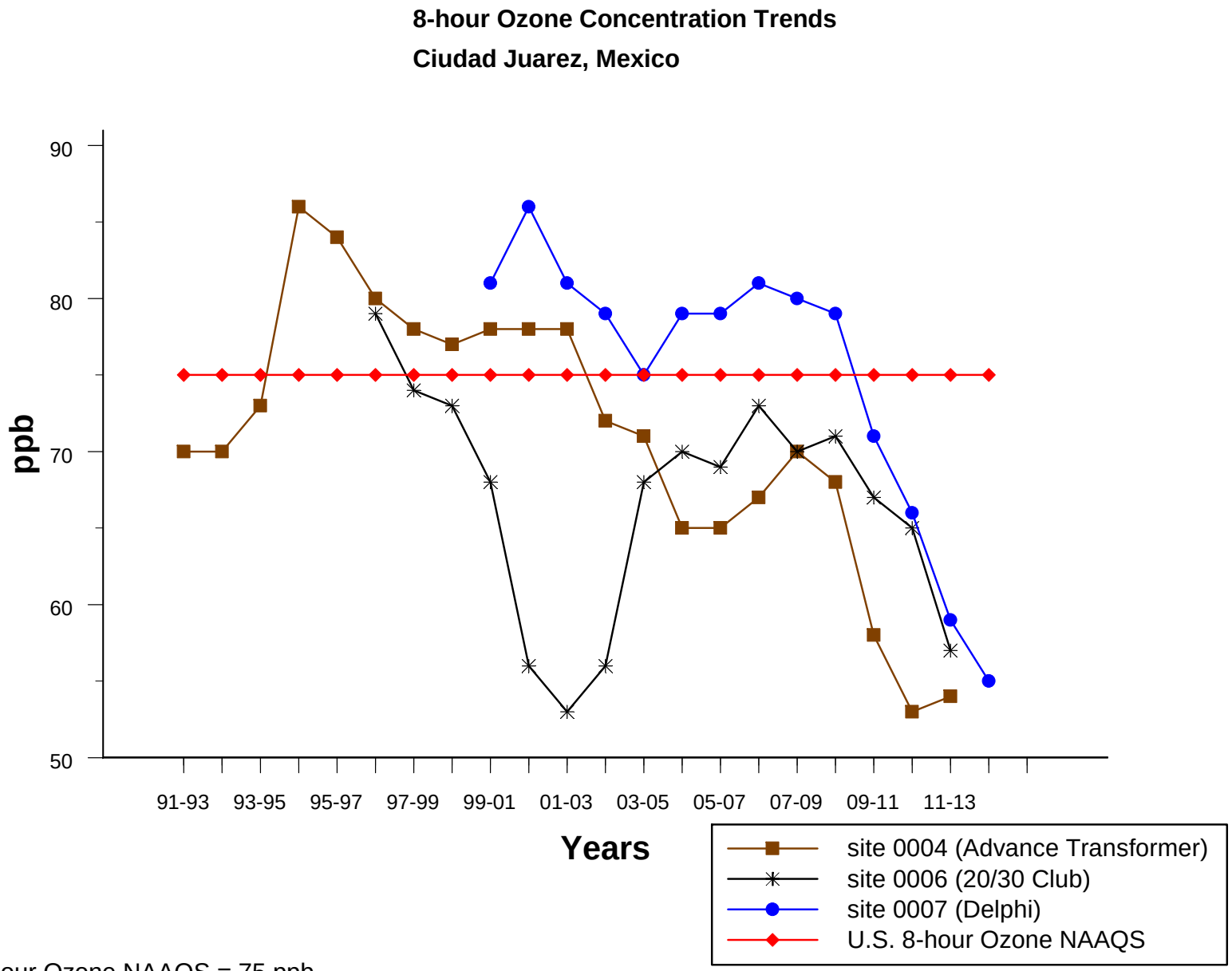
2008 8-hour ozone National Ambient Air Quality Standard (NAAQS) = 75 ppb

Design Values = 3-year average of annual 4th highest 8-hour ozone daily maxima

Link to EPA's Report on the Environment

- The following link provides summary information for ozone and particulate matter concentrations for U.S. Counties in the U.S./Mexico border region:

- http://cfpub.epa.gov/roe/indicator.cfm?i=16



U.S. 8-hour Ozone NAAQS = 75 ppb

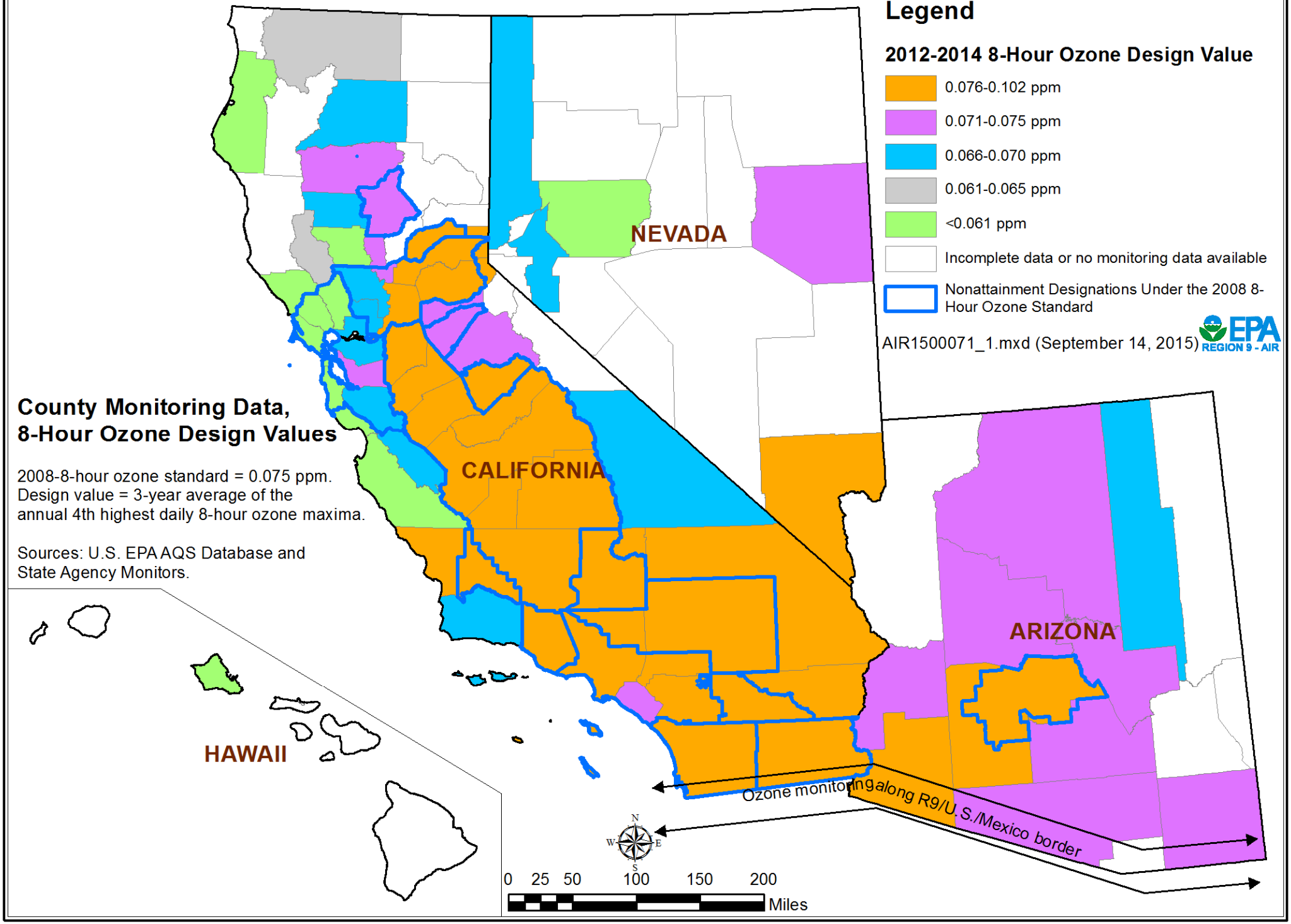
Ciudad Juarez, Mexico Ozone data contains multiple site years < 75% data completeness

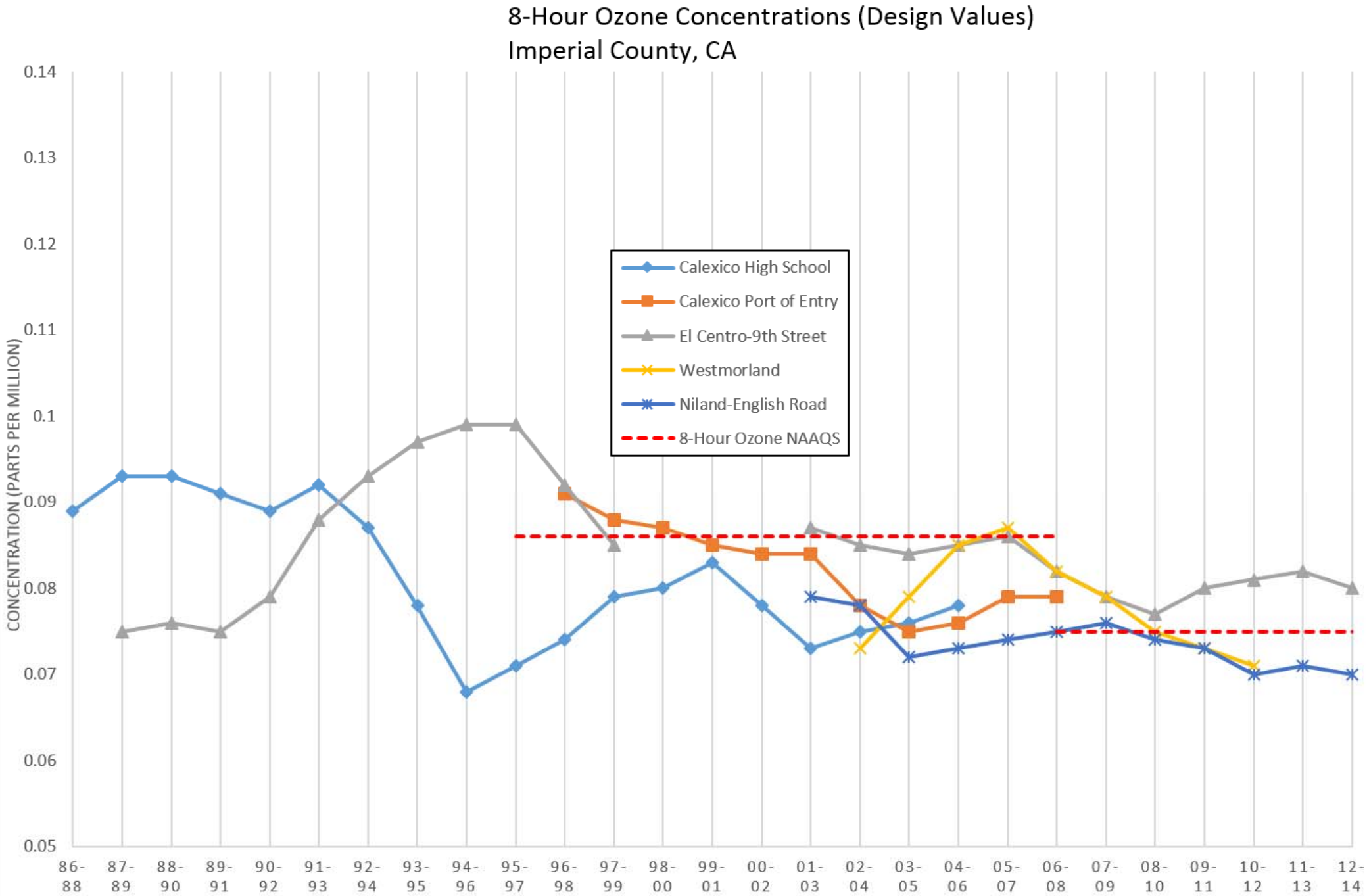
no data for sites 0004 and 0006 after 2013

no data for site 0007 after 2014

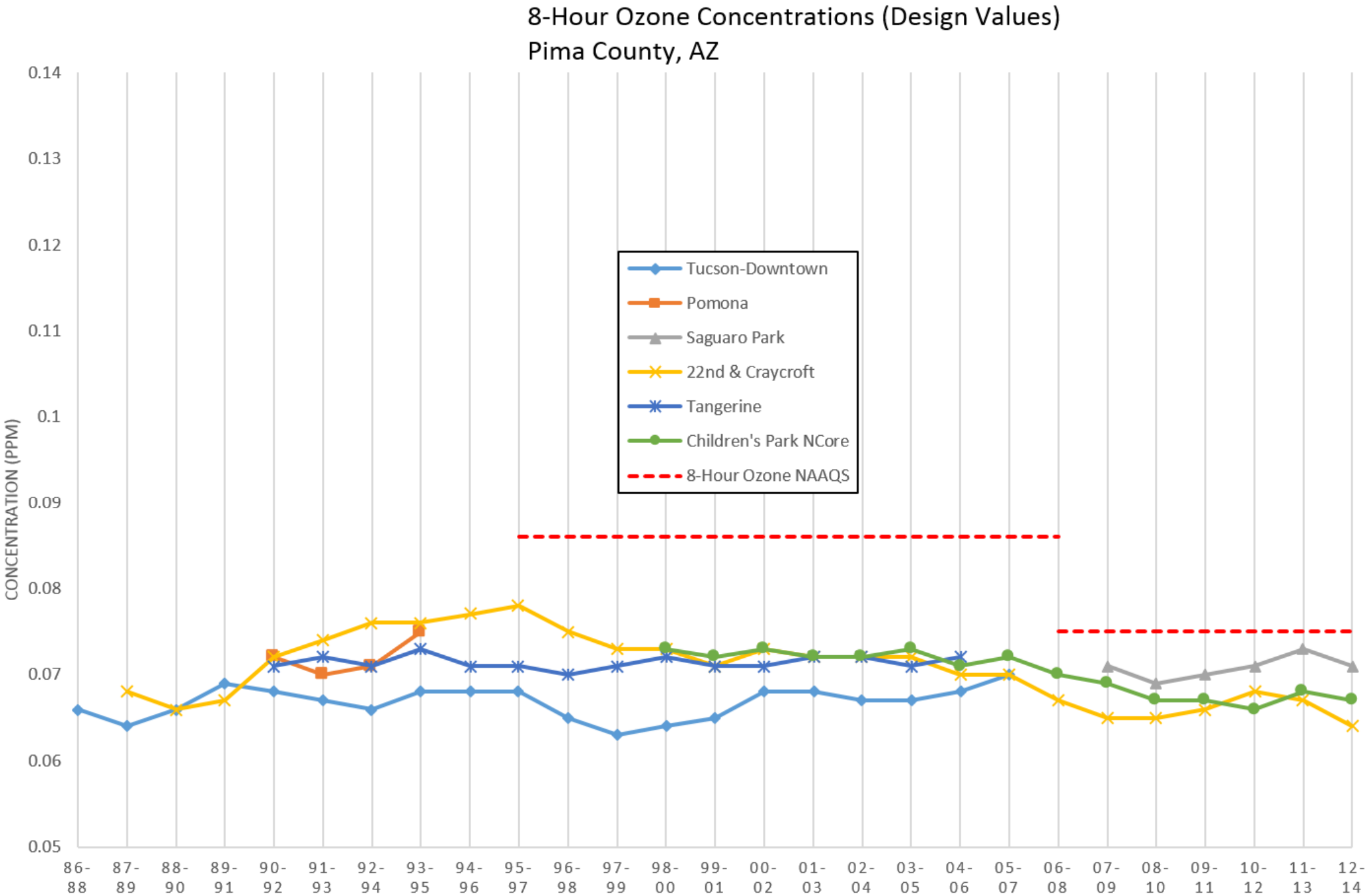
Trends Analysis of 8-Hour Ambient Ozone and PM Concentration Data along the U.S./Mexico Border in EPA Region 9

Region 9 Ground Level Ozone Concentrations

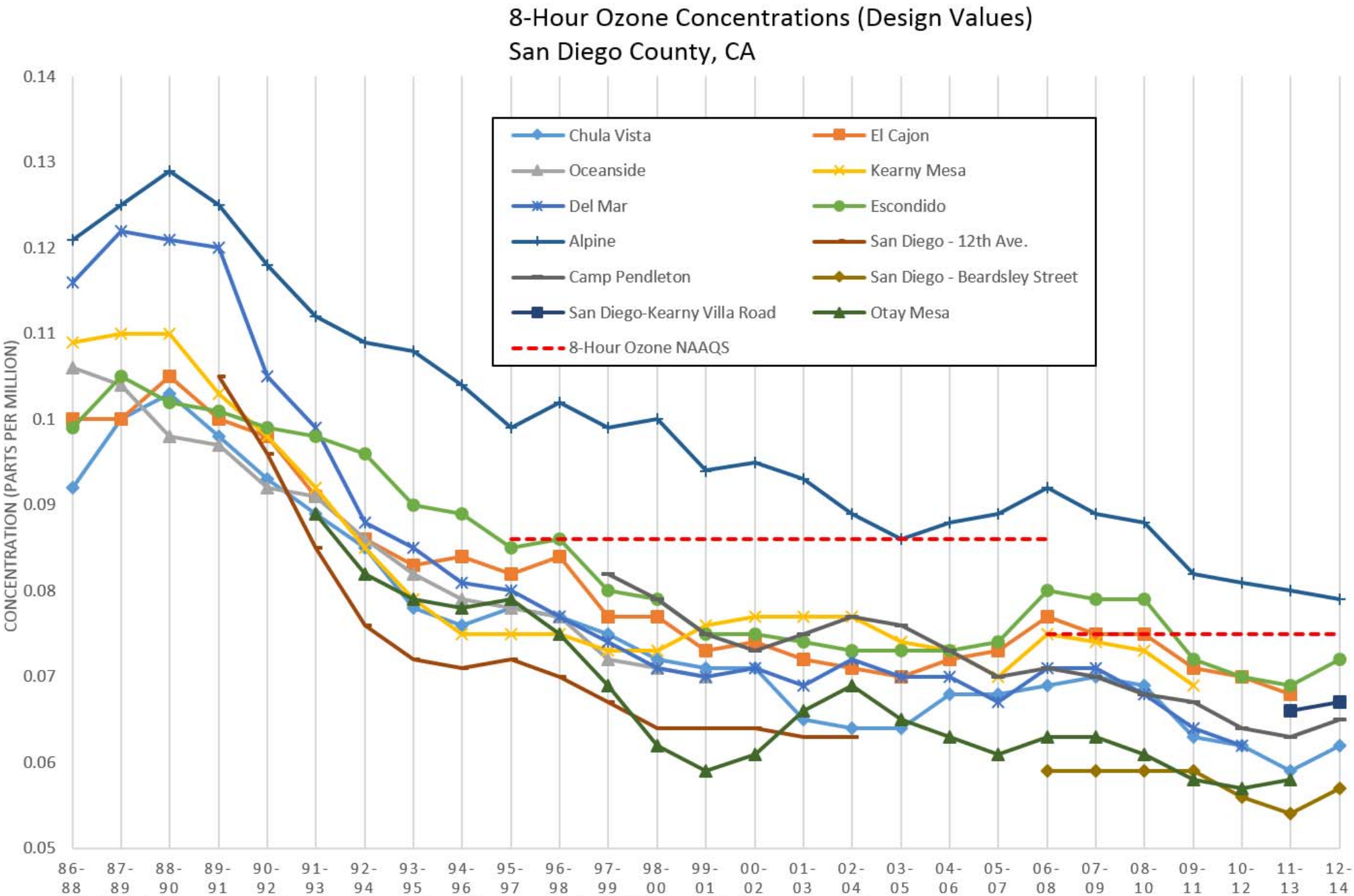




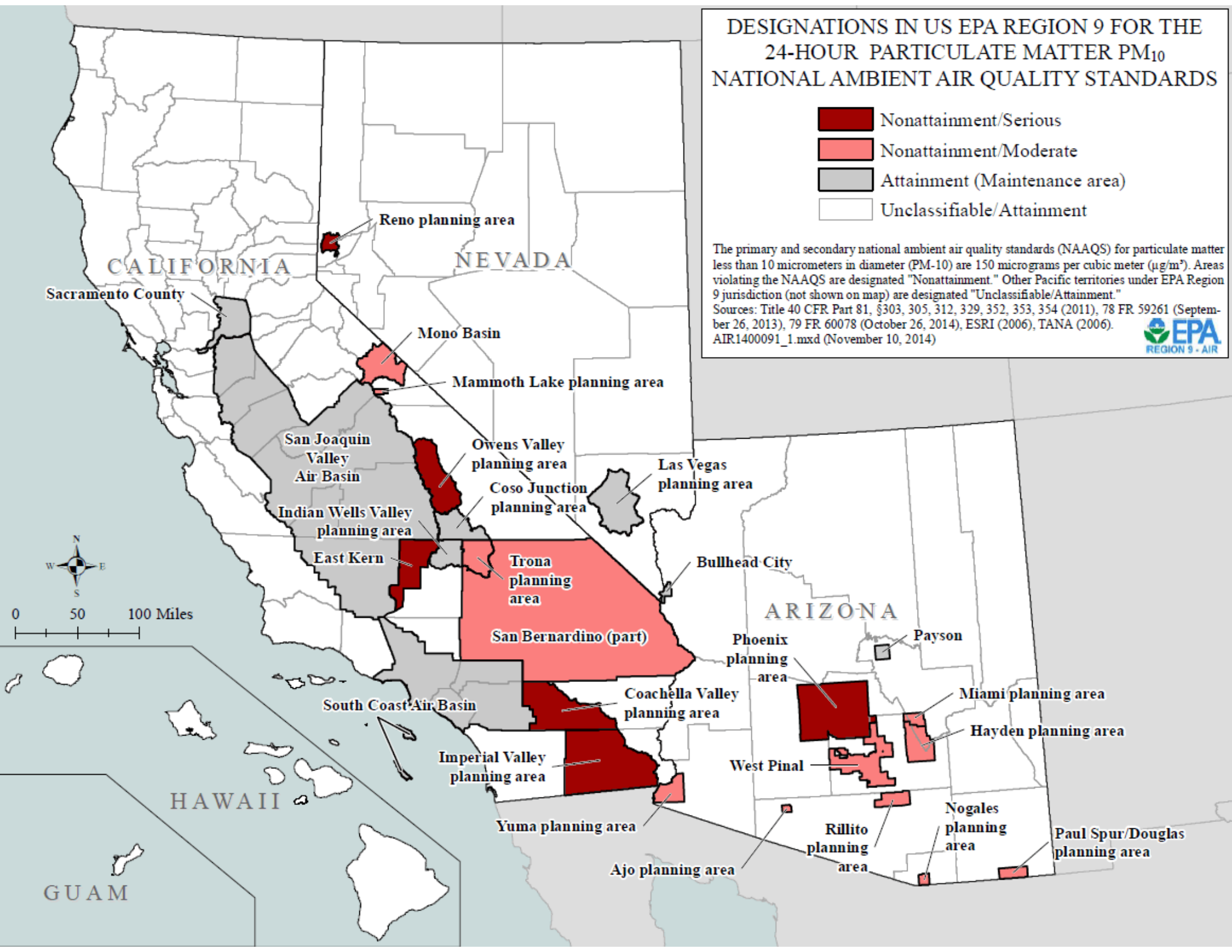
2008 8-hour ozone national ambient air quality standard (NAAQS) is 0.075 parts per million
Design values are the three-year average of annual 4th-highest 8-hour ozone daily maxima
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).

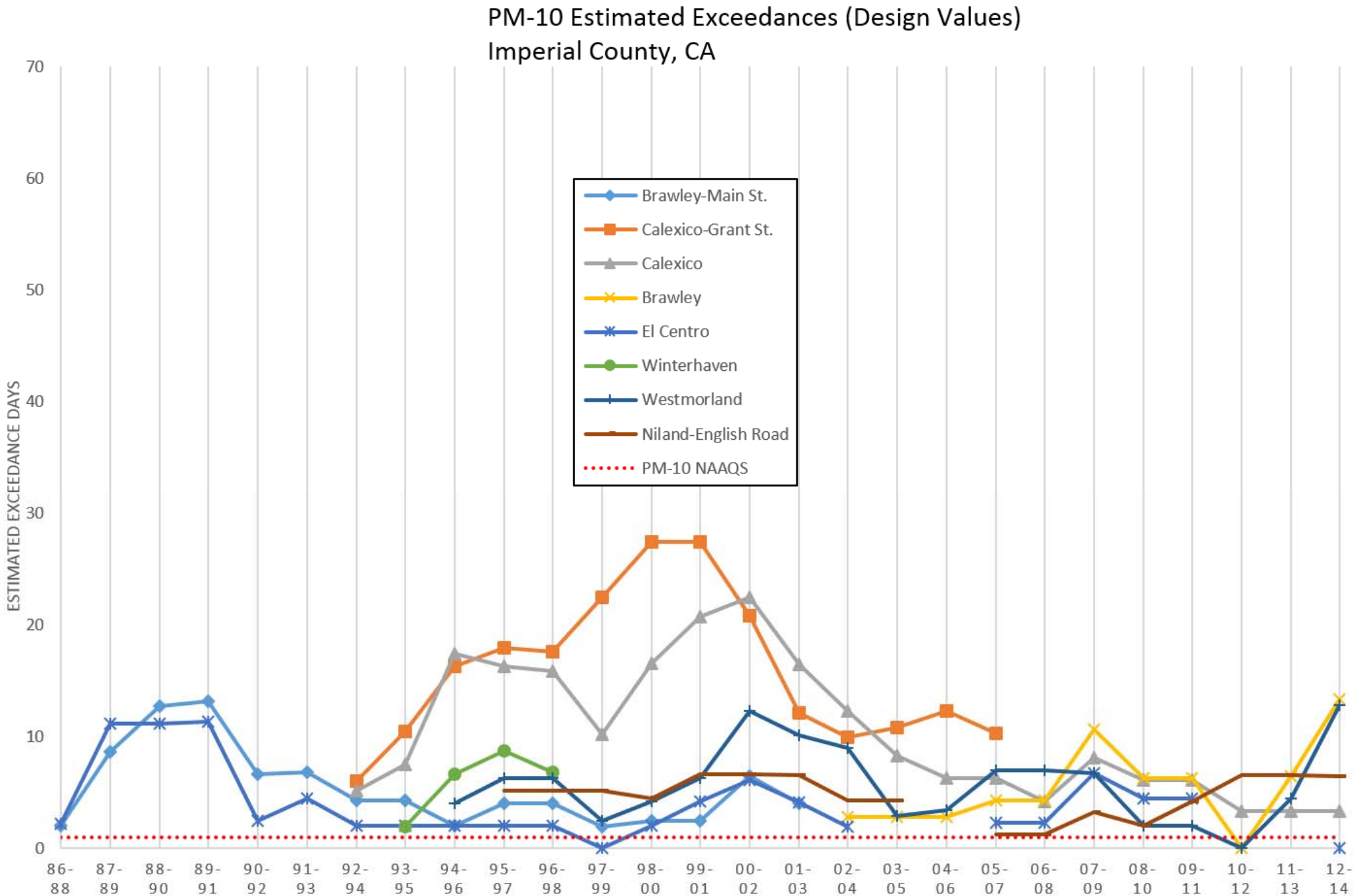


2008 8-hour ozone national ambient air quality standard (NAAQS) is 0.075 parts per million
Design values are the three-year average of annual 4th-highest 8-hour ozone daily maxima
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



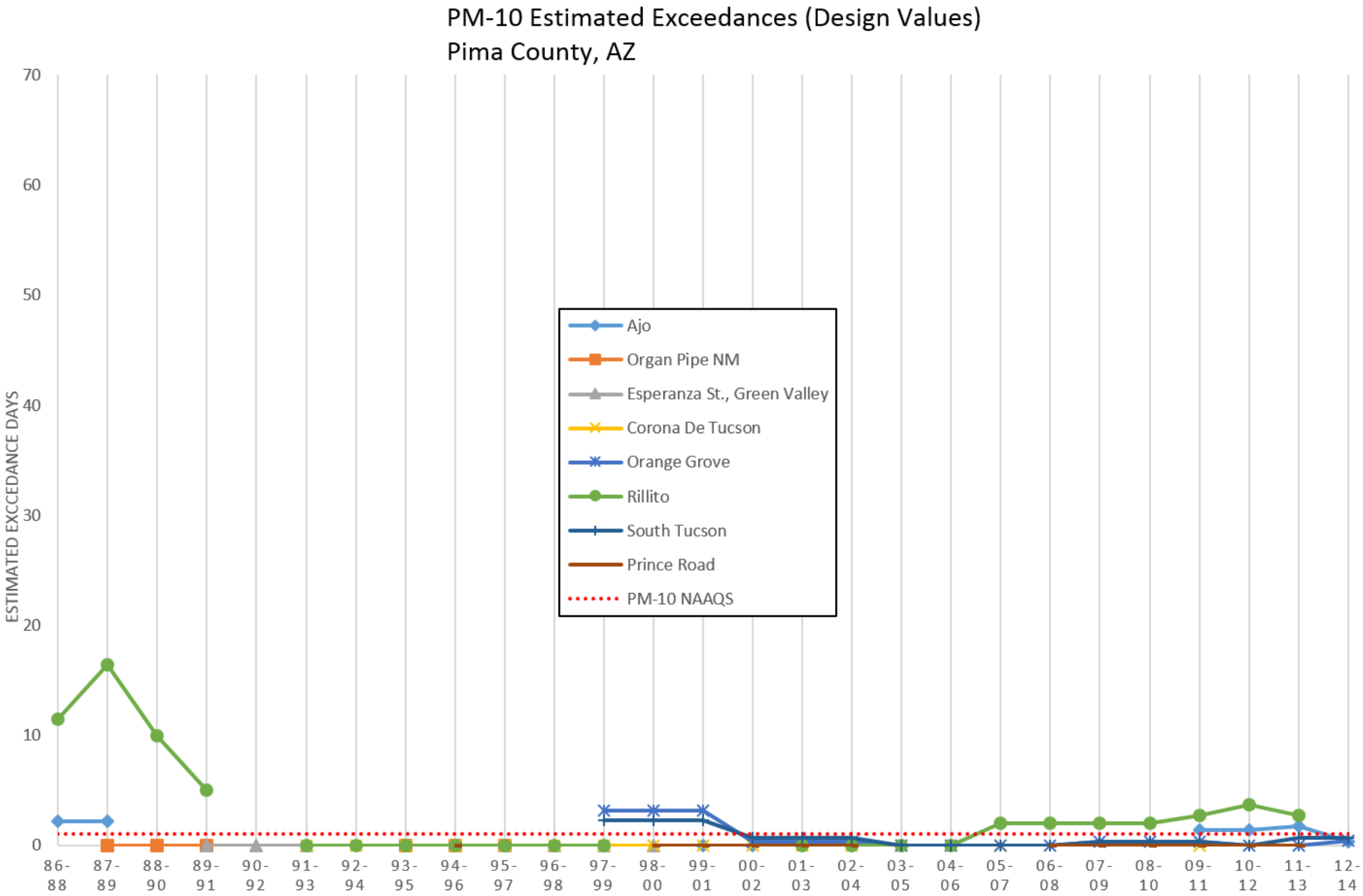
2008 8-hour ozone national ambient air quality standard (NAAQS) is 0.075 parts per million
Design values are the three-year average of annual 4th-highest 8-hour ozone daily maxima
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).


DESIGNATIONS IN US EPA REGION 9 FOR THE 24-HOUR PARTICULATE MATTER PM10 NATIONAL AMBIENT AIR QUALITY STANDARDS
Nonattainment/Serious
Nonattainment/Moderate
Attainment (Maintenance area)
Unclassifiable/Attainment
The primary and secondary national ambient air quality standards (NAAQS) for particulate matter less than 10 micrometers in diameter (PM-10) are 150 micrograms per cubic meter (µg/m³). Areas violating the NAAQS are designated "Nonattainment." Other Pacific territories under EPA Region 9 jurisdiction (not shown on map) are designated "Unclassifiable/Attainment."
Sources: Title 40 CFR Part 81, §303, 305, 312, 329, 352, 353, 354 (2011), 78 FR 59261 (September 26, 2013), 79 FR 60078 (October 26, 2014), ESRI (2006), TANA (2006).
AIR1400091_1.mxd (November 10, 2014)
EPA
REGION 9 • AIR
CALIFORNIA
NEVADA
ARIZONA
HAWAII
GUAM
Reno planning area
Sacramento County
Mono Basin
Mammoth Lake planning area
San Joaquin Valley Air Basin
Owens Valley planning area
Coso Junction planning area
Las Vegas planning area
Indian Wells Valley planning area
East Kern
Trona planning area
Bullhead City
San Bernardino (part)
Payson
Phoenix planning area
Coachella Valley planning area
Miami planning area
South Coast Air Basin
Hayden planning area
Imperial Valley planning area
West Pinal
Yuma planning area
Rillito planning area
Nogales planning area
Paul Spur/Douglas planning area
Ajo planning area
N
W
E
S
0
50
100 Miles



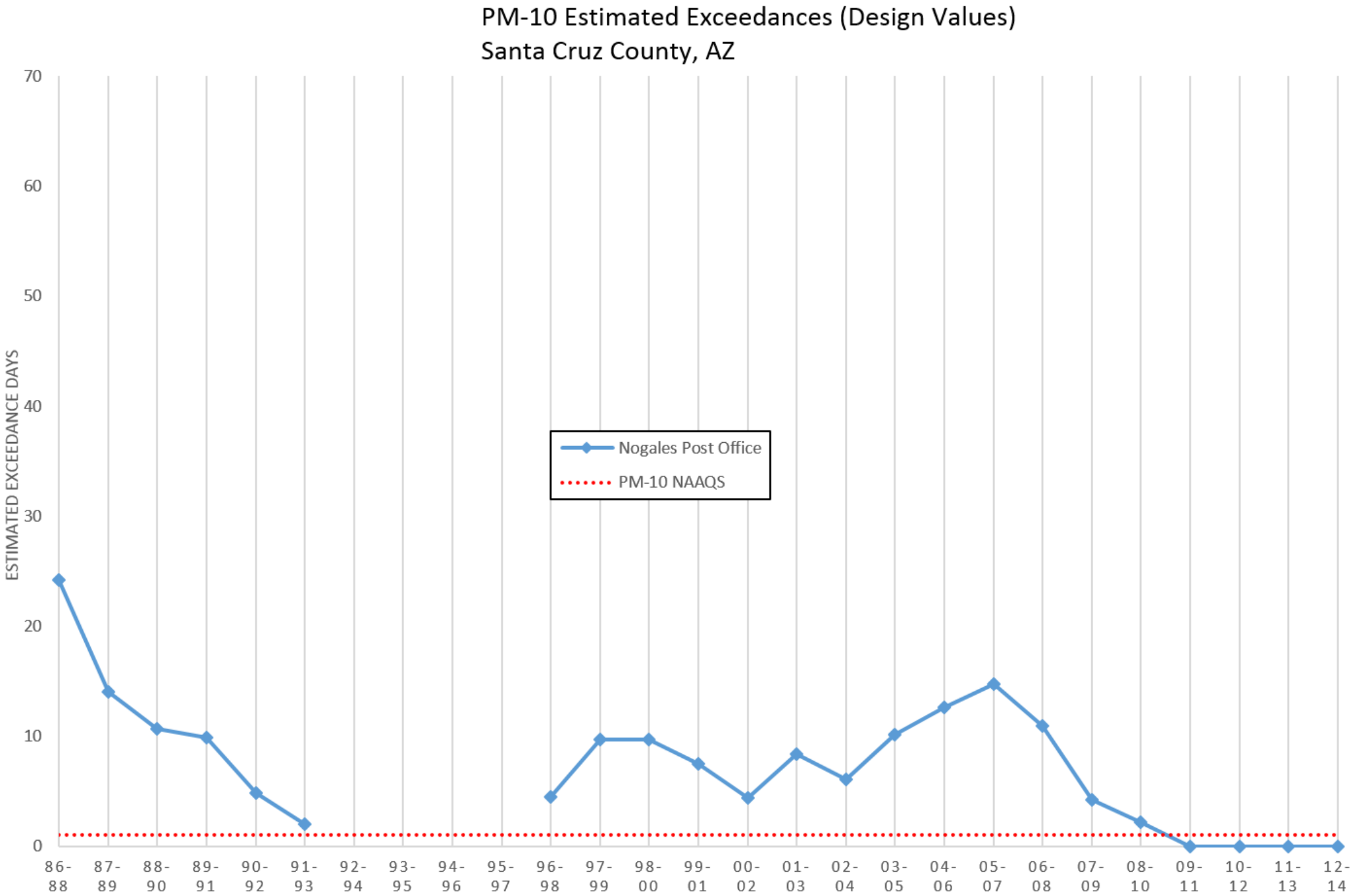
PM-10 national ambient air quality standard (NAAQS) is 150 micrograms per cubic meter, not to be exceeded more than once per year on average over three years.

Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



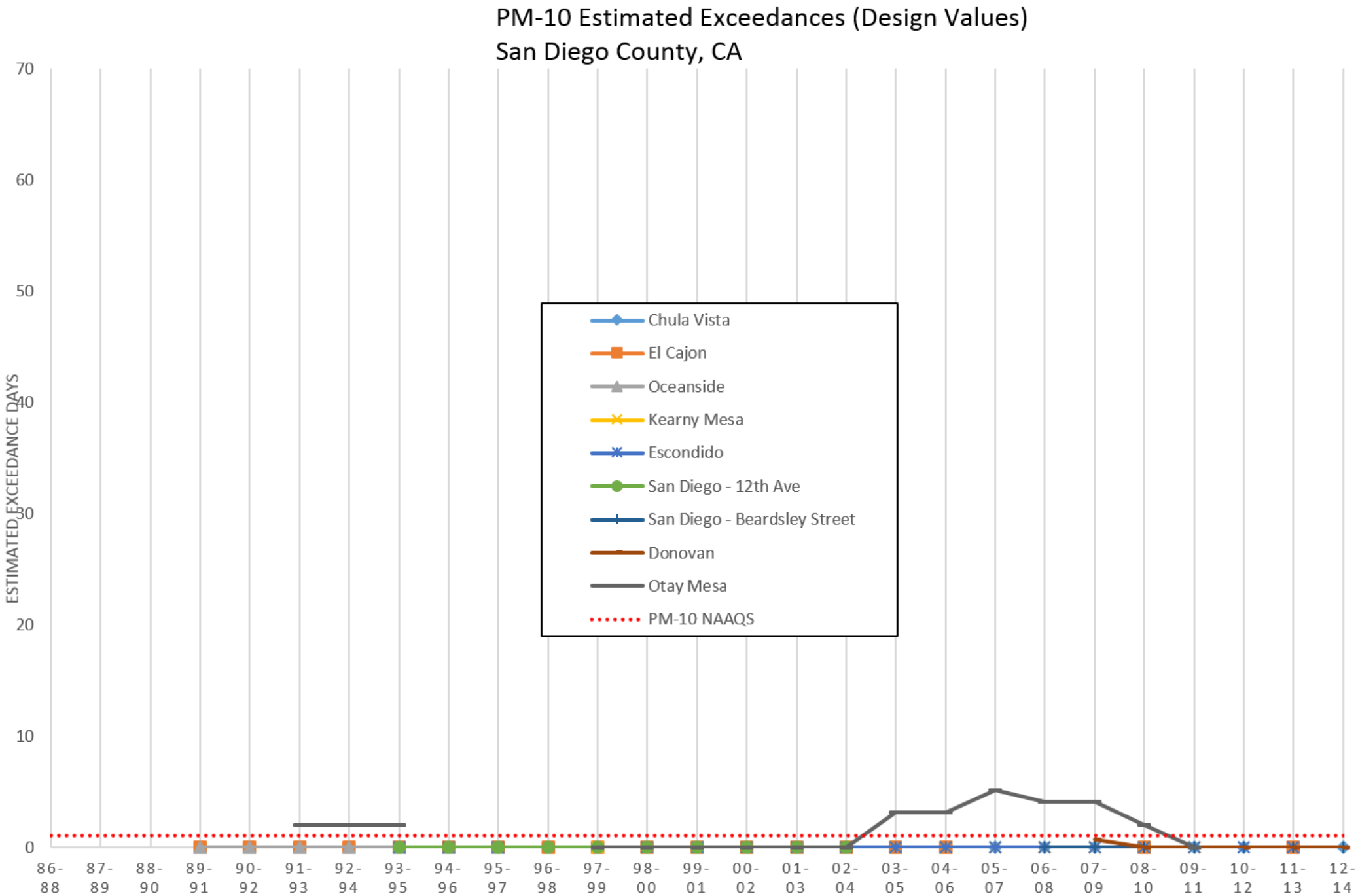
PM-10 national ambient air quality standard (NAAQS) is 150 micrograms per cubic meter, not to be exceeded more than once per year on average over three years.

Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



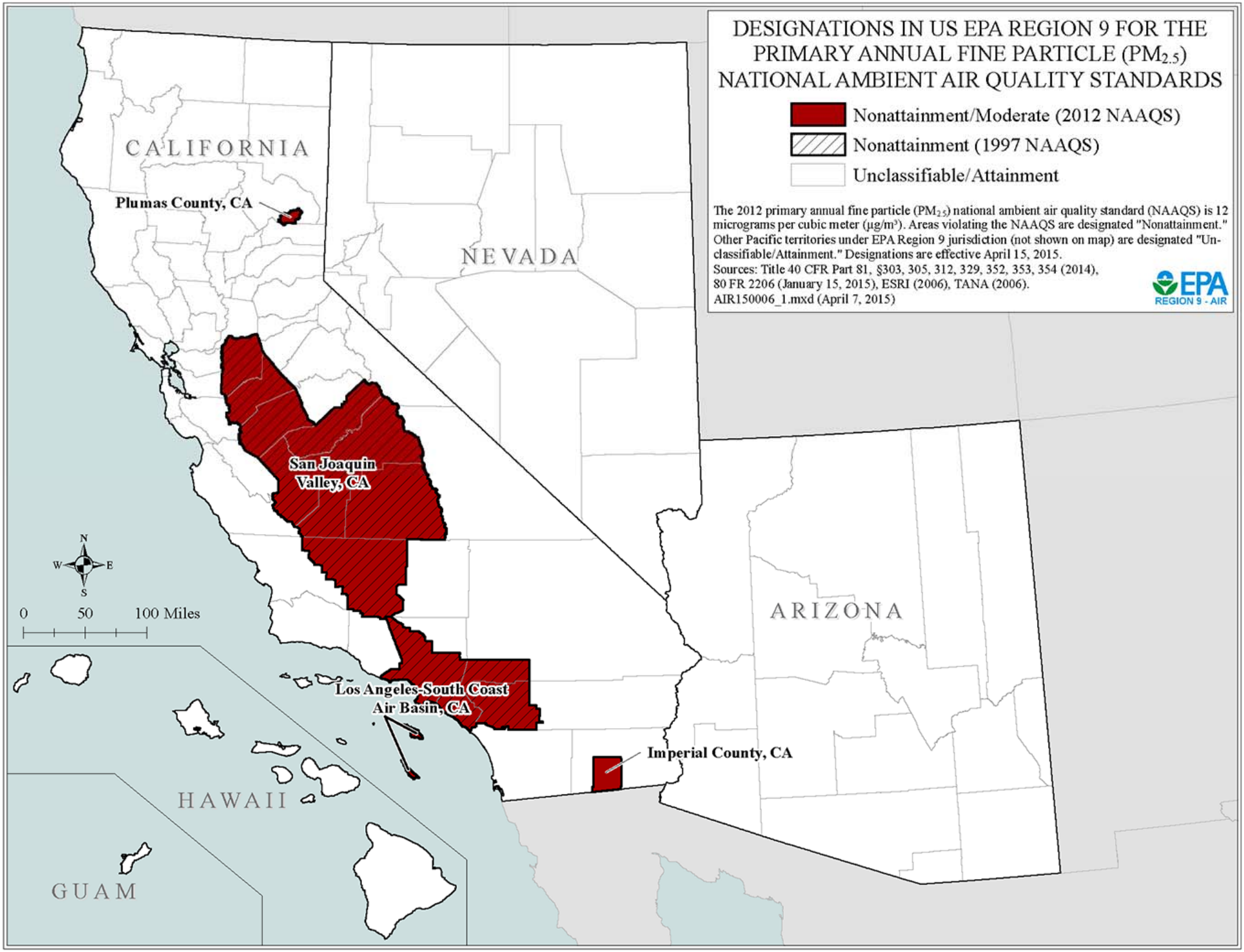
PM-10 national ambient air quality standard (NAAQS) is 150 micrograms per cubic meter, not to be exceeded more than once per year on average over three years.

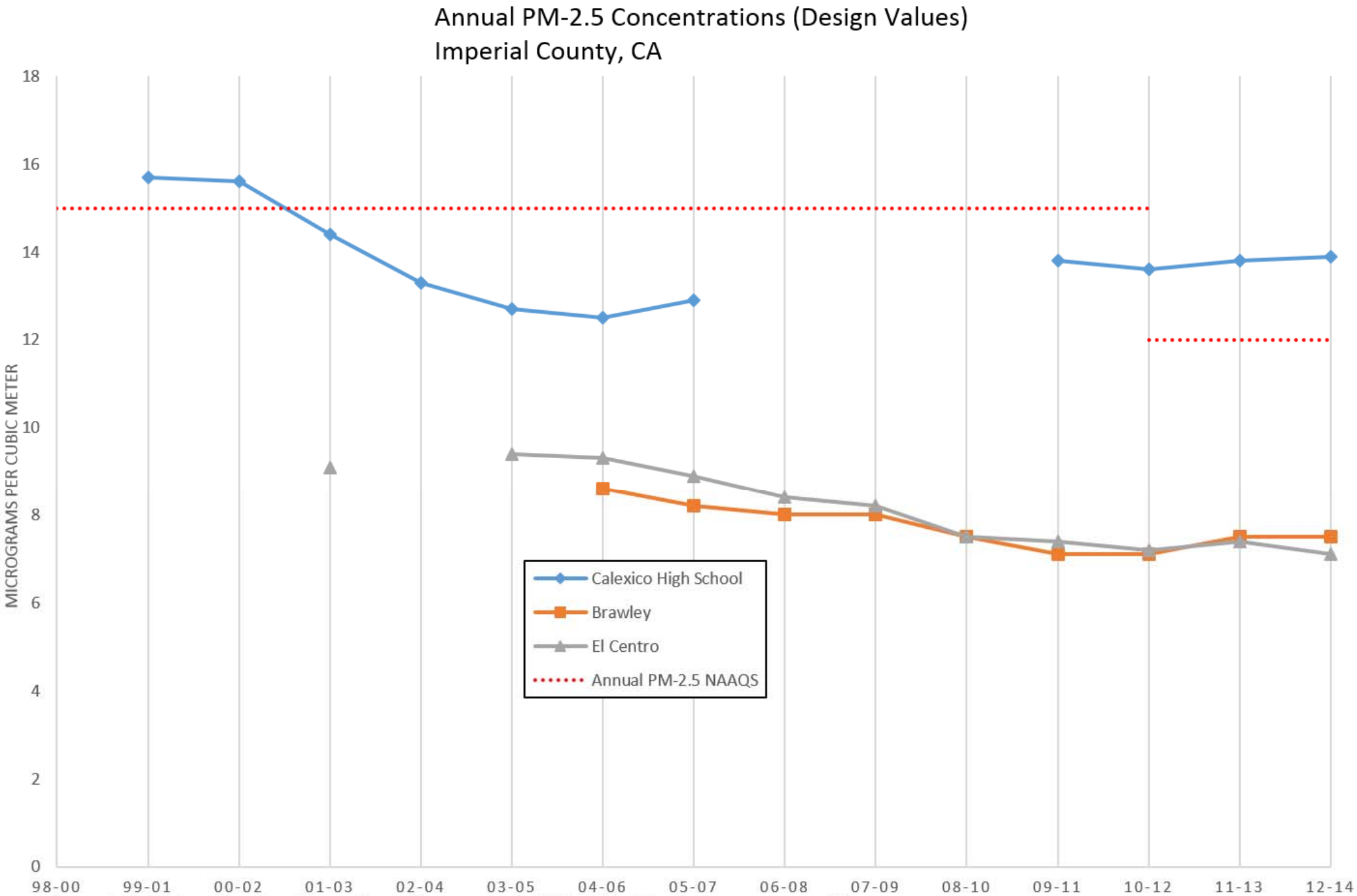
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



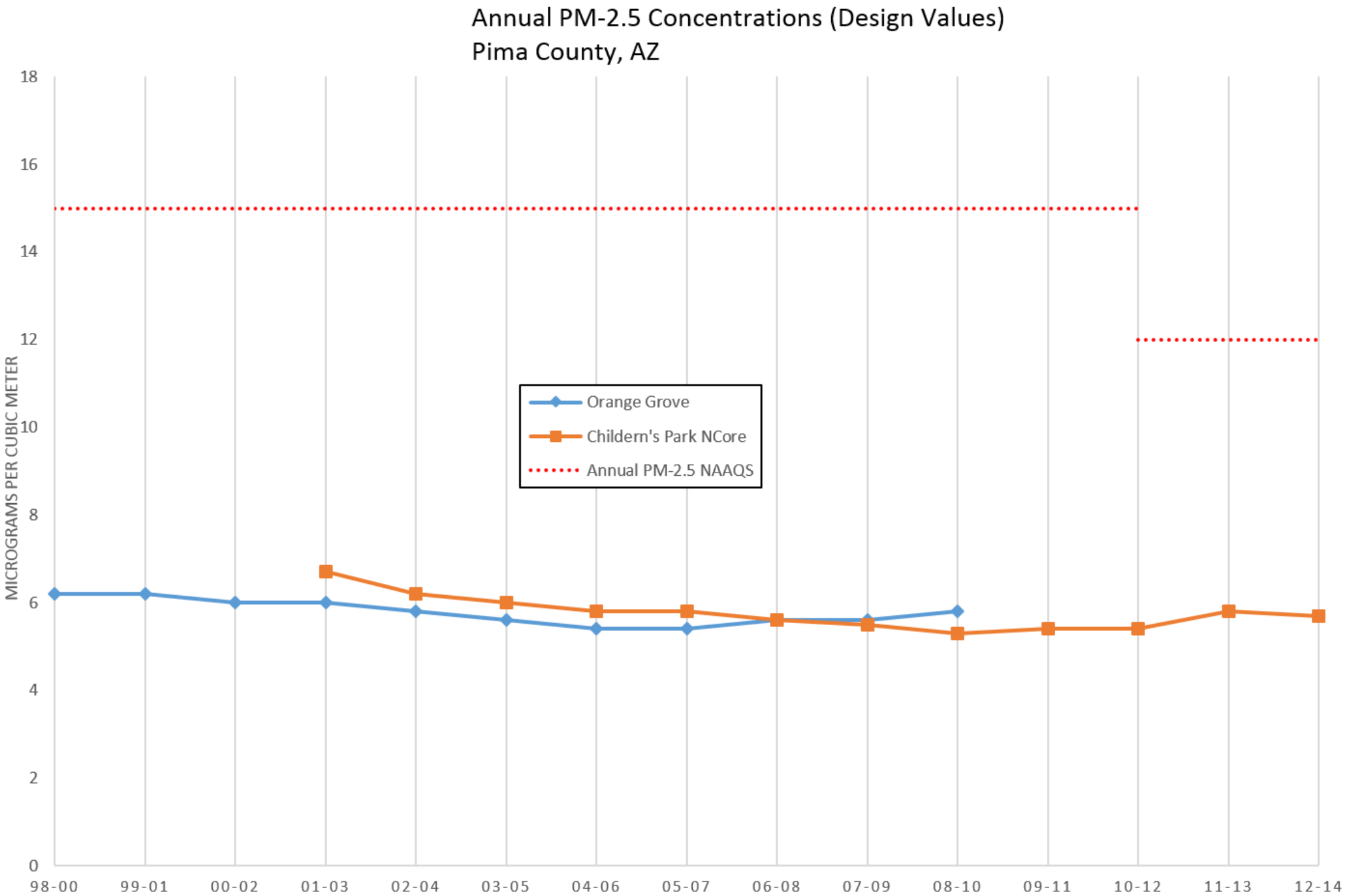
PM-10 national ambient air quality standard (NAAQS) is 150 micrograms per cubic meter, not to be exceeded more than once per year on average over three years.

Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).

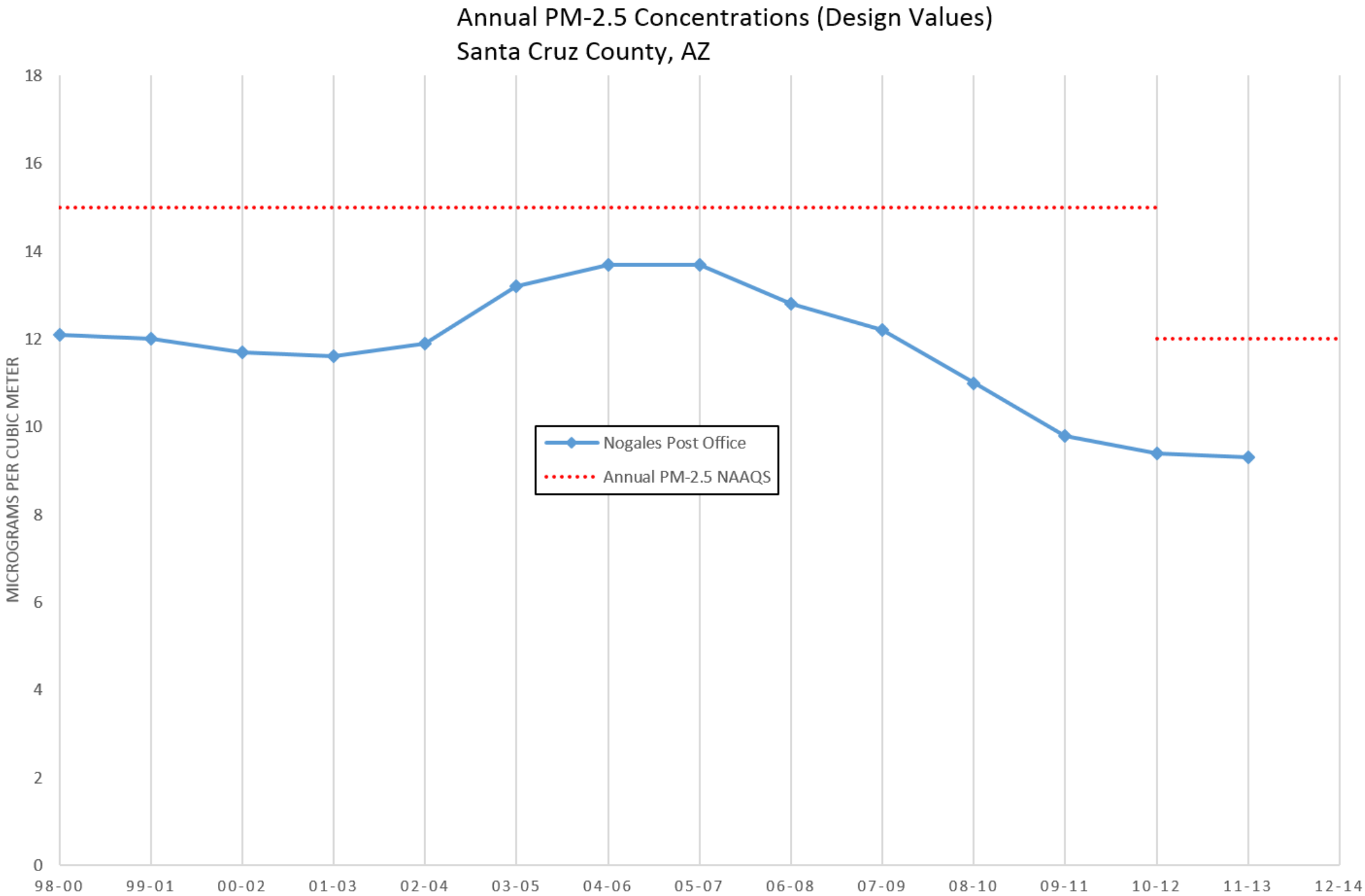

DESIGNATIONS IN US EPA REGION 9 FOR THE PRIMARY ANNUAL FINE PARTICLE ($PM_{2.5}$) NATIONAL AMBIENT AIR QUALITY STANDARDS
Nonattainment/Moderate (2012 NAAQS)
Nonattainment (1997 NAAQS)
Unclassifiable/Attainment
The 2012 primary annual fine particle ($PM_{2.5}$) national ambient air quality standard (NAAQS) is 12 micrograms per cubic meter (µg/m³). Areas violating the NAAQS are designated "Nonattainment." Other Pacific territories under EPA Region 9 jurisdiction (not shown on map) are designated "Unclassifiable/Attainment." Designations are effective April 15, 2015.
Sources: Title 40 CFR Part 81, §303, 305, 312, 329, 352, 353, 354 (2014), 80 FR 2206 (January 15, 2015), ESRI (2006), TANA (2006).
AIR150006_1.mxd (April 7, 2015)
EPA
REGION 9 - AIR
CALIFORNIA
NEVADA
ARIZONA
HAWAII
GUAM
Plumas County, CA
San Joaquin Valley, CA
Los Angeles-South Coast Air Basin, CA
Imperial County, CA
N
W
E
S
0
50
100 Miles



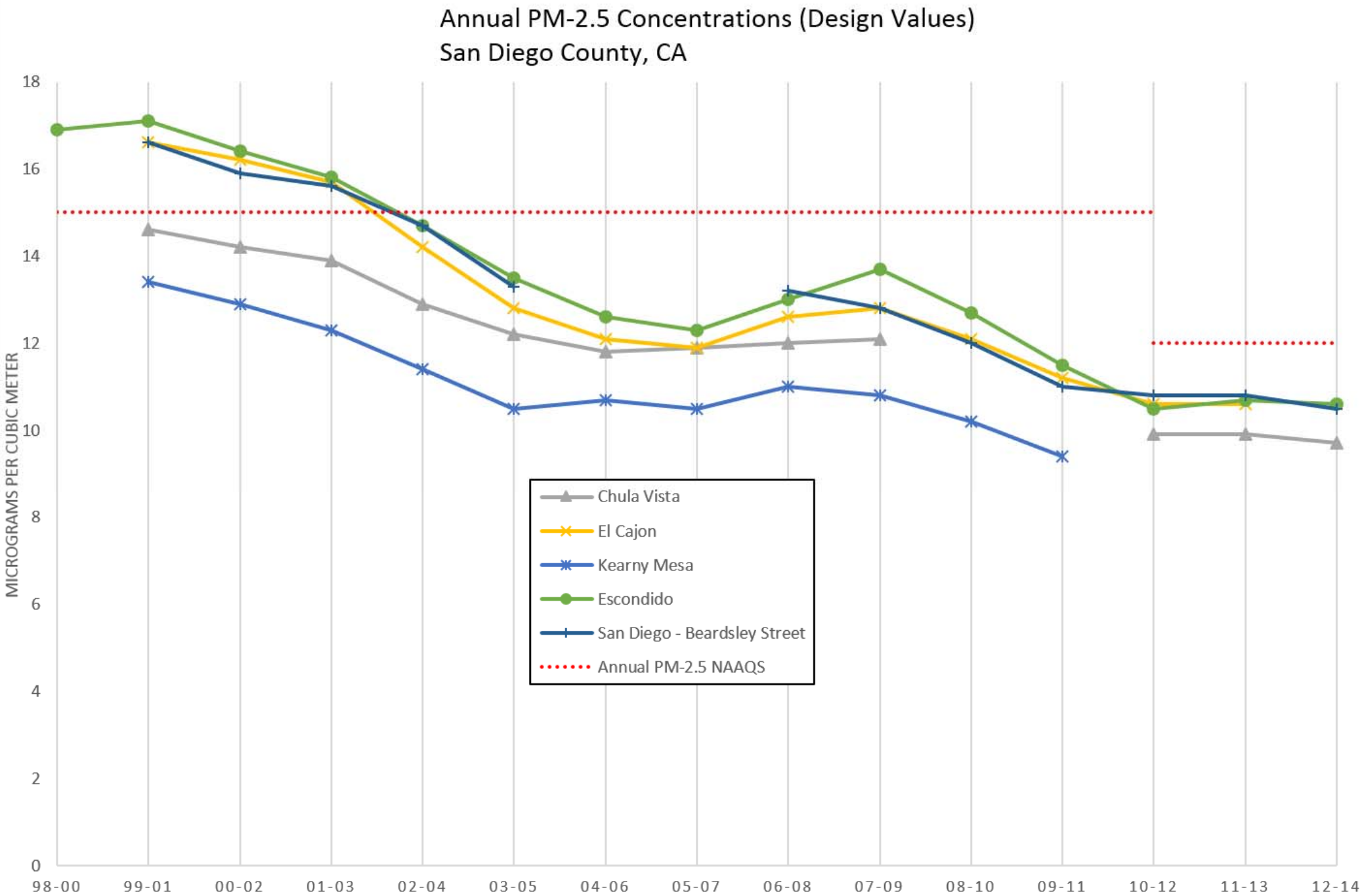
Annual PM-2.5 national ambient air quality standard (NAAQS) is 12 micrograms per cubic meter.
Design value is the monitoring site's annual mean concentration, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



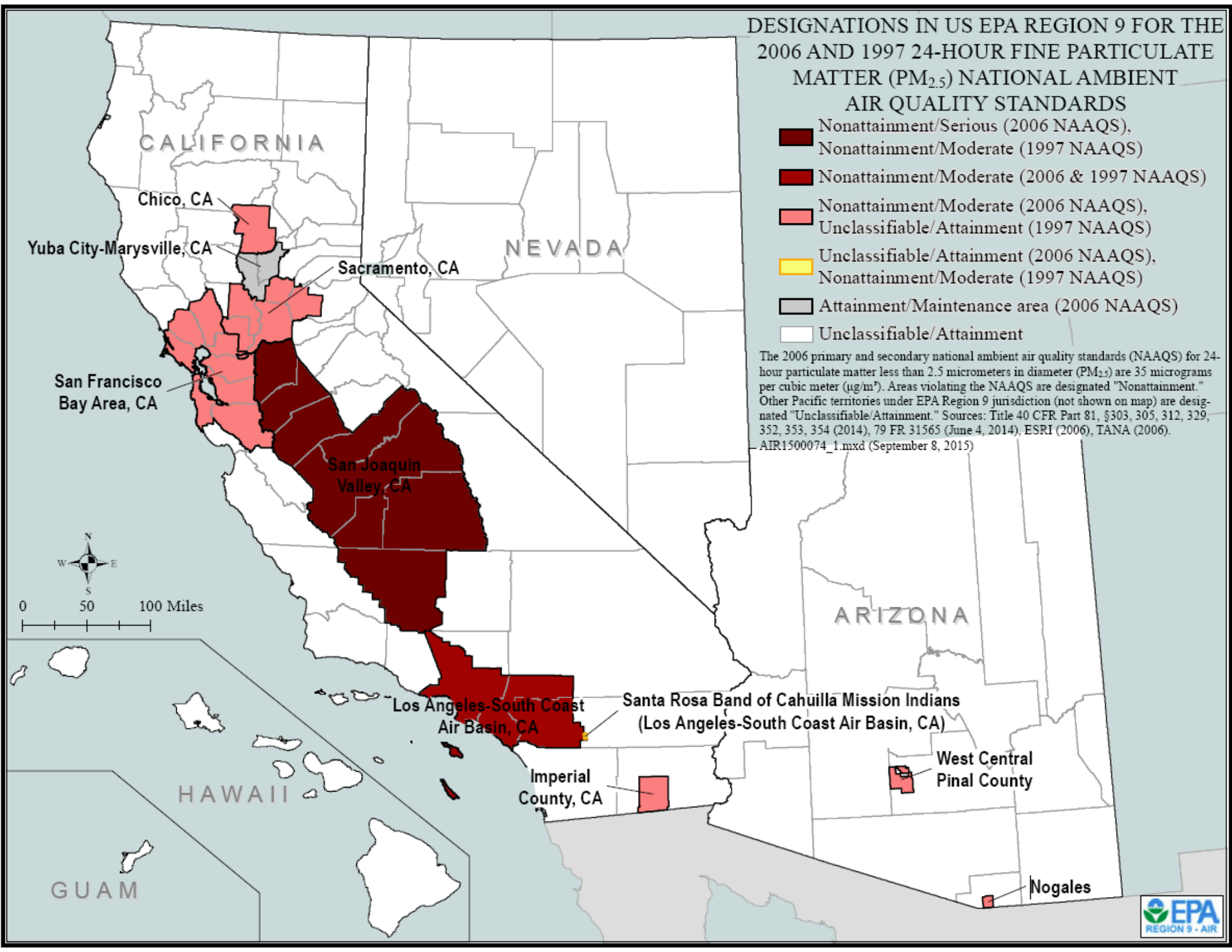
Annual PM-2.5 national ambient air quality standard (NAAQS) is 12 micrograms per cubic meter.
Design value is the monitoring site's annual mean concentration, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).

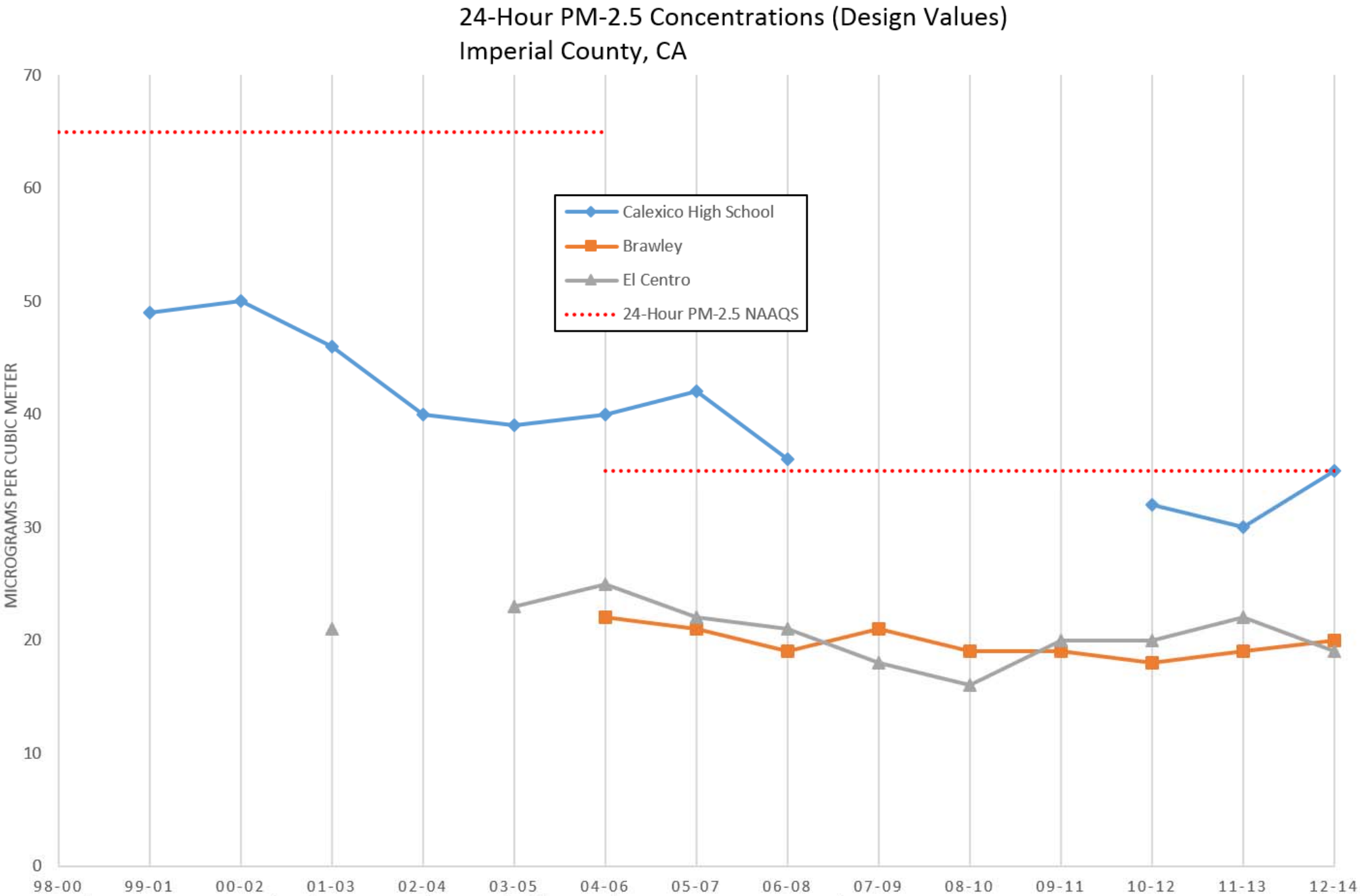


Annual PM-2.5 national ambient air quality standard (NAAQS) is 12 micrograms per cubic meter.
Design value is the monitoring site's annual mean concentration, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).

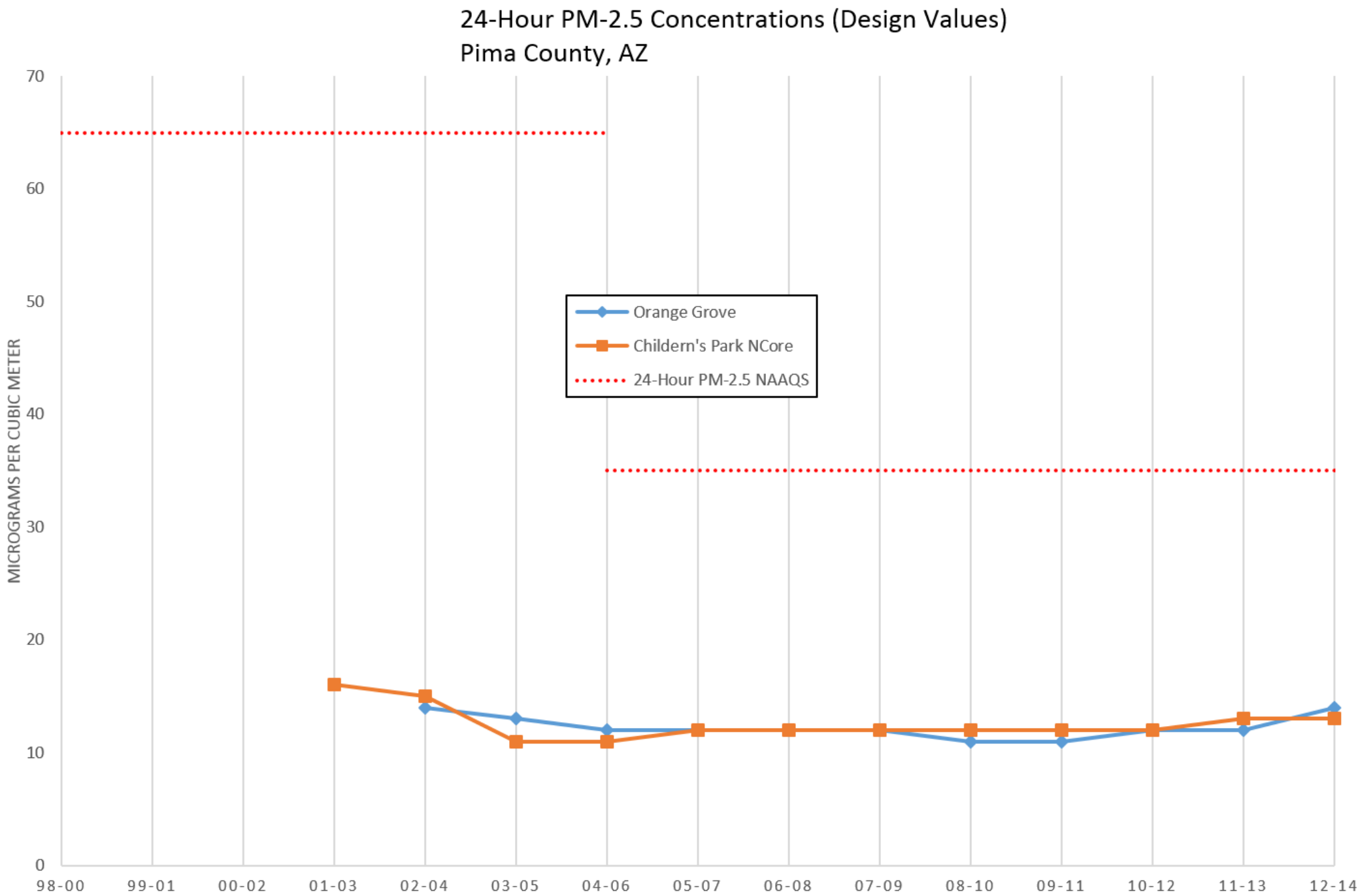


Annual PM-2.5 national ambient air quality standard (NAAQS) is 12 micrograms per cubic meter.
Design value is the monitoring site's annual mean concentration, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).

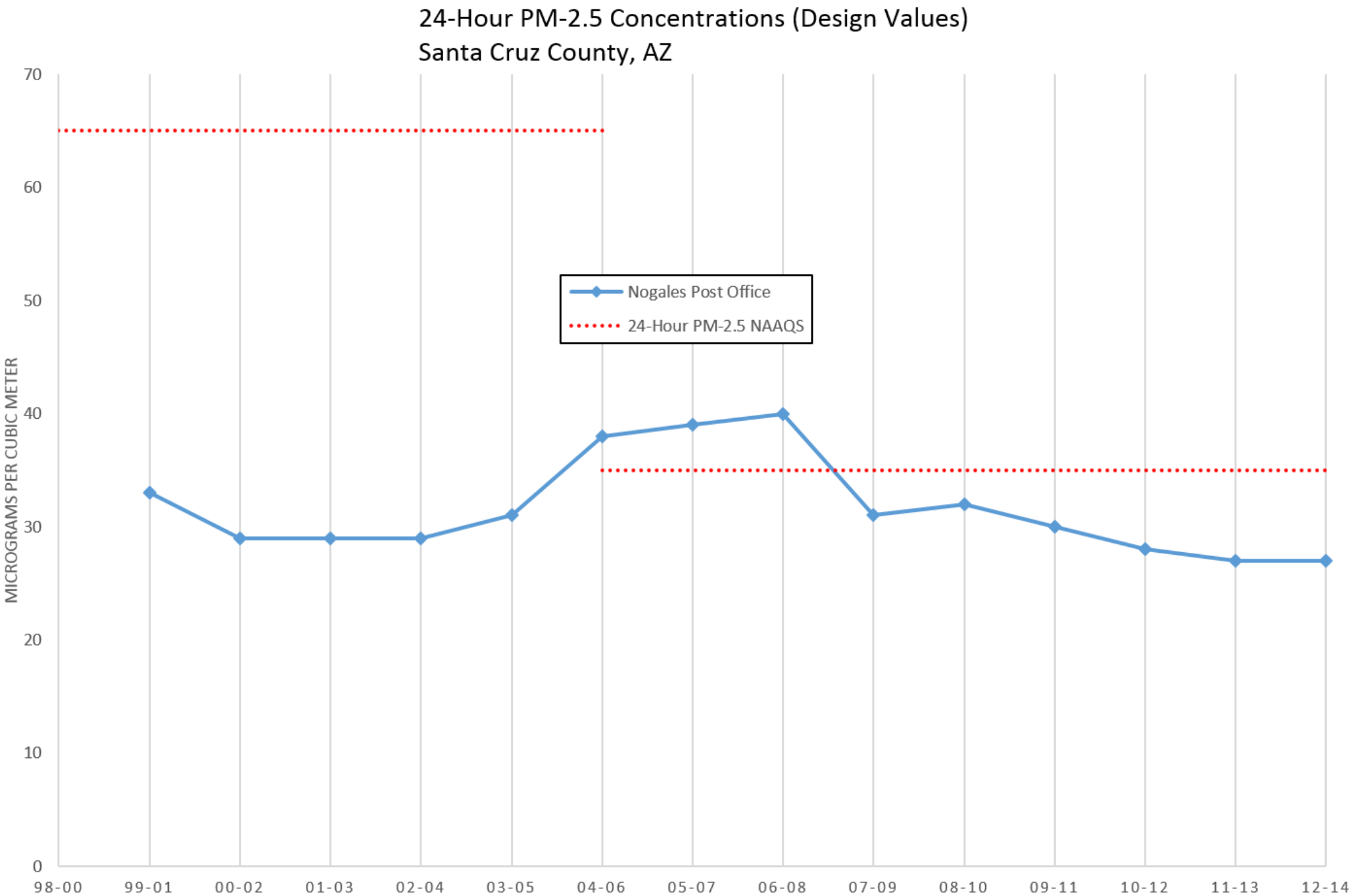

DESIGNATIONS IN US EPA REGION 9 FOR THE 2006 AND 1997 24-HOUR FINE PARTICULATE MATTER ($PM_{2.5}$) NATIONAL AMBIENT AIR QUALITY STANDARDS
Nonattainment/Serious (2006 NAAQS), Nonattainment/Moderate (1997 NAAQS)
Nonattainment/Moderate (2006 & 1997 NAAQS)
Nonattainment/Moderate (2006 NAAQS), Unclassifiable/Attainment (1997 NAAQS)
Unclassifiable/Attainment (2006 NAAQS), Nonattainment/Moderate (1997 NAAQS)
Attainment/Maintenance area (2006 NAAQS)
Unclassifiable/Attainment
The 2006 primary and secondary national ambient air quality standards (NAAQS) for 24-hour particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$) are 35 micrograms per cubic meter (µg/m³). Areas violating the NAAQS are designated "Nonattainment." Other Pacific territories under EPA Region 9 jurisdiction (not shown on map) are designated "Unclassifiable/Attainment." Sources: Title 40 CFR Part 81, §303, 305, 312, 329, 352, 353, 354 (2014), 79 FR 31565 (June 4, 2014), ESRI (2006), TANA (2006).
AIR1500074_1.mxd (September 8, 2015)
CALIFORNIA
NEVADA
ARIZONA
HAWAII
GUAM
Chico, CA
Yuba City-Marysville, CA
Sacramento, CA
San Francisco Bay Area, CA
San Joaquin Valley, CA
Los Angeles-South Coast Air Basin, CA
Santa Rosa Band of Cahuilla Mission Indians (Los Angeles-South Coast Air Basin, CA)
Imperial County, CA
West Central Pinal County
Nogales
N
W
E
S
0
50
100 Miles
EPA
REGION 9 - AIR



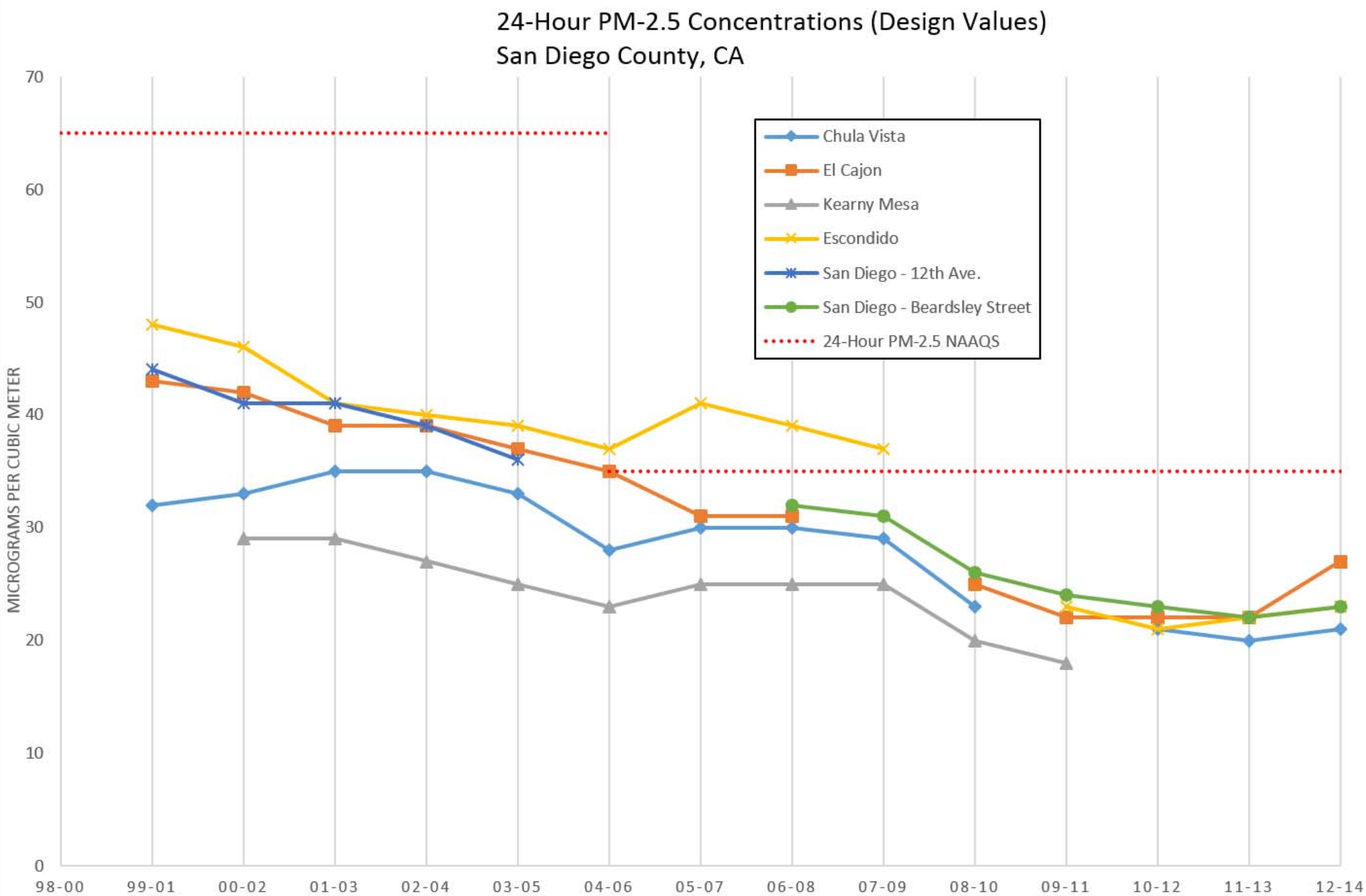
24-hour PM-2.5 national ambient air quality standard (NAAQS) is 35 micrograms per cubic meter.
Design value is the monitoring site's 98th percentile, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



24-hour PM-2.5 national ambient air quality standard (NAAQS) is 35 micrograms per cubic meter.
Design value is the monitoring site's 98th percentile, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



24-hour PM-2.5 national ambient air quality standard (NAAQS) is 35 micrograms per cubic meter.
Design value is the monitoring site's 98th percentile, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).



24-hour PM-2.5 national ambient air quality standard (NAAQS) is 35 micrograms per cubic meter.
Design value is the monitoring site's 98th percentile, averaged over three years.
Source: US EPA's Air Quality Systems (AQS) database (September 14, 2015).