

US EPA ARCHIVE DOCUMENT

Ozone and Carbon Monoxide 1997-99 Air Quality Data Update

The following is a brief summary of EPA's 1999 air quality update for ozone and carbon monoxide nonattainment areas.

Ozone (O₃): Today's list updates ozone air quality monitoring data for the three year period, 1997-99. During this current three year period,

- 39 of the original 98 areas designated nonattainment for the 1-hour O₃ National Ambient Air Quality Standard (NAAQS) in 1991 failed to meet the NAAQS in 1997-99 (Table 1).
- 7 additional counties failed to meet the 1-hour O₃ NAAQS in 1997-99 (Table 2).
- 332 counties have average annual 4th maximum 8-hour daily maximum O₃ concentrations in 1997-99 greater than the level of the 8-hour O₃ NAAQS (Table 3).

EPA set the 1-hour O₃ standard at 0.12 parts per million (ppm) daily maximum 1-hour average concentration not to be exceeded more than once per year on average. Compliance with the 1-hour ozone standard is judged on the basis of the most recent three years of ambient air quality monitoring data. The 1-hour ozone standard is not met at a monitoring site if the average number of estimated exceedances of the ozone standard is greater than 1.0 (1.05 rounds up). The level of the 8-hour O₃ NAAQS is 0.08 ppm¹. The 8-hour O₃ standard is not met if the 3-year average of the annual 4th highest daily maximum 8-hour O₃ concentration is greater than 0.08 ppm (0.085 rounds up).

Carbon Monoxide (CO): Today's list updates CO air quality data for the two year period, 1998-99. During this two year period,

- 3 of the original 42 areas designated nonattainment for the 8-hour CO NAAQS in 1991 failed to meet the CO NAAQS in 1998-99 (Table 4).
- 3 additional areas failed to meet the CO NAAQS in 1998-99 (Table 4).

EPA's National Ambient Air Quality Standard for carbon monoxide is 9 parts per million (ppm) nonoverlapping 8-hour average concentration not to be exceeded more than once per year. The CO standard is not met at a monitoring site if there are two or more exceedances of the level of the CO NAAQS in either of the two most recent calendar years of monitoring data.

Notes:

¹ In a May 1999 split decision, the U.S. Court of Appeals for the D.C. Circuit limited the manner in which EPA can implement the eight-hour standard, which the Agency issued in 1997. EPA appealed the May 1999 decision to the U.S. Supreme Court, which has agreed to hear the case. The Court of Appeals did not question the need for the new standard or the science behind it. That standard, based on 8-hour averages of ozone rather than the previous 1-hour average, reflects a more realistic measure of people's exposure and is more protective of public health.

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Table 1. Areas designated nonattainment in 1991 ⁽¹⁾ that fail to meet the 1-hr ozone NAAQS in 1997-99

| State | Designated Area | O ₃ Design Value ⁽²⁾ (ppm) | Avg. Expected Exceedance Rate ⁽³⁾ |
|-------|--|---|--|
| | | 1997-99 | 1997-99 |
| GA | Atlanta | 0.156 | 10.2 |
| MD | Baltimore | 0.152 | 4.5 |
| LA | Baton Rouge | 0.126 | 1.8 |
| TX | Beaumont-Port Arthur | 0.130 | 1.7 |
| AL | Birmingham | 0.128 | 1.7 |
| NC | Charlotte-Gastonia ⁽⁴⁾ | 0.132 | 2.0 |
| IL | Chicago-Gary-Lake County | 0.126 | 1.7 |
| TX | Dallas-Fort Worth | 0.135 | 9.9 |
| MI | Detroit-Ann Arbor ⁽⁴⁾ | 0.126 | 1.3 |
| CT | Greater Connecticut | 0.147 | 2.7 |
| TX | Houston-Galveston-Brazoria | 0.203 | 11.7 |
| WV | Huntington-Ashland ⁽⁴⁾ | 0.129 | 2.3 |
| IL | Jersey Co. ⁽⁴⁾ | 0.127 | 1.7 |
| MD | Kent County and Queen Anne's Co. | 0.130 | 2.3 |
| TN | Knoxville ⁽⁴⁾ | 0.138 | 3.7 |
| PA | Lancaster | 0.128 | 1.7 |
| CA | Los Angeles South Coast Air Basin | 0.211 | 39.3 |
| IN | Louisville | 0.130 | 2.1 |
| WI | Manitowoc Co | 0.128 | 1.3 |
| TN | Memphis ⁽⁴⁾ | 0.126 | 1.7 |
| WI | Milwaukee-Racine | 0.134 | 2.1 |
| TN | Nashville ⁽⁴⁾ | 0.127 | 2.0 |
| NY | New York-N. New Jersey-Long Island, NY-NJ-CT | 0.145 | 3.7 |
| PA | Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD | 0.153 | 4.4 |
| PA | Pittsburgh-Beaver Valley | 0.128 | 1.3 |
| ME | Portland ⁽⁵⁾ | 0.125 | 1.3 |
| NC | Raleigh-Durham ⁽⁴⁾ | 0.127 | 1.4 |
| VA | Richmond ⁽⁴⁾ | 0.134 | 2.7 |
| CA | Sacramento Metro | 0.148 | 5.2 |
| CA | San Diego | 0.135 | 3.0 |

| State | Designated Area | O ₃ Design Value ⁽²⁾ (ppm) | Avg. Expected Exceedance Rate ⁽³⁾ |
|-------|--------------------------------|---|--|
| | | 1997-99 | 1997-99 |
| CA | San Francisco-Bay | 0.139 | 2.7 |
| CA | San Joaquin Valley | 0.161 | 13.5 |
| WI | Sheboygan ⁽⁴⁾ | 0.134 | 2.0 |
| CA | Southeast Desert Modified AQMD | 0.170 | 24.1 |
| MA | Springfield (W. Mass) | 0.128 | 1.7 |
| MO | St. Louis | 0.131 | 2.0 |
| DE | Sussex Co ⁽⁵⁾ | 0.125 | 1.3 |
| CA | Ventura Co | 0.134 | 2.7 |
| DC | Washington | 0.132 | 4.2 |

Notes:

1. Designations and classifications for ozone nonattainment areas as published in the Federal Register, 40 CFR Part 81. *Unclassified and transitional nonattainment areas are not included in Table 1.*

2. The updated air quality design value is estimated for the 1997-99 period using all air quality data reported to EPA's Aerometric Information Retrieval System (AIRS). The computation procedures follow EPA guidance for calculating design values (Laxton Memorandum, June 18, 1990). For sites with three complete years of monitoring data, the air quality design value is the fourth highest daily maximum 1-hour ozone concentration, because the standard allows one exceedance per year on average. It is important to note that the 1990 Clean Air Act Amendments required that nonattainment areas be classified on the basis of the design value at the time the Amendments were passed, generally the 1987-89 period was used.

3. The level of the 1-hour ozone Ambient Air Quality standard is 0.12 parts per million (ppm) daily maximum 1-hour average concentration not to be exceeded more than once per year on average. The average estimated number of exceedances column shows the number of days the 0.12 ppm 1-hour ozone standard was exceeded on average at the site recording the highest updated air quality value. This computation is performed after adjustment for any missing sampling days during the 3-year period, 1996-98.

4. Areas presently designated attainment for the 1-hour ozone NAAQS that fail to meet the standard in 1997-99.

5. Areas to be reinstated to nonattainment for the 1-hour NAAQS that fail to meet the standard in 1997-99.

6. At the publication date for this update, air quality data for two areas: Poughkeepsie, NY; and Hancock and Waldo Co.s, ME are still under review and evaluation. Currently, it is unclear whether or not these areas violate the 1-hour ozone NAAQS. When a final determination is made, this table will be updated.

Table 2. Additional counties failing to meet the 1-hour ozone NAAQS in 1997-99

| State | County (Area) | O ₃ Design Value ⁽¹⁾ (ppm) | Avg. Expected Exceedance Rate ⁽²⁾ |
|-------|--|---|--|
| | | 1997-99 | 1997-99 |
| AR | Crittenden Co. ⁽⁴⁾ (Memphis, TN) | 0.124 | 1.3 |
| CA | Amador Co. ⁽⁴⁾ (adjacent to Sacramento) | 0.128 | 1.8 |
| CA | Imperial Co. ⁽³⁾ (Calexico, CA) | 0.139 | 4.7 |
| GA | Bibb Co. ⁽⁴⁾ (Macon, GA) | 0.134 | 3.0 |
| NC | Rowan Co. ⁽⁴⁾ (Charlotte-Gastonia-Rock Hill, NC-SC) | 0.128 | 1.7 |
| TN | Jefferson Co. ⁽⁴⁾ (adjacent to Knoxville) | 0.127 | 3.2 |
| TX | Gregg Co. ⁽⁴⁾ (Longview-Marshall) | 0.134 | 3.0 |

Notes:

1. The updated air quality design value is estimated for the 1997-99 period using all air quality data reported to EPA's Aerometric Information Retrieval System (AIRS). The computation procedures follow EPA guidance for calculating design values (Laxton Memorandum, June 18, 1990). For sites with three complete years of monitoring data, the air quality design value is the fourth highest daily maximum 1-hour ozone concentration, because the standard allows one exceedance per year on average. It is important to note that the 1990 Clean Air Act Amendments required that nonattainment areas be classified on the basis of the design value at the time the Amendments were passed, generally the 1987-89 period was used.

2. The level of the 1-hour ozone Ambient Air Quality standard is 0.12 parts per million (ppm) daily maximum 1-hour average concentration not to be exceeded more than once per year on average. The average estimated number of exceedances column shows the number of days the 0.12 ppm 1-hour ozone standard was exceeded on average at the site recording the highest updated air quality value. This computation is performed after adjustment for any missing sampling days during the 3-year period, 1997-99.

3. Section 185a nonattainment area that fails to meet the standard in 1997-99.

4. Areas presently designated attainment for the 1-hour ozone NAAQS that fail to meet the standard in 1997-99.

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|--------------|-------------------|-----------------------------------|
| Alabama | Clay Co | 88 |
| | Jefferson Co | 93 |
| | Madison Co | 90 |
| | Mobile Co | 88 |
| | Shelby Co | 97 |
| Arizona | Maricopa Co | 88 |
| | | |
| Arkansas | Crittenden Co | 90 |
| | | |
| California | Alameda Co | 85 |
| | Amador Co | 96 |
| | Calaveras Co | 96 |
| | El Dorado Co | 102 |
| | Fresno Co | 113 |
| | Imperial Co | 91 |
| | Kern Co | 109 |
| | Kings Co | 99 |
| | Los Angeles Co | 118 |
| | Mariposa Co | 94 |
| | Merced Co | 97 |
| | Nevada Co | 88 |
| | Placer Co | 97 |
| | Riverside Co | 124 |
| | Sacramento Co | 101 |
| | San Bernardino Co | 147 |
| | San Diego Co | 99 |
| | San Joaquin Co | 85 |
| | Shasta Co | 95 |
| | Solano Co | 85 |
| | Stanislaus Co | 95 |
| | Sutter Co | 89 |
| | Tehama Co | 91 |
| | Tulare Co | 102 |
| | Tuolumne Co | 92 |
| | Ventura Co | 106 |
| | | |
| Connecticut | Fairfield Co | 103 |
| | | |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|-------------------|-----------------|-----------------------------------|
| | Hartford Co | 91 |
| | Litchfield Co | 97 |
| | Middlesex Co | 99 |
| | New Haven Co | 103 |
| | New London Co | 94 |
| | Tolland Co | 95 |
| Delaware | Kent Co | 99 |
| | New Castle Co | 100 |
| | Sussex Co | 99 |
| Dist. Of Columbia | Washington | 100 |
| Florida | Escambia Co | 91 |
| | Hillsborough Co | 87 |
| Georgia | Bibb Co | 104 |
| | Dawson Co | 88 |
| | De Kalb Co | 105 |
| | Douglas Co | 101 |
| | Fulton Co | 118 |
| | Gwinnett Co | 100 |
| | Muscogee Co | 89 |
| | Paulding Co | 97 |
| | Richmond Co | 92 |
| | Rockdale Co | 115 |
| Illinois | Cook Co | 90 |
| | Jersey Co | 91 |
| | Lake Co | 88 |
| Indiana | Madison Co | 87 |
| | Allen Co | 88 |
| | Clark Co | 96 |
| | Floyd Co | 92 |
| | Hamilton Co | 97 |
| | Hancock Co | 92 |
| | Johnson Co | 89 |
| | Lake Co | 91 |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|--------------|----------------------|-----------------------------------|
| | La Porte Co | 91 |
| | Madison Co | 90 |
| | Marion Co | 93 |
| | Morgan Co | 90 |
| | Porter Co | 93 |
| | Posey Co | 91 |
| | St Joseph Co | 91 |
| | Vanderburgh Co | 94 |
| | Warrick Co | 94 |
| Kentucky | | |
| | Boone Co | 85 |
| | Boyd Co | 85 |
| | Bullitt Co | 89 |
| | Campbell Co | 89 |
| | Christian Co | 86 |
| | Daviess Co | 87 |
| | Edmonson Co | 93 |
| | Fayette Co | 87 |
| | Graves Co | 87 |
| | Greenup Co | 90 |
| | Hancock Co | 91 |
| | Henderson Co | 86 |
| | Jefferson Co | 95 |
| | Kenton Co | 88 |
| | Livingston Co | 95 |
| | Mc Cracken Co | 89 |
| | Mc Lean Co | 90 |
| | Oldham Co | 96 |
| | Simpson Co | 91 |
| Louisiana | | |
| | Ascension Par | 88 |
| | Bossier Par | 88 |
| | Caddo Par | 87 |
| | Calcasieu Par | 88 |
| | East Baton Rouge Par | 92 |
| | Iberville Par | 91 |
| | Jefferson Par | 85 |
| | Lafourche Par | 85 |
| | Livingston Par | 87 |
| | West Baton Rouge Par | 85 |
| Maine | | |
| | Cumberland Co | 89 |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|---------------|-------------------|-----------------------------------|
| | Hancock Co | 89 |
| | Sagadahoc Co | 92 |
| | York Co | 92 |
| Maryland | | |
| | Anne Arundel Co | 109 |
| | Baltimore Co | 99 |
| | Calvert Co | 90 |
| | Carroll Co | 95 |
| | Cecil Co | 110 |
| | Charles Co | 104 |
| | Harford Co | 106 |
| | Kent Co | 100 |
| | Montgomery Co | 95 |
| | Prince Georges Co | 106 |
| | Baltimore | 90 |
| Massachusetts | | |
| | Barnstable Co | 95 |
| | Bristol Co | 91 |
| | Essex Co | 93 |
| | Hampden Co | 91 |
| | Hampshire Co | 99 |
| | Middlesex Co | 93 |
| | Worcester Co | 94 |
| Michigan | | |
| | Allegan Co | 94 |
| | Benzie Co | 89 |
| | Berrien Co | 96 |
| | Cass Co | 92 |
| | Genesee Co | 89 |
| | Huron Co | 85 |
| | Kalamazoo Co | 87 |
| | Kent Co | 85 * |
| | Macomb Co | 95 |
| | Mason Co | 93 |
| | Muskegon Co | 93 |
| | Ottawa Co | 87 |
| | St Clair Co | 88 |
| | Wayne Co | 91 |
| Mississippi | | |
| | De Soto Co | 88 |
| | Hancock Co | 86 |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|----------------|------------------|-----------------------------------|
| | Jackson Co | 93 |
| Missouri | | |
| | Clay Co | 91 |
| | Jefferson Co | 92 |
| | Platte Co | 85 |
| | St Charles Co | 95 |
| | Ste Genevieve Co | 88 |
| | St Louis Co | 89 |
| New Hampshire | | |
| | Hillsborough Co | 89 |
| | Rockingham Co | 90 |
| New Jersey | | |
| | Atlantic Co | 97 |
| | Camden Co | 106 |
| | Cumberland Co | 99 |
| | Essex Co | 93 |
| | Gloucester Co | 102 |
| | Hudson Co | 100 |
| | Hunterdon Co | 102 |
| | Mercer Co | 104 |
| | Middlesex Co | 105 |
| | Monmouth Co | 94 |
| | Morris Co | 98 |
| | Ocean Co | 107 |
| New York | | |
| | Bronx Co | 88 |
| | Chautauqua Co | 89 |
| | Dutchess Co | 90 |
| | Erie Co | 85 |
| | Jefferson Co | 90 |
| | Niagara Co | 86 |
| | Orange Co | 90 |
| | Putnam Co | 94 |
| | Richmond Co | 105 |
| | Suffolk Co | 98 |
| | Wayne Co | 86 |
| | Westchester Co | 98 |
| North Carolina | | |
| | Alexander Co | 86 |
| | Caldwell Co | 90 |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|--------------|----------------|-----------------------------------|
| | Caswell Co | 94 |
| | Chatham Co | 88 |
| | Cumberland Co | 92 |
| | Davie Co | 98 |
| | Duplin Co | 85 |
| | Durham Co | 88 |
| | Edgecombe Co | 90 |
| | Forsyth Co | 97 |
| | Franklin Co | 93 |
| | Granville Co | 92 |
| | Guilford Co | 92 |
| | Haywood Co | 94 |
| | Johnston Co | 95 |
| | Lincoln Co | 87 |
| | Mecklenburg Co | 104 |
| | Northampton Co | 87 |
| | Pitt Co | 93 |
| | Rockingham Co | 85 |
| | Rowan Co | 99 |
| | Wake Co | 101 |
| Ohio | Allen Co | 88 |
| | Ashtabula Co | 92 |
| | Butler Co | 93 |
| | Clark Co | 94 |
| | Clermont Co | 93 |
| | Clinton Co | 98 |
| | Cuyahoga Co | 88 |
| | Delaware Co | 97 |
| | Franklin Co | 93 |
| | Geauga Co | 91 |
| | Greene Co | 93 |
| | Hamilton Co | 91 |
| | Knox Co | 91 |
| | Lake Co | 99 |
| | Lawrence Co | 93 |
| | Licking Co | 92 |
| | Lorain Co | 87 |
| | Lucas Co | 85 |
| | Madison Co | 94 |
| | Mahoning Co | 91 |
| | Medina Co | 89 |
| | Miami Co | 88 |
| | Montgomery Co | 92 |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|----------------|-----------------|-----------------------------------|
| | Portage Co | 93 |
| | Stark Co | 91 |
| | Summit Co | 94 |
| | Trumbull Co | 95 |
| | Warren Co | 95 |
| | Washington Co | 90 |
| | Wood Co | 86 |
| Oklahoma | Oklahoma Co | 86 |
| | Tulsa Co | 88 |
| Pennsylvania | Allegheny Co | 101 |
| | Armstrong Co | 86 |
| | Beaver Co | 92 |
| | Berks Co | 96 |
| | Blair Co | 95 |
| | Bucks Co | 103 |
| | Cambria Co | 93 |
| | Centre Co | 90 |
| | Clearfield Co | 93 |
| | Dauphin Co | 94 |
| | Delaware Co | 100 |
| | Erie Co | 93 |
| | Franklin Co | 97 |
| | Greene Co | 97 |
| | Lackawanna Co | 90 |
| | Lancaster Co | 101 |
| | Lehigh Co | 100 |
| | Luzerne Co | 92 |
| | Mercer Co | 96 |
| | Monroe Co | 97 |
| | Montgomery Co | 104 |
| | Northampton Co | 93 |
| | Perry Co | 90 |
| | Philadelphia Co | 90 |
| | Washington Co | 101 |
| | Westmoreland Co | 85 |
| | York Co | 94 |
| Rhode Island | Kent Co | 92 |
| South Carolina | | |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|--------------|----------------|-----------------------------------|
| | Abbeville Co | 86 |
| | Aiken Co | 89 |
| | Anderson Co | 95 |
| | Barnwell Co | 88 |
| | Cherokee Co | 93 |
| | Chester Co | 92 |
| | Darlington Co | 88 |
| | Edgefield Co | 85 |
| | Oconee Co | 86 |
| | Pickens Co | 90 |
| | Richland Co | 92 |
| | Spartanburg Co | 94 |
| | York Co | 86 |
| | | |
| Tennessee | Anderson Co | 88 |
| | Blount Co | 104 |
| | Davidson Co | 91 |
| | Hamilton Co | 94 |
| | Haywood Co | 88 |
| | Jefferson Co | 101 |
| | Knox Co | 102 |
| | Lawrence Co | 88 |
| | Putnam Co | 88 |
| | Rutherford Co | 90 |
| | Sevier Co | 100 |
| | Shelby Co | 95 |
| | Sullivan Co | 91 |
| | Sumner Co | 102 |
| | Williamson Co | 95 |
| | Wilson Co | 87 |
| | | |
| Texas | Bexar Co | 88 |
| | Brazoria Co | 95 |
| | Collin Co | 101 |
| | Dallas Co | 92 |
| | Denton Co | 100 |
| | Ellis Co | 92 |
| | Galveston Co | 109 |
| | Gregg Co | 100 |
| | Harris Co | 118 |
| | Jefferson Co | 88 |
| | Smith Co | 91 |
| | Tarrant Co | 99 |
| | | |

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|---------------|-------------------|-----------------------------------|
| | Travis Co | 88 |
| Virginia | Arlington Co | 97 |
| | Caroline Co | 92 |
| | Charles City Co | 96 |
| | Chesterfield Co | 91 |
| | Fairfax Co | 96 |
| | Fauquier Co | 88 |
| | Frederick Co | 90 |
| | Hanover Co | 99 |
| | Henrico Co | 96 |
| | Madison Co | 96 |
| | Prince William Co | 91 |
| | Roanoke Co | 90 |
| | Stafford Co | 91 |
| | Alexandria | 91 |
| | Hampton | 94 |
| | Suffolk | 90 |
| West Virginia | Cabell Co | 95 |
| | Greenbrier Co | 90 |
| | Hancock Co | 87 |
| | Kanawha Co | 90 |
| | Ohio Co | 85 |
| | Wood Co | 91 |
| Wisconsin | Door Co | 97 |
| | Jefferson Co | 85 |
| | Kenosha Co | 95 |
| | Kewaunee Co | 94 |
| | Manitowoc Co | 97 |
| | Milwaukee Co | 91 |
| | Ozaukee Co | 97 |
| | Racine Co | 91 |
| | Rock Co | 87 |
| | Sheboygan Co | 93 |
| | Walworth Co | 85 |

Notes:

* = Based on 1996-98 data

Table 3. Counties failing to meet the 8-hr ozone NAAQS, 1997-99

| State | County | Design Value (ppb) |
|-------|--------|--------------------------|
|-------|--------|--------------------------|

The level of the 8-hour ozone (O₃) National Ambient Air Quality Standard (NAAQS) is 0.08 parts per million (ppm). The air quality design value for the 8-hour O₃ NAAQS is the 3-year average of the annual 4th highest daily maximum 8-hour average O₃ concentration. The 8-hour O₃ NAAQS is not met when the 8-hour ozone design value is greater than 0.08 ppm (85 ppb rounds up).

In a May 1999 split decision, the U.S. Court of Appeals for the D.C. Circuit limited the manner in which EPA can implement the eight-hour standard, which the Agency issued in 1997. EPA appealed the May 1999 decision to the U.S. Supreme Court, which has agreed to hear the case. The Court of Appeals did not question the need for the new standard or the science behind it. That standard, based on 8-hour averages of ozone rather than the previous 1-hour average, reflects a more realistic measure of people's exposure and is more protective of public health.

For additional information on air quality data relative to the 8-hour ozone NAAQS, refer to <http://www.epa.gov/ttn/rto/areas/aqdata.htm>

Table 4. Areas not meeting the 8-hour Carbon Monoxide National Ambient Air Quality Standard, 1998-99

| Metropolitan Area | 1998-99 Design Value ⁽¹⁾ (ppm) | 1998 | | 1999 | |
|---------------------------------------|--|------------------------------------|----------------------|------------------------------------|----------------------|
| | | 2 nd Max ⁽²⁾ | # Exc ⁽³⁾ | 2 nd Max ⁽²⁾ | # Exc ⁽³⁾ |
| Designated CO nonattainment areas | | | | | |
| Fairbanks, AK | 10.3 | 10.2 | 2 | 10.3 | 2 |
| Las Vegas, NV | 10.1 | 10.1 | 2 | 8.1 | 0 |
| Los Angeles-Long Beach, CA | 11.5 | 11.5 | 13 | 11.1 | 8 |
| Additional areas | | | | | |
| Calexico, CA | 14.4 | 13.3 | 8 | 14.4 | 13 |
| Des Moines, IA | 10.4 | 10.1 | 2 | 2.1 | 0 |
| Weirton, WV | 13.2 | 13.2 | 6 | 4.3 | 0 |
| Number of areas not meeting the NAAQS | 6 | | 6 | | 3 |

Notes:

1. The level of the 8-hour National Ambient Air Quality Standard for carbon monoxide is 9 parts per million (ppm) not to be exceeded more than once per year. The design value for the 8-hour CO NAAQS is the highest annual second maximum nonoverlapping 8-hour concentration during the most recent two years.

2. Annual second highest nonoverlapping 8-hour average CO concentration.

3. Number of nonoverlapping exceedances of the 8-hour CO NAAQS.

SOURCE: U.S. EPA's Aerometric Information Retrieval System (AIRS)