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EPA DATA SHOW STEADY PROGRESS IN CLEANING NATION'S AIR

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The U.S. Environmental Protection Agency today announced that its 19th annual urban air quality trends report shows continuing progress in reducing six major pollutants over the ten-year period 1982-91. EPA also released today 1991 air quality data showing that 41 of the 97 areas designated as "non-attainment" for ground level ozone (smog) under the Clean Air Act Amendments of 1990 have now come into compliance with the standard. The 1991 data also show that 13 of the 42 areas designated non-attainment for carbon monoxide (CO) are now meeting the standard.

The trends report shows that during the 10-year period 1982-1991:

- Ambient smog levels dropped eight percent.
- Lead ambient levels in the atmosphere decreased 89 percent.
- Sulfur dioxide ambient levels fell 20 percent.
- Ambient carbon monoxide levels declined 30 percent.
- Ambient particulate (dirt, dust, soot) levels decreased 10 percent from 1988-1991 (particulate standard changed in 1987, so long-term data not available).
- Nitrogen dioxide ambient levels fell six percent.

"These declines in overall emissions translate into real health benefits for Americans," said EPA Administrator William K. Reilly. "The 1991 statistics show that tens of millions of our citizens no longer have to breathe unhealthy air. The reports show that we have made -- and are continuing to make -- steady progress toward our national environmental goals, a real American success story. The Clean Air Act helps assure this momentum continues."

The report also shows the magnitude of the air pollution problem which still exists. In 1991, over 86 million Americans lived in counties with unhealthy air. Although the major problem is smog, problems still

R-211

(more)

remain as a result of carbon monoxide and particulate pollution. Over 69 million people currently live in counties exceeding the smog standard; over 19 million live in counties exceeding the carbon monoxide standard; and over 21 million reside in areas violating the particulate standard.

"The trends report shows that much remains to be done in cleaning up our nation's air," added William G. Rosenberg, EPA Assistant Administrator for Air and Radiation. "Under the Clean Air Act Amendments of 1990 EPA has proposed or finalized detailed rules that will remove three-quarters of the 57 billion pounds of air pollution reduction mandated by the Act."

The report also shows that from 1990 to 1991:

- Ambient lead levels decreased 18 percent.
- Sulfur dioxide decreased four percent.
- Carbon monoxide decreased five percent.
- Particulates declined one percent.
- Nitrogen dioxide levels did not change.
- Smog increased one percent.

The report lists the highest pollution readings for six air pollutants in each of the 341 Metropolitan Statistical Areas in the United States and shows air quality trends in major metropolitan areas from 1982-91 for: Atlanta, Boston, Chicago, Dallas, Denver, Detroit, Houston, Kansas City, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Seattle and Washington, D.C.

Smog is not emitted directly into the atmosphere, but is produced by a complex series of chemical reactions in the presence of sunlight, initiated when sources such as automobiles, factories and others emit volatile organic compounds (mainly hydrocarbons) and nitrogen oxide into the air.

EPA believes that part of the improvement in smog and CO air pollution shown by the 1991 air quality data is the result of federal limits on gasoline volatility and the replacement of older cars with newer, cleaner ones. Meteorology also plays a critical role, because heat and sunlight can exacerbate the smog problem. The weather patterns of the past few years have been different from some of those in the late 1980s when smog levels were very high.

EPA cautions, however, that complying with the smog and CO standard is only the first step these areas must take in being officially redesignated to "attainment." Attainment is a legal definition that determines whether an area is subject to cleanup requirements of the Clean Air Act. Before these areas can be officially redesignated to attainment, EPA must approve their state clean air plans as well as their plans to "maintain" or stay in compliance with the standards for the next 10 years. The state clean air plans are due to be submitted to EPA beginning next month. Until these areas get an official attainment designation from EPA, they are still subject to all pertinent requirements of the Act, such as auto inspection/maintenance and clean fuel programs. EPA plans to work closely with states and review their clean air plans (called state implementation plans, or SIPs) as expeditiously as possible to assure that unnecessary control programs are not implemented.

The 10-year EPA study, "National Air Quality and Emissions Trends Report, 1991," deals with the six pollutants for which the Agency has issued national atmospheric standards, called National Ambient Air Quality Standards (NAAQS). (These pollutants are regulated under the Title I non-attainment provisions of the Clean Air Act Amendments of 1990.)

The trends data show average urban air quality. In some cities the air quality is better than the national average; in other cities it is worse. These air quality averages are based upon actual measurements of pollution concentrations occurring in the ambient air.

The analysis in this report is based on data from some 4,000 air pollution monitors throughout the nation.

Under the Clean Air Act, Congress gave state and local governments the main responsibility for air quality monitoring, and these jurisdictions have traditionally used standard monitoring techniques approved by EPA. However, because the extent of monitoring networks varies from city to city, EPA feels that any ranking of cities by air quality is misleading. (Fact sheets on the report are attached to this release.)

Limited copies of the air trends report are available to reporters from EPA's Press Office. Others can obtain copies from, and direct questions on the report to, Dr. Thomas C. Curran, Technical Support Division (MD-14), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, N.C. 27711; 919-541-5558.

R-211

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Air Trends Fact Sheet

Following is a brief summary of EPA's National Air Quality and Emissions Trends Report, 1991, findings on national progress in cleaning up the major air pollutants from 1982 to 1991.

CARBON MONOXIDE (CO): Carbon monoxide enters the bloodstream and reduces the delivery of oxygen to the body's organs and tissues. Ambient levels of CO, primarily an automotive pollutant, have decreased by 30 percent for the 10-year period 1982-91. The estimated number of exceedances of the 8-hour standard decreased 90 percent between 1982 and 1991. CO emissions decreased 31 percent during the same period. These improvements occurred despite a 36 percent increase in vehicle miles travelled during this 10-year period. Between 1990 and 1991, ambient CO levels improved with a decrease of 5 percent, while total CO emissions are estimated to have decreased by 8 percent.

LEAD (Pb): Exposure to lead can occur through multiple pathways, including inhalation of air, diet and ingestion of lead in food, water, soil or dust. Lead accumulates in the body in blood, bone and soft tissue. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation and/or behavioral disorders. Fetuses, infants and children are especially susceptible to low doses of lead, often suffering central nervous system damage. Ambient lead levels, recorded at 209 urban sites, decreased 89 percent between 1982 and 1991. Lead emissions declined 90 percent during the same period. Between 1990 and 1991, ambient Pb levels declined 18 percent, while Pb emissions are estimated to have declined 3 percent. Ambient lead concentrations in urban areas throughout the country have shown major improvements because of both the increased usage of unleaded gasoline and the reduction of the lead content in leaded gasoline. Unleaded gasoline sales accounted for 97 percent of the total gasoline market in 1991. While lead emissions from industrial sources have dropped by more than one-half since the late 1970's, some serious point source lead problems remain.

NITROGEN DIOXIDE (NO₂): Nitrogen dioxide can irritate the lungs and lower resistance to infection (such as influenza). Ambient NO₂ levels decreased 6 percent between 1982 and 1991. The trend pattern in the estimated nationwide emissions of nitrogen oxides is similar to the NO₂ air quality trend. Between 1982 and 1991, total emissions of nitrogen oxides decreased by 8 percent, while highway vehicle emissions decreased by 32 percent. Between 1990 and 1991, the NO₂ composite average was unchanged, while the estimated emissions of nitrogen oxides decreased by 3 percent. Los Angeles County is the only county that violated the NO₂ National Ambient Air Quality Standard in the last decade.

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OZONE (O₃): The reactivity of ozone causes health problems because it damages biological tissues and cells. Exposure to ozone for 6 to 7 hours at relatively low concentrations (i.e. 0.08 ppm) has been found to significantly reduce lung function in normal, healthy people during periods of moderate exercise. Ozone, which can seriously irritate eyes, mucous membranes, and the respiratory system, is not emitted directly into the atmosphere but is produced by a complex series of chemical reactions initiated when volatile organic compounds (VOC) and nitrogen oxide emissions from autos and other sources are exposed to sunlight. Ambient ozone levels decreased 8 percent and the estimated number of exceedances of the ozone standard decreased 38 percent for the 10-year period 1982-91. VOC emissions decreased 13 percent between 1982-91. Ambient ozone levels increased by 1 percent from 1990 to 1991. VOC emissions, which represent annual totals, decreased 4 percent between 1990-91.

PARTICULATE MATTER (PM-10): This year's report utilizes the increasingly prevalent PM-10 air monitoring data to characterize particulate matter trends. On July 1, 1987, EPA promulgated new standards for particulate matter using a new indicator, PM-10, rather than Total Suspended Particulates (TSP). This focuses on smaller particles less than 10 micrometers in diameter which are likely to be responsible for most of the adverse effects health effects because of their ability to reach the thoracic or lower regions of the respiratory tract. The major effects of concern for human health include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature mortality. Because the number of TSP monitoring sites has declined during the past decade from about 4000 to about 825 sites, interpretation of the more recent data is limited. During the same period, as expanding data base has become available to examine trends in PM-10 air quality. Longer term trends in particulates must necessarily be based on TSP; previous annual reports are a valuable source of TSP trend information. For 1991, annual means PM-10 levels experienced a 1 percent decrease from 1990 levels and a 10 percent decrease from 1989 concentrations. PM-10 emissions estimates for 1991 decreased by 3 percent when compared to either 1989 or 1985 emissions estimates and experienced a slight (less than 1 percent) increase over 1990 emissions estimates. Total Particulate (TP) emissions are estimated to have decreased by 3 percent for the 10-year period 1982-1991.

SULFUR DIOXIDE (SO₂): The major health effects associated with high exposures to sulfur dioxide include effects on breathing, respiratory illness and symptoms, alterations in the lung's defenses, aggravation of existing respiratory and cardiovascular disease and mortality. Ambient levels of SO₂ have decreased 20 percent between 1982 and 1991. Correspondingly,

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there was a 2 percent drop in sulfur oxides emissions. The difference between emissions and air quality can be attributed to several factors. SO₂ monitors are mostly urban population-oriented and as such do not monitor many of the major emitters which tend to be located in more rural areas. The residential and commercial areas, where most monitors are located, have shown sulfur oxides emission decreases comparable to SO₂ air quality improvement. Between 1990 and 1991, nationwide average ambient SO₂ levels decreased 4 percent while sulfur oxides emissions decreased 2 percent.

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Ozone and Carbon Monoxide Air Quality Data Update Fact Sheet

Following is a brief summary of EPA's 1991 air quality update for ozone and carbon monoxide nonattainment areas.

Ozone (O₃): As required by the Clean Air Act Amendments (CAAA) of 1990, EPA designated 98 areas in 1991 that did not meet the National Ambient Air Quality Standard (NAAQS) for ozone as ozone nonattainment areas. Since that listing, Kansas City was the first ozone nonattainment area to be redesignated to attainment. The NAAQS for ozone is 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 ozone NAAQS is judged on the basis of the most recent three years with complete monitoring data. The ozone standard is met when the average estimated exceedances of the ozone NAAQS is less than or equal to 1.0. Today's list updates air quality monitoring data for the three year period, 1989-91. During this current three year period, 41 of the remaining 97 nonattainment areas had average estimated exceedance rates less than or equal to 1.0. These 41 areas meeting the NAAQS include 29 of the 42 Marginal areas and 12 of the 33 Moderate areas. An additional 12 areas were originally classified as ozone transitional areas, and all 12 of these areas met the ozone NAAQS during 1989-91 as required by Section 185A of the CAAA of 1990.

Carbon Monoxide (CO): There are 42 areas that have been designated as nonattainment for carbon monoxide. The carbon monoxide NAAQS is 9 parts per million (ppm) 8-hour nonoverlapping average concentration not to be exceeded more than once per year. The CO standard is met at a site when there are fewer than two exceedances for the two most recent calendar years with complete air quality monitoring data.

Today's listing does not mean that those areas meeting the NAAQS during the last three years will automatically be redesignated to attainment. The Clean Air Act Amendments of 1990 state that an area can be redesignated to attainment if the following conditions are met:

- (1) the area has air quality data meeting the national air quality standards,
- (2) the area has an approved State Implementation Plan (SIP) meeting Clean Air Act requirements, and
- (3) the area has an approved maintenance plan showing attainment for 10 years.

OZONE FINDINGS (97 Nonattainment Areas)

12 of 33 Moderate Ozone Nonattainment Areas have ozone air quality data meeting the Ozone National Ambient Air Quality Standard during the period 1989-91.

Charleston, WV
Dayton, OH
Greensboro, NC
Kewaunee Co., WI

Lewiston, ME
Miami, FL
Monterey, CA
Parkersburg, WV

Raleigh, NC
Reading, PA
Richmond, VA
Toledo, OH

29 of 42 Marginal Ozone Nonattainment Areas have ozone air quality data meeting the Ozone National Ambient Air Quality Standard during the period 1989-91.

Albany, NY
Allentown, PA
Altoona, PA
Buffalo, NY
Canton, OH
Cherokee Co., SC
Columbus, OH
Edmonson Co., KY
Erie, PA
Evansville, IN

Greenbrier, WV
Harrisburg, PA
Indianapolis, IN
Jefferson Co., NY
Jersey Co., IL
Johnstown, PA
Knoxville, TN
Lancaster, PA
Lexington, KY
Manchester, NH

Memphis, TN
Norfolk, VA
Owensboro, KY
Paducah, KY
South Bend, IN
Tampa, FL
Walworth Co., WI
York, PA
Youngstown, OH

CARBON MONOXIDE FINDINGS (42 Nonattainment Areas)

13 of 42 Carbon Monoxide (CO) Nonattainment Areas have CO air quality data meeting the Carbon Monoxide National Ambient Air Quality Standard during the period 1990-91.

Baltimore, MD
Chico, CA
Colorado Springs, CO
Duluth, MN
Grants Pass, OR
Klamath Falls, OR
Longmont, CO

Memphis, TN
Philadelphia, PA
San Diego, CA
Syracuse, NY
Washington, DC
Winston-Salem, NC

Ozone & Carbon Monoxide

Air Quality Update, 1991

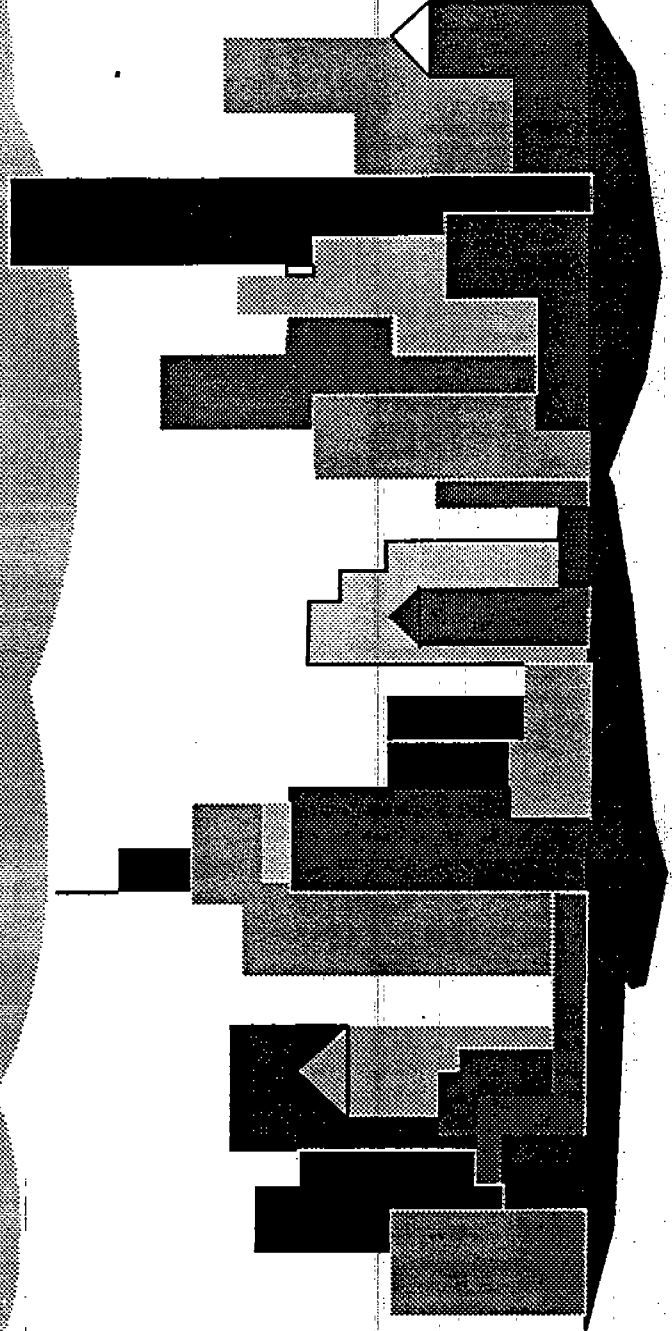


Table 1. Ozone Nonattainment Areas - Air Quality Update, 1989-91

State	Nonattainment Area Name	Clean Air Act Classification	1989-91 Update		1991 2nd Daily Max 1-hr	1991 Est. Exc.
			A.Q. Value	Avg. Est Exc.		
AL	Birmingham NA Area	Marginal	0.125	1.4	0.109	0.0
AZ	Phoenix	Moderate	0.141	3.0 (#4)	0.122	0.0
CA	Los Angeles South Coast Air Basin	Extreme	0.310	105.2	0.310	91.0
CA	Monterey Bay Unified NA Area	Moderate	0.112	0.7	0.106	1.1
CA	Sacramento Metro NA Area	Serious	0.160	3.1	0.160	15.7
CA	San Diego NA Area	Severe 15	0.170	25.9	0.180	7.1
CA	San Francisco-Bay NA Area	Moderate	0.130	1.3	0.120	1.0
CA	San Joaquin Valley NA Area	Serious	0.160	34.3	0.160	33.9
CA	Santa Barbara - Santa Maria - Southeast Desert Modified AQMD	Moderate	0.147	4.1 (#5)	0.147	4.1
CA	Ventura Co NA Area	Severe 17	0.220	45.3	0.190	32.1
CA	Greater Connecticut NA Area	Severe 15	0.170	29.0	0.156	32.6
CT	New York-N. New Jersey-Long Island	Serious	0.174	9.7	0.175	17.3
CT	Sussex Co NA Area	Severe 17	0.165	8.6	0.175	13.3
DE	Miami-Fort Lauderdale-W. Palm	Marginal	0.128	1.4 (#6)	0.145	3.1
FL	Tampa-St. Petersburg-Clearwater	Moderate	0.121	0.3	0.123	0.0
FL	Atlanta NA Area	Marginal	0.114	0.5 (#7)	0.114	0.0
GA	Jersey Co NA Area	Serious	0.146	3.8	0.131	4.0
IL	Chicago-Gary-Lake County NA Area	Marginal	0.113	0.7	0.111	0.0
IL	Evansville NA Area	Severe 17	0.143	5.5	0.146	11.8
IN	Indianapolis NA Area	Marginal	0.112	0.4	0.108	0.0
IN	Louisville NA Area	Marginal	0.112	0.7	0.105	0.0
IN	South Bend-Mishawaka NA Area	Moderate	0.132	2.2	0.132	3.4
IN	Edmondson Co NA Area	Marginal	0.110	0.0	0.105	0.0
KY	Huntington-Ashland NA Area	Marginal	0.100	0.0	0.090	0.0
KY	Huntington-Fayette NA Area	Moderate	0.133	1.9	0.129	3.1
KY	Owensboro NA Area	Marginal	0.107	0.3	0.095	0.0
KY	Paducah NA Area	Marginal	0.119	1.0	0.097	0.0
LA	Baton Rouge NA Area	Marginal	0.103	0.0	0.103	0.0
LA	Lake Charles NA Area	Serious	0.168	4.1	0.142	2.0
MA	Boston-Lawrence-Worcester NA Area	Marginal	0.131	1.7	0.121	1.0
MA	Springfield (W. Mass) NA Area	Serious	0.139	4.3 (#9)	0.154	7.6
MD	Baltimore NA Area	Serious	0.149	3.9	0.149	5.7
MD	Kent County and Queen Anne's Co.	Severe 15	0.156	6.9	0.156	8.2
ME	Hancock Co and Waldo Co NA Area	Marginal	0.133	3.2	0.133	6.3
ME	Knox Co and Lincoln Co NA Area	Marginal	0.123	1.2	0.125	2.5
ME	Lewiston - Auburn NA Area	Moderate	0.134	4.2	0.136	7.0
ME	Portland NA Area	Moderate	0.111	1.0	0.111	1.0
MI	Detroit-Ann Arbor NA Area	Moderate	0.152	5.0	0.148	4.8
MI	Grand Rapids NA Area	Moderate	0.132	2.0	0.131	3.0
MI	Muskegon NA Area	Moderate	0.136	2.0	0.136	2.0
MI	Kansas City NA Area	Moderate	0.148	4.8	0.148	4.8
MO	St. Louis NA Area	Attainment (#10)	0.109	0.4	0.117	0.0
MO	Charlotte-Gastonia NA Area	Moderate	0.125	1.4	0.124	1.0
NC	Greensboro-Winston-Salem-High Pt.	Moderate	0.123	1.1	0.119	1.0
NC		Moderate	0.113	0.3 (#11)	0.107	0.0

Table 1. Ozone Nonattainment Areas - Air Quality Update 1989-91 (continued)

State	Nonattainment Area Name	Clean Air Act Classification	1989-91 Update		1991 2nd Daily Max 1-hr	1991 Est. Exo.
			A.Q. Value	Avg. Est Exo.		
NC	Raleigh-Durham NA Area	Moderate	0.119	1.0	0.108	0.0
NH	Manchester NA Area	Marginal	0.103	0.5	ND	ND
NH	Portsmouth-Dover-Rochester, NH	Serious	0.143	2.1	0.157	3.2
NJ	Atlantic City NA Area	Moderate	0.148	2.8	0.136	2.1
NJ	Philadelphia-Wilmington-Trenton	Severe 15	0.152	8.1	0.156	10.3
NV	Reno	Marginal	0.139	2.1	0.094	0.0
NY	Albany-Schenectady-Troy NA Area	Marginal	0.105	0.0	0.104	1.1
NY	Buffalo-Niagara Falls NA Area	Marginal	0.111	0.3	0.110	0.0
NY	Essex Co. NA Area	Marginal	0.119	1.2	0.152	3.7
NY	Jefferson Co. NA Area	Marginal	0.112	0.0	0.112	0.0
NY	Poughkeepsie NA Area	Marginal	0.126	2.1	0.126	2.1
OH	Canton NA Area	Marginal	0.116	0.3	0.116	1.0
OH	Cincinnati-Hamilton NA Area	Moderate	0.139	2.3	0.139	3.0
OH	Cleveland-Akron-Lorain NA Area	Moderate	0.129	2.0	0.129	2.0
OH	Columbus NA Area	Marginal	0.124	0.7	0.124	1.0
OH	Dayton-Springfield NA Area	Moderate	0.123	0.7	0.115	0.0
OH	Toledo NA Area	Moderate	0.113	0.3	0.115	0.0
OH	Youngstown-Warren-Sharon NA Area	Marginal	0.115	0.3	0.118	1.0
OR	Portland-Vancouver AQMA NA Area	Marginal	0.129	1.9	0.111	1.4
PA	Allentown-Bethlehem-Easton NA	Marginal	0.116	0.3	0.120	0.0
PA	Altoona NA Area	Marginal	0.106	0.0	0.106	0.0
PA	Erie NA Area	Marginal	0.113	0.0	0.113	0.0
PA	Harrisburg-Lebanon-Carlisle NA	Marginal	0.118	0.3	0.113	0.0
PA	Johnstown NA Area	Marginal	0.109	0.0	0.113	0.0
PA	Lancaster NA Area	Marginal	0.113	0.0	0.119	0.0
PA	Pittsburgh-Beaver Valley NA Area	Moderate	0.109	1.1	0.119	0.0
PA	Reading NA Area	Marginal	0.118	0.3	0.123	1.0
PA	Scranton-Wilkes-Barre NA Area	Marginal	0.123	1.1	0.126	2.0
PA	York NA Area	Marginal	0.119	0.3	0.114	0.0
RI	Providence (all of RI) NA Area	Serious	0.152	6.0	0.161	9.5
SC	Cherokee Co NA Area	Marginal	0.096	0.0	0.095	0.0
TN	Knoxville NA Area	Marginal	0.120	0.3	0.110	0.0
TN	Memphis NA Area	Marginal	0.121	0.3	0.110	0.0
TN	Nashville NA Area	Moderate	0.130	3.0	0.116	1.1
TX	Beaumont-Port Arthur NA Area	Serious	0.150	5.1	0.130	6.0
TX	Dallas-Fort Worth NA Area	Moderate	0.140	3.5	0.150	4.2
TX	El Paso NA Area	Serious	0.140	3.5	0.130	3.2
TX	Houston-Galveston-Brazoria NA	Severe 17	0.220	14.9	0.200	16.6
UT	Salt Lake City-Ogden NA Area	Moderate	0.144	1.3	0.113	0.0
VA	Norfolk-Virginia Beach-Newport	Marginal	0.109	0.0	0.106	1.0
VA	Richmond-Petersburg NA Area	Moderate	0.121	0.3	0.121	0.0
VA	Smyth Co NA Area	Marginal	0.084	0.0	ND	ND
VA	Washington NA Area	Serious	0.134	2.4	0.144	6.1
WA	Seattle - Tacoma NA Area	Marginal	0.126	1.7	0.109	0.0

Table 1. Ozone Nonattainment Areas - Air Quality Update, 1989-91 (continued)

State	Nonattainment Area Name	Clean Air Act Classification	1989-91 Update		1991 2nd Daily Max 1-hr	1991 Est. Exc.
			A.Q. Value	Avg. Est Exc.		
WI	Door Co NA Area	Marginal	0.132	2.3	0.136	4.0
WI	Kewaunee Co NA Area	Moderate	0.120	0.7	0.142	2.1
WI	Manitowoc Co NA Area	Moderate	0.136	2.4	0.159	5.1
WI	Milwaukee-Racine NA Area	Severe 17	0.151	5.7	0.176	10.2
WI	Sheboygan NA Area	Moderate	0.156	7.5 (#17)	0.156	7.5
WI	Walworth Co NA Area	Marginal	0.121	0.7	0.123	1.0
WV	Charleston NA Area	Moderate	0.119	0.3	0.119	1.0
WV	Greenbrier NA Area	Marginal	0.108	0.4	0.102	1.1
WV	Parkersburg-Marletta NA Area	Moderate	0.120	1.0	0.120	1.0

97 Nonattainment Areas

SOURCE:

EPA's air quality data system, the Aerometric Information Retrieval System (AIRS), with supplemental data from EPA Regional Offices.

NOTES:

- Designations and classifications for ozone nonattainment areas as published in the Federal Register, 40 CFR Part 81.
- The updated air quality value is estimated for the 1989-91 period using EPA guidance for calculating design values (Laxton Memorandum, June 18, 1990). Generally, the fourth highest monitored value with 3 complete years of data is selected as the updated air quality value because the standard allows one exceedance for each year. It is important to note that the 1990 Clean Air Act Amendments required that O₃ 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.
- The National Ambient Air Quality standard for ozone is 0.12 parts per million (ppm) daily maximum 1-hour average 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 standard was exceeded on average at the site recording the highest updated air quality value. This is done after adjustment for incomplete, or missing days, during the 3-year period, 1989-91. The last two columns contain data from the site recording the highest second daily maximum 1-hour concentration in 1991. The last column shows the estimated exceedances for 1991 at the site recording the highest second maximum 1-hour concentration listed in the previous column.
- The updated air quality value and estimated exceedances have been adjusted for a new monitoring site which started monitoring in 1990.
- A private site with data only in 1990.
- The site was moved within the same area. Data from the two separate site records in AIRS have been combined to calculate estimated exceedances.

7. Calculation of the updated air quality value and estimated exceedances adjusted to account for start-up of a new site in 1990.
8. The nonattainment/updated air quality value site for the Chicago NA Area is in Kenosha County, WI.
9. The nonattainment site stopped monitoring after 1988.
10. Kansas City, MO was redesignated to attainment in the **Federal Register** on June 23, 1992.
11. The nonattainment site was a special study site which operated in 1988 and 1991.
12. The exceedances of the ozone standard occurred during winter 1990.
13. The site was located atop Whiteface Mountain, NY as part of the Mountain Cloud Study. Elevation of the site is 4867 feet. This is a rural transport area. The nonattainment area is that portion of Whiteface Mountain above 4500 feet elevation.
14. The site was relocated during construction activity which began in 1990. Estimated exceedances were calculated using combined data from both locations. The site will be relocated after construction is completed.
15. The site is located atop Whitetop Mountain, VA as part of the Mountain Cloud Study. Site elevation is 5520 feet. No data reported after 1988. This is a rural transport area. The nonattainment area is that portion of Whitetop Mountain above 4500 feet elevation.
16. Calculation of exceedances adjusted for seasonal sampling. Incomplete data for 1988-89.
17. New monitoring site which began operation in 1991.

Table 2. Ozone Areas Classified as Transitional and Incomplete Data Areas - Air Quality Update, 1989-91

State	Nonattainment Area Name	Clean Air Act Classification	1989-91 Update		1991 2nd Daily Max 1-hr	1991 Est. Exc.
			A.Q. Value	Avg. Est Exc.		
CA	Chico NA Area	Transitional	0.100	0.3	0.090	0.0
CA	Imperial Co NA Area	Transitional	0.110	0.0	0.100	0.0
CO	Denver - Boulder NA Area	Transitional	0.119	0.0	0.110	0.0
FL	Jacksonville NA Area	Transitional	0.111	0.0	0.095	0.0
LA	Beauregard Parish NA Area	Inc. Data	0.114	0.0	0.093	0.0
LA	Grant Par NA Area	Inc. Data	0.098	0.0	0.083	0.0
LA	Lafayette NA Area	Transitional	0.097	0.0	0.082	0.0
LA	Lafourche Par NA Area	Inc. Data	0.107	0.0	0.097	0.0
LA	New Orleans NA Area	Transitional	0.107	0.3	0.102	0.0
LA	St. James Par NA Area	Inc. Data	0.108	0.0	0.101	0.0
LA	St. Mary Par NA Area	Inc. Data	0.101	0.0	0.096	0.0
MI	Allegan Co NA Area	Inc. Data	0.135	2.1 *	0.132	3.1
MI	Flint NA Area	Transitional	0.104	0.0	0.104	0.0
MI	Lansing-East Lansing NA Area	Transitional	0.110	0.0	0.112	0.0
NH	Cheshire Co NA Area	Inc. Data	0.094	0.0	0.094	0.0
NH	Sullivan Co NA Area	Inc. Data	0.090	0.0	0.081	0.0
OH	Clinton Co NA Area	Transitional	0.118	0.3	0.119	0.0
OH	Pemble Co NA Area	Transitional	0.113	0.3	0.118	1.0
OH	Steubenville-Weirton NA Area	Transitional	0.111	0.0	0.118	0.0
PA	Lawrence Co NA Area	Inc. Data	0.101	0.0	0.101	0.0
TX	Victoria NA Area	Inc. Data	0.103	0.0	0.100	0.0

12 Transitional Areas

* - Special study site operated as part of the 1990 Lake Michigan Ozone Field Study and the 1991 Lake Michigan Ozone Study (LMOS). Estimated exceedance rates have been adjusted to account for the special study site operating schedule.

Table 2b. Additional Areas With Average Estimated Exceedances Greater than 1.0 for 1989-91

STATE	AREA NAME	Clean Air Act CLASSIFICATION	1989-91 Value	Updated A.Q. Value	1991 2nd Daily Max 1-hr	1991 Est. Exc.
			Value	Avg. Est. Exc.		Exc.
MI	MASON Co (LMOS STUDY SITE)	Unclassifiable	0.146	4.9 *	0.146	4.9
MI	OTTAWA Co (LMOS STUDY SITE)	Moderate **	0.146	3.4 *	0.146	3.4
MI	OCEANA Co (LMOS STUDY SITE)	Unclassifiable	0.140	4.0 *	0.140	4.0
MI	BENZIE Co (LMOS STUDY SITE)	Unclassifiable	0.138	3.7 *	0.138	3.7
MI	DELTA Co (LMOS STUDY SITE)	Unclassifiable	0.128	2.1 *	0.128	2.1
OH	LAWRENCE Co, OH	Unclassifiable	0.142	2.1 ***	0.144	3.1

* - Average estimated exceedance rates have been adjusted to account for the start-up schedules of these special study sites in 1991.

** - Ottawa County is part of the Grand Rapids, MI nonattainment area.

*** - Lawrence County is adjacent to the Huntington-Ashland nonattainment area. Average estimated exceedance rate has been adjusted to account for the start-up schedule of a new site in 1990.

LMOS - Lake Michigan Ozone Study monitoring sites which operated in 1991.

Table 3. Carbon Monoxide Nonattainment Areas - Air Quality Update, 1990-91

STATE	NONATTAINMENT AREA NAME	CLEAN AIR ACT CLASSIFICATION	1990-91 Update		1991 2nd Max 8-hr	1991 8-hr Exo.
			A.Q. Value	8-hr Exo. YEAR		
AK	Anchorage Area	Moderate >= 12.7	11.6	12	9.9	3
AK	Fairbanks North Star Borough	Moderate < 12.7	10.2	2	10.1	3
AZ	Phoenix NA Area	Moderate < 12.7	10.0	4	9.8	3
CA	Chico NA Area	Moderate < 12.7	9.1	0	9.1	0
CA	Fresno NA Area	Moderate >= 12.7	9.0	1	9.0	1 (#4)
CA	Lake Tahoe S. Shore	Moderate < 12.7	10.1	5	8.5	0
CA	Los Angeles South Coast Air Basin	Serious	15.9	47	15.7	41
CA	Modesto NA Area	Moderate < 12.7	10.5	2	9.4	1
CA	Sacramento NA Area	Moderate < 12.7	12.6	11	10.9	5
CA	San Diego NA Area	Moderate < 12.7	8.1	0	7.6	0
CA	San Francisco-Oakland-San Jose	Moderate < 12.7	10.5	2	10.3	4
CA	Stockton NA Area	Moderate < 12.7	10.9	2	8.4	1
CO	Colorado Springs NA Area	Moderate < 12.7	7.2	0	7.2	0
CO	Denver-Boulder NA Area	Moderate >= 12.7	11.4	3	9.9	4
CO	Fort Collins Area	Moderate < 12.7	9.8	2	9.8	2
CO	Longmont NA Area	Moderate < 12.7	7.2	0	7.2	0
CT	Hartford-New Britain-Middletown	Moderate < 12.7	8.9	1	8.9	1 (#5)
MA	Boston NA Area	Moderate < 12.7	6.1	0	4.2	0 (#6)
MD	Baltimore NA Area	Moderate < 12.7	8.1	0	8.1	0
MD	Washington NA Area	Moderate < 12.7	8.8	0	8.8	0
MN	Duluth NA Area	Moderate < 12.7	5.2	0	5.2	0
MN	Minneapolis-St. Paul NA Area	Moderate < 12.7	10.8	2	10.8	2
MT	Missoula	Moderate < 12.7	9.9	5	9.9	5
NC	Raleigh-Durham NA Area	Moderate < 12.7	10.2	2	8.8	0
NC	Winston-Salem NA Area	Moderate < 12.7	6.8	0	6.6	0
NM	Albuquerque NA Area	Moderate < 12.7	10.5	3	10.1	2
NV	Las Vegas NA Area	Moderate >= 12.7	14.1	17	12.1	6
NV	Reno NA Area	Moderate < 12.7	11.9	2	11.9	2
NY	New York-N. New Jersey-Long Island	Moderate >= 12.7	10.8	4	10.7	2
NY	Syracuse NA Area	Moderate < 12.7	8.4	0	8.4	0
OH	Cleveland NA Area	Moderate < 12.7	5.7	0	5.7	0 (#7)
OR	Grants Pass	Moderate < 12.7	9.0	0	9.0	0
OR	Klamath Falls	Moderate < 12.7	8.9	0	8.8	1
OR	Medford	Moderate < 12.7	10.5	3	10.5	3
PA	Philadelphia-Camden Co NA Area	Moderate < 12.7	7.1	0	7.1	0
TN	Memphis NA Area	Moderate < 12.7	8.8	1	7.0	0
TX	El Paso	Moderate < 12.7	14.0	4	11.2	3
UT	Ogden NA Area	Moderate < 12.7	9.9	3	8.0	0
UT	Provo-Orem NA Area	Moderate >= 12.7	16.2	11	11.6	6
WA	Portland-Vancouver NA Area	Moderate < 12.7	10.8	2	9.5	2
WA	Seattle-Tacoma NA Area	Moderate >= 12.7	9.6	2	9.1	1
WA	Spokane NA Area	Moderate >= 12.7	11.8	13	11.8	13

42 Nonattainment Areas

SOURCE: EPA's air quality data system, the Aerometric Information Retrieval System (AIRS) with supplemental data from EPA Regional Offices.

NOTES:

1. Designations and classifications for carbon monoxide nonattainment areas as published in the Federal Register, 40CFR, Part 81.
2. The National Ambient Air Quality Standard for carbon monoxide is 9 ppm 8-hour nonoverlapping average not to be exceeded more than once per year. The rounding convention in the standard specifies that values of 9.5 ppm, or greater, are counted as exceeding the level of the standard. The updated air quality value listed for the 1990-91 period shown in the fourth column is the highest of the annual second maximum 8-hour concentrations observed at any site in the area during the two year period. The exceedances of the carbon monoxide standard listed in the fifth column are from the site recording that updated value.
3. The year associated with the updated air quality value concentration is listed in the sixth column. The last two columns contain 1991 data from the site recording the highest second maximum non-overlapping 8-hour concentration in 1991. The number of exceedances shown in the last column are from the site recording the highest second maximum non-overlapping 8-hour concentration listed in the previous column.
4. The nonattainment site stopped monitoring at the end of 1989.
5. The nonattainment site was temporarily shutdown after mid-1990 due to localized construction activity. The site is back on-line in 1991.
6. The nonattainment site was discontinued in mid-1988.
7. The nonattainment site was discontinued in 1986.

Table 4. Additional Areas with Two or More Exceedances of the Carbon Monoxide NAAQS, 1990-91

STATE	NONATTAINMENT AREA NAME	CLEAN AIR ACT CLASSIFICATION	1990-91 D.V.	D.V. SITE 8-hr Exc	D.V. YEAR	1991 2nd Max 8-hr	1991 8-hr Exc
OH	Steubenville, OH-WV	Unclassified	20.5	31	1990	13.9	6

Note:

The designation for this area is under review by the states and EPA under the process set out in Section 107(d)(4)(A) of the Clean Air Act Amendments of 1990. Installation of control equipment at a major point source has been completed and no exceedances of the CO standard have been recorded since April 1991.