

Establishment of Control Periods under Section 211(m)
of the Clean Air Act as Amended

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Mobile Sources

Field Operations and Support Division

Guidance on Establishment of Control Periods under Section 211(m) of the Clean Air Act as Amended

SUMMARY: Section 211(m) of the Clean Air Act as amended by the Clean Air Act Amendments of 1990 ("the Act") requires that various states submit revisions to their State Implementation Plans (SIPs) and implement an oxygenated gasoline program. This requirement applies to all states with carbon monoxide (CO) nonattainment areas with design values of 9.5 parts per million or more, generally based on data for 1988 and 1989. The oxygenated gasoline program must require gasoline in the specified control areas to contain no less than 2.7% oxygen by weight during that portion of the year in which the areas are prone to high ambient concentrations of carbon monoxide, except that a state is strongly encouraged to adopt an averaging program employing marketable oxygen credits.

Section 211(m)(2) requires that the Administrator specify the portion of the year in which the area is prone to high ambient concentrations of carbon monoxide. This portion of the year ("control period") is to be not less than four months in length, unless the state can demonstrate that based on meteorological conditions, a reduced period will not result in exceedances outside of such reduced period.

This document provides EPA guidance on control periods by area. This document also discusses the geographic scope of the control areas.

The primary determinants of the control periods are the statutory minimum of four months and data on exceedances of the carbon monoxide standard at the design value monitor in the design value year.

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SUPPLEMENTARY INFORMATION:

I. Introduction

This document provides EPA's guidance on establishment of control periods for oxygenated gasoline programs under section 211(m) of the Act. Section II provides the background for this guidance, with respect to chronology and the broad issues involved. Section III presents EPA's guidance on control periods and rationale. Comments received and EPA responses to those comments are also contained in Section III.

II. Background

Section 211(m) of the Act requires states with carbon monoxide (CO) nonattainment areas with design values of 9.5 parts per million or more, based on data for the two-year period of 1988 and 1989,¹ to submit revisions to their State Implementation Plans (SIPs). Such states must individually implement an oxygenated gasoline program in the specified control areas requiring gasoline to meet a minimum oxygen content of 2.7 percent by weight, subject to a testing tolerance established by the Administrator. This oxygen content requirement applies during the portion of the year, referred to as the "control period," in which the areas are prone to high ambient concentrations of CO. The length of the control period, as required by section 211(m) of the Act, is to be determined by the Administrator and shall not be less than four months in length. EPA may reduce the control period if a State can demonstrate that because of meteorological conditions, a reduced period will assure that there will be no carbon monoxide exceedances outside of such reduced period. The oxygen content requirement is to cover all gasoline sold or dispensed in the larger of the Consolidated Metropolitan Statistical Area (CMSA) or the Metropolitan Statistical Area (MSA) in which the nonattainment area is located.

This document provides EPA's guidance to states regarding the establishment of control periods for oxygenated gasoline programs, under section 211(m) of the Act. This guidance is a general statement of policy. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made applying the law, applicable regulations and guidelines on the basis of specific facts and actual action. The proper control period will also be an issue during the notice and comment rulemaking undertaken by EPA to review individual state submissions of oxygenated gasoline programs as SIP revisions as required by section 211(m).

To expedite Agency decisions in particular cases, a state submitting a SIP revision which includes an oxygenated gasoline program with a different proposed control period than the applicable control period as specified in these guidelines should provide as detailed an explanation as possible for the differences.

¹ The Agency has determined that the 1988 and 1989 data from several areas is inadequate to properly characterize the ambient concentrations of CO. Therefore, for these areas - Boston, Cleveland and Washington D.C. - older, more representative data has been used.

Regulatory Negotiation

EPA used a Regulatory Negotiation Advisory Committee (Advisory Committee) to aid in the development of the proposed² and supplemental³ guidelines published on July 9, 1991 and February 5, 1992. For a discussion of the Regulatory Negotiation process as it relates to development of these guidelines, please refer to the February 5, 1992 Supplemental Notice.

III. Guidance and Rationale

Control Periods

In establishing an oxygenated gasoline program, the Act specifies that oxygenated gasoline will be required during the portion of the year in which the areas are prone to high ambient concentrations of carbon monoxide. The control period shall not be less than four months. These control periods are to be determined by the Administrator. EPA may reduce the control period if a state can demonstrate, based on meteorological conditions, that a reduced period will assure that there will be no carbon monoxide exceedances outside of such reduced period. Under section 211(m)(1)(B) of the Act, areas with carbon monoxide design values of 9.5 parts per million (ppm) or greater for any two-year period after 1989 shall submit SIP revisions establishing an oxygenated gasoline program within 18 months of such two-year exceedance period. EPA will address control period issues for such areas as necessary.

In analyzing the control period issue, the Agency has focused primarily on the ambient monitoring data from 1988 and 1989. The Agency chose this time period because it is the time period specified in § 211(m) of the Act for determining inclusion in the program. For areas where the Agency believes that 1988-89 ambient monitoring data is inadequate, the Agency has focused on the ambient monitoring data that was used to determine that area's attainment status. EPA has also considered more recent data in response to comments from state officials requesting modified control periods.

EPA considered various approaches to calculating the period "prone to high ambient concentrations of carbon monoxide," a phrase which the Act does not define. The first approach taken by EPA analyzed the ambient monitoring data by looking at the average carbon monoxide concentrations which occurred in 8-hour overlapping periods (Approach I).

² 56 FR 31151 (July 9, 1991).

³ 57 FR 4406 (February 5, 1992).

For each of the covered CO nonattainment areas, the five highest days in each month were calculated and plotted for 1988 and 1989. Bar graphs reflecting this information for the originally-proposed 39⁴ oxygenated gasoline areas have been placed in the docket.⁵ Preliminary control periods under Approach I were identified by noting those months where any of the five highest days exceeded the National Ambient Air Quality Standard (NAAQS) for CO.

Examination of the data resulting from the Approach I analysis revealed considerable heterogeneity in the length and temporal placement of a number of areas that share fuel distribution facilities. As a result, it was suggested that there is a need to constrain this heterogeneity to facilitate transportation logistics. That is, where possible, areas that share pipeline distribution systems should be given the same control period. In evaluating this suggestion, EPA considered a second way of analyzing the monitoring data.

This second approach used the exceedances of the carbon monoxide standard at the design value monitor in the design value year (the year in which the design value was established), to identify the months the individual areas were prone to high ambient concentrations of carbon monoxide. The outer boundaries of the season in which these exceedances at the design value monitor occurred was considered along with the larger body of monitoring data mentioned before. Determination of the control periods in this manner results in a significant degree of consistency among the control periods of areas which share oxygenate sources and transportation facilities.

In many cases, using both approaches, the 4-month statutory minimum length for the control period was the controlling factor, along with the requirement that, in general, these programs begin no later than November 1, 1992.

The result of the second analysis, called Approach II, has been used by the Agency as the basis for most of the control periods established in today's guidance. Several modifications, noted below, were made to Approach II. EPA's guidance on control periods by area is set forth in Table 1.

⁴ In the July 9, 1991 Federal Register Notice, this number was 41, not 39. As of the current date, neither Steubenville, OH nor Winnebago, WI has been designated as a CO nonattainment area. Therefore the number of CO nonattainment areas covered by these guidelines is currently 39. Both of these areas have been deleted from Table 1.

⁵ These bar graphs appear in a document titled, "Bar graphs of carbon monoxide in Non-Attainment Areas - Revised," June 7, 1991, which is contained in the public docket.

By using only data from the design value monitor in the design value year and by looking only at non-overlapping 8-hour averages, Approach II ties the control period determination more closely to the methodology used to define attainment. Violation of the 8-hour standard occurs when the second highest non-overlapping 8-hour average in a year exceeds the NAAQS for CO. In addition, Approach II also provides more logical consistency in the gasoline distribution network.

Using this second approach, the eastern seaboard, with the exception of the New York City area, converges on a common core 4-month period from November through February. This same core period prevails in Petroleum Administration for Defense Districts (PADDs)⁶ 3 and 4 and in a substantial portion of PADD 5. Five areas were assigned control periods in excess of four months using this approach.

One area which merits a separate analysis is the New York City CMSA. Data from 1988-89 suggested that a control period extending into the summer might be warranted in the New York City area. Based on this data, EPA initially proposed a 12-month control period. However, consideration of the area's 1990 and 1991 data supports a shorter control period. The New York State Deputy Commissioner previously proposed that the New York City CMSA program require 2.7% oxygen by weight in gasoline from November 1 to March 31, and 2.0% oxygen by weight from April 1 to October 31. In response to the February 5, 1991 supplemental notice, comments were received from the New York State Department of Environmental Conservation, the New Jersey Department of Environmental Protection and Energy, the Connecticut Department of Environmental Protection and New York City Department of Environmental Protection officials requesting a 7-month control period based upon the 1990 and 1991 data. EPA has had extensive discussions with New York, New Jersey and Connecticut state officials, to attempt to coordinate their input regarding this issue for their common control area. As a result of these discussions, the requests from the local officials, and

⁶ The definition of PADD is contained in the Petroleum Supply Monthly (DOE/EIA-0109), prepared by the Energy Information Administration, Office of Oil and Gas, U.S. Department of Energy (May 1991). The definition, which appears on page 143, is as follows:

Petroleum Administration for Defense (PAD) Districts.
Geographic aggregations of the 50 States and the District of Columbia into five districts by the Petroleum Administration for Defense in 1950. These districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which was established in 1942.

A map showing PADDs by State appears on page 110 of the above referenced publication.

the fact that all carbon monoxide exceedances from 1990 and 1991 occurred between October and April, EPA's guidance indicates a 7-month control period for the New York City control area, for the period of October 1 through April 30.

Based on discussions during the regulatory negotiation process, and in accordance with the "Agreement in Principle," EPA had proposed to modify the control periods for Grant's Pass, Medford and Klamath, in the state of Oregon to the four months from October 1 through January 31. This was a modification of the control period originally proposed in the July 9, 1991 Notice.⁷ The ambient air data from southern Oregon indicates high ambient concentrations for these counties in the months of December and January. The Agency considered additional months given the four-month statutory minimum. For one county, February had somewhat lower concentrations than October, and for the other two counties the February and October concentrations were approximately the same. EPA has received additional comments on this modification in response to the February 5, 1992 supplemental notice. The State of Oregon has requested that the control period for southern Oregon be returned to the original November through February period. The State believes that this control period will more accurately match the time when these areas are prone to high ambient concentrations of CO.

Based on EPA's analysis of the data alone, these counties are not prone to high ambient concentrations of CO in either October or February. Nevertheless, the Act requires a minimum control period of four months. While the statute specifies that the control period is to constitute that time of year in which the area is prone to high ambient CO concentrations, this criterion is insufficient for selecting whether October or February should be included to meet the statutory minimum in this case. In such a case, the Agency believes it may reasonably consider other factors, including the state's preference, where the environmental data does not provide a substantial basis for distinction. The commenters were split on their choice of control periods whether to include October or February. Therefore, the Agency has decided to concur with the State of Oregon's request to set the control period from November through February.

EPA has decided to adopt Approach II primarily because it is more consistent with the methodology used to determine attainment. This is consistent with the statute's emphasis on attainment status and design value, both of which are based on design monitor values. This approach will also aid in the implementation of these state programs by helping to integrate control periods for areas which share oxygenate sources and transportation facilities. EPA is fully confident that Approach II reasonably reflects the period "prone to high ambient concentrations of carbon monoxide" for the applicable areas.

⁷ 56 FR 51151 (July 9, 1991).

Several commenters have raised a concern regarding Litchfield County, Connecticut. Section 211(m) of the Act provides that the oxygenated gasoline program should apply in the entire Metropolitan Statistical Area (MSA) or Consolidated Metropolitan Statistical Area (CMSA) during that area's control period. Separate parts of Litchfield County are included in both the Hartford and New York City CMSAs. This problem is compounded by the fact that these two control areas are proposed to have different control periods. EPA believes that the Connecticut SIP revisions should provide that each part of Litchfield County be subject to the control period applicable to the MSA or CMSA of which it is a part. The state has indicated that this decision will be acceptable to them.

Minnesota has requested a control period of October 15 through February 14. Many gasoline marketers opposed starting or ending a control period in the middle of the month. Their opposition was based upon the recordkeeping and logistical problems that a mid-month date would create. Given that one of the highest ambient readings in Minneapolis occurred on October 15, EPA does not believe that the October control period should be shortened to exclude the first two weeks of October. Also, there were no exceedences in February in the Minnesota ambient data. Therefore, EPA reaffirms its control period as published on February 5, 1992 - October through January. If the State believes that February should be included, the State can consider including it as part of the control period which will be included in its SIP revision.

Several commenters including the Massachusetts Department of Environmental Protection suggested that Boston should not be required to implement an oxygenated gasoline program. These commenters did not believe that the ambient monitoring data warranted implementation of an oxygenated gasoline program in the Boston CMSA.

EPA does not agree with these commenters and thus strongly believes that the Boston CMSA is an area which is required to implement an oxygenated gasoline program by November 1, 1992.

EPA believes that the monitoring data collected in Boston in 1988 and 1989 was inadequate to properly characterize Boston's CO problem. The CO microscale site in Boston was discontinued in June 1988 due to a lost lease. The site was eventually moved to a new location and resumed operation in January 1990. The new site has shown no exceedences from January 1990 through January 1992. However, rerouting of traffic patterns past this site for a major 10-year construction project is scheduled to begin in May 1992, and concentrations are expected to increase. Since a microscale CO monitor did not operate for 6 of the 8 calendar quarters during 1988 and 1989 and the previous site had recorded CO exceedences in 1986, the Agency believes it is reasonable to consider alternative data. The alternative data that the agency has chosen to use is the calendar year data from 1986 and 1987. Use of this data is consistent with current Agency policy and the Agency's calaaification decision for Boston under Title I of the Act.

Specific response to the comments concerning the accuracy and validity of the 1986 and 1987 Boston monitoring data will be contained in the Technical Support Document to the Title I Designation/Classification Corrections Notice. Using the 1986 and 1987 data, EPA concludes that the Boston CMSA has a design value of 9.8 ppm CO and, hence, is required to implement an oxygenated gasoline program.

The County of Sacramento has submitted a letter in response to the Supplemental Notice of Proposed Guidance. The letter states that the County would like to petition the EPA Administrator under section 211(m)(3) of the Act that the Agency alter the control period as proposed for Sacramento from October through January to November through February. EPA does not believe that the ambient data warrant such a change. There were CO exceedances in Sacramento in October and none in February during the 1989-1990 period. EPA will address the issues raised more fully at such time as a petition is actually received.

A comment from the California Air Resources Board (CARB) points out that EPA, in the proposed guidelines, stated that it will consider recent ambient air quality data in issuing final guidelines or in reviewing individual SIPs. CARB recommends that the Los Angeles control period should not include the month of September. The reason given is that there were no CO exceedances in September for the years 1989 to 1991. This would result in a control period of October 1 through February 29. EPA agrees that it would be appropriate to eliminate the month of September from Los Angeles' control period and has adjusted Table 1 accordingly.

Effective Date

In the Notice of Proposed Guidance on Establishment of Control Periods published on July 9, 1992 EPA proposed that gasoline programs with control periods beginning in September, October, and November would have effective dates of September 1, 1992, October 1, 1992, and November 1, 1992, respectively. In addition, EPA proposed that for areas with a control period of twelve months, the effective date will be September 1, 1992.⁸ Based on comments, however, EPA proposed in the February 5, 1992 Supplemental Notice that the effective date for all areas with control periods beginning on or before November 1, 1992 will be no later than November 1, 1992.

After considering the public comments, EPA is recommending a November 1, 1992 start date for all programs. EPA is concerned that an effective date prior to November 1, 1992 would afford industry and the states insufficient time to implement the oxygenated gasoline programs. EPA recognizes that a November 1 start date could deprive areas of air quality benefits from the oxygenated gasoline program during that portion of control periods prior to November 1, 1992. In addition, EPA recognizes that certain areas may have an effective control period in

⁸ 56 FR 31148, 31153 (July 9, 1991).

the winter of 1992-93 of less than four months. Nevertheless, EPA believes that the time necessary to successfully implement this program this first year justifies the November 1 start date. In any case, states will control periods commencing prior to November 1 are not precluded from starting their programs prior to the November 1 deadline.

EPA also believes that the November 1, 1992 start date is consistent with the Act, which provides that the oxygenated gasoline requirement "shall take effect no later than November 1, 1992 (or at such other date during 1992 as the Administrator establishes under the preceding provisions of this paragraph)."

For additional information and discussion of the issues related to start date, the February 5, 1992 Supplemental Notice should be consulted.

Geographic Scope

According to Section 211(m) of the Act, SIP revisions must be submitted by each State in which there is located all or part of an area which is designated under Title I as a nonattainment area for carbon monoxide and which has a carbon monoxide design value of 9.5 parts per million (ppm) or above based on data for the two-year period of 1988 and 1989⁹ and calculated according to the most recent interpretation methodology issued by the Administrator prior to enactment of the 1991 amendments to the Act. These control areas are as follows:

1. Boston-Lawrence-Salem, MA-NH CMSA
2. Hartford-New Britain-Middletown, CT CMSA
3. New York-Northern New Jersey-Long Island, NY-NJ-CT CMSA
4. Syracuse, NY MSA
5. Baltimore, MD MSA
6. Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD CMSA
7. Washington, DC-MD-VA MSA
8. Greensboro-Winston-Salem-High Point, NC MSA
9. Memphis, TN-AR-MS MSA
10. Raleigh-Durham, NC MSA
11. Cleveland-Akron-Lorain, OH CMSA
12. Duluth, MN-WI MSA
13. Minneapolis-St. Paul, MN-WI MSA
14. Albuquerque, NM MSA
15. El Paso, TX MSA
16. Colorado Springs, CO MSA
17. Denver-Boulder, CO CMSA

⁹ The Agency has determined that the 1988 and 1989 data from several areas is inadequate to properly characterize the ambient concentrations of CO. Therefore, for these areas - Boston, Cleveland and Washington, D.C. - older, more representative data has been used.

18. Fort Collins-Loveland, CO MSA
19. Missoula, MT
20. Provo-Orem, UT MSA
21. Chico, CA MSA
22. Las Vegas, NV MSA
23. Fresno, CA MSA
24. Los Angeles-Anaheim-Riverside, CA CMSA
25. Modesto, CA MSA
26. Phoenix, AZ MSA
27. Reno, NV MSA
28. Sacramento, CA MSA
29. San Diego, CA MSA
30. San Francisco-Oakland-San Jose, CA CMSA
31. Stockton, CA MSA
32. Anchorage, AK MSA
33. Fairbanks, AK
34. Grant's Pass, OR
35. Klamath County, OR
36. Medford, OR MSA
37. Portland-Vancouver, OR-WA CMSA
38. Seattle-Tacoma, WA CMSA
39. Spokane, WA MSA

Section 211(m)(2) of the Act requires that the oxygenated gasoline program apply to all gasoline sold or dispensed in the larger of the CMSA or MSA in which the nonattainment area is located. For nonattainment areas not in a CMSA or MSA, the control area is the nonattainment area. The requirements of the program shall apply to every county, or partial county which is located in the CMSA, MSA, or nonattainment areas. Table 2, compiled based on information from the U.S. Census Bureau, contains a list of the counties that are covered by these programs. States may rely on the list of covered areas by CMSA, MSA, or nonattainment area that appear in Table 2 for implementing oxygenated gasoline programs in 1992.

This requirement has caused some concern. State officials in Minnesota have expressed concern over the designation of the entire Duluth MSA as requiring an oxygenated gasoline program. Most of northeastern Minnesota is included in the Duluth MSA. According to state officials, much of this area is national wilderness area, and therefore very rural and sparsely populated. The state believes that compliance with the oxygenated gasoline provisions as proposed may prove an onerous burden for the few gasoline marketers and retailers in the area.

Congress specifically mandated in the Act that these programs be implemented in "the larger of the Consolidated Metropolitan Statistical Area (CMSA) in which the [CO nonattainment] area is located, or if the area is not located in a CMSA, the Metropolitan Statistical Area in which the area is located." Moreover, EPA does not agree that compliance in northeastern Minnesota will be onerous since that area already receives its gasoline from the Duluth area. Therefore, as

stated above, Table 1 includes the entire CMSA or MSA, whichever is larger.

For certain multi-state MSAs and CMSAs, the portions of one or more of the states in the MSA or CMSA are not actually designated as being in CO nonattainment. For example, the Memphis CMSA extends to areas of Arkansas and Louisiana which are designated as attainment for CO. This problem arises in a number of additional states.

The Agency notes that section 211(m)(1) obligates "[e]ach State in which there is located all or part of an area which is designated under title I as a nonattainment area for carbon monoxide...[to] submit to the administrator a State implementation plan...for such area..." Section 211(m)(2) provides further that SIP revisions require that the oxygenated gasoline program apply to fuel refiners or marketers in the larger of the CMSA or MSA in which the CO nonattainment area is located. The Agency does not believe that states containing only an attainment portion of the MSA or CMSA are obligated to submit SIP revisions. In the case of such states, the attainment portions of the MSA or CMSA located within their boundaries are not themselves designated under title I as a nonattainment area for CO. These states therefore are not required to submit SIPs for such areas. Therefore, for the Memphis CMSA, Tennessee is required to implement an oxygenated gasoline program in Shelby and Tipton Counties.

The Agency does not believe that Congress intended States containing nonattainment portions of the MSA or CMSA to establish oxygenated gasoline programs requiring that gasoline sold or dispensed for use outside its borders be oxygenated. An interpretation that section 211(m) requires such states to establish oxygenated gasoline programs applicable in this manner to the portions of the MSA or CMSA outside their borders raises serious constitutional issues regarding the principle of a State's sovereignty vis a vis other States and about the constitutionality of Congress's delegation of power to regulate interstate commerce.

For areas that have carbon monoxide design values of 9.5 parts per million (ppm) for any two year period after 1989, the Act requires that a revision to the SIP shall be submitted within 18 months after such two year period. The statute does not specify whether two-year periods after 1989 are to be overlapping or mutually exclusive. EPA believes the two-year period was specified to ensure that a sufficient amount of data is considered, and therefore an overlapping approach is more appropriate. EPA will address the geographic scope issues for these areas as such action becomes necessary.

One such area is Ogden, Utah which has been classified as nonattainment with a design value of 9.9 ppm based on 1989 and 1990 data. Ogden will be required to implement an oxygenated gasoline program beginning in 1993.

TABLE 1 - Guidance on Control Period
by Nonattainment Area

November 1 - February 29

Hartford-New Britain-Middletown, CT CMSA
Boston-Lawrence-Salem, MA-NH CMSA
Syracuse, NY MSA
Baltimore, MD MSA
Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD CMSA
Washington, DC-MD-VA MSA
Greensboro-Winston-Salem-High Point, NC MSA
Memphis, TN-AR-MS MSA
Raleigh-Durham, NC MSA
Cleveland-Akron-Lorain, OH CMSA
Albuquerque, NM MSA
El Paso, TX MSA
Colorado Springs, CO MSA
Denver-Boulder, CO CMSA
Fort Collins-Loveland, CO MSA
Missoula, MT
Provo-Orem, UT MSA
San Diego, CA MSA
Anchorage, AK MSA
Fairbanks, AK
Portland-Vancouver, OR-WA CMSA
Seattle-Tacoma, WA CMSA
Grant's Pass, OR
Klamath County, OR
Medford, OR MSA

October 1- April 30

New York-Northern New Jersey-Long Island, NY-NJ-CT CMSA

October 1 - January 31

Duluth, MN-WI MSA
Minneapolis-St. Paul, MN-WI MSA
Chico, CA MSA
Fresno, CA MSA
Modesto, CA MSA
Reno, NV MSA
Sacramento, CA MSA
San Francisco-Oakland-San Jose, CA CMSA
Stockton, CA MSA

October 1 - February 29

Las Vegas, NV MSA
Phoenix, AZ MSA
Los Angeles-Anaheim-Riverside, CA CMSA

September 1 - February 29

Spokane, WA MSA

TABLE 2 - CMSA and MSA BY COUNTY¹

Boston-Lawrence-Salem, MA-NH CMSA

Boston, MA PMSA:

Bristol County (pt)
Mansfield Town
Norton Town
Raynham Town
Essex County (pt)
Lynn City
Lynnfield Town
Nahant Town
Saugus Town
Middlesex County (pt)
Acton Town
Arlington Town
Ashland Town
Ayer Town
Bedford Town
Belmont Town
Boxborough Town
Burlington Town
Cambridge Town
Carlisle Town
Concord Town
Everett City
Framingham Town
Framingham (CDP)
Groton Town
Holliston Town
Hopkinton Town
Hudson Town
Lexington Town
Lincoln Town
Littleton Town
Malden City
Marlborough City
Maynard Town
Medford City
Melrose City
Natick Town
Newtown City
North Reading Town
Reading Town

¹ A partial county is indicated by "(pt)" following the county name. The cities and towns that appear below the county name are those that are included in the program area.

Sherborn Town
Shirley Town
Somerville City
Stoneham Town
Stow Town
Sudbury Town
Townsend Town
Wakefield Town
Waltham City
Watertown Town
Wayland Town
Weston Town
Wilmington Town
Winchester Town
Woburn City
Norfolk County (pt)
Bellingham Town
Braintree Town
Brookline Town
Canton Town
Cohasset Town
Dedham Town
Dover Town
Foxborough Town
Franklin Town
Holbrook Town
Medfield Town
Medway Town
Millis Town
Milton Town
Needham Town
Norfolk Town
Norwood Town
Quincy City
Randolph Town
Sharon Town
Stoughton Town
Walpole Town
Wellesley Town
Westwood Town
Weymouth Town
Wrentham Town
Plymouth County (pt)
Carver Town
Duxbury Town
Hanover Town
Hanson Town
Hingham Town
Hull Town
Kingston Town
Lakeville Town
Marshfield Town

Middleborough Town
Norwell Town
Pembroke Town
Plymouth Town
Plympton Town
Rockland Town
Scituate Town
Suffolk County
Boston City
Chelsea City
Revere City
Winthrop Town
Worcester County (pt)
Berlin Town
Bolton Town
Harvard Town
Hopedale Town
Lancaster Town
Mendon Town
Milford Town
Southborough Town
Upton Town

Brockton, MA PMSA:

Bristol County (pt)
Easton Town
Norfolk County (pt)
Avon Town
Plymouth County (pt)
Abingdon Town
Bridgewater Town
Brockton City
East Bridgewater Town
Halifax Town
West Bridgewater Town
Whitman Town

Lawrence-Haverhill, MA-NH PMSA:

Essex County, MA (pt)
Amesbury Town
Andover Town
Boxford Town
Georgetown Town
Groveland Town
Haverhill City
Lawrence City
Merrimac Town
Methuen Town
Newbury Town
Newburyport City

North Andover Town
Salisbury Town
West Newbury Town

Lowell, MA-NH PMSA:

Middlesex County, MA (pt)
Billerica Town
Chelmsford Town
Dracut Town
Dunstable Town
Lowell City
Pepperell Town
Tewksbury Town
Tyngsborough Town
Westford Town

Salem-Gloucester, MA PMSA:

Essex County (pt)
Beverly City
Danvers Town
Essex Town
Gloucester City
Hamilton Town
Ipswich Town
Manchester Town
Marblehead Town
Middleton Town
Peabody City
Rockport Town
Rowley Town
Salem City
Swampscott Town
Topsfield Town
Wenham Town

Cleveland-Akron-Lorain, OH CMSA

Akron, OH PMSA:

Portage County
Kent City
Summit County
Akron City
Barberton City

Cleveland, OH PMSA:

Cuyahoga County
Cleveland City
Geauga County
Lake County

Medina County

Lorain-Elyria, OH PMSA:

Lorain County
Elyria City
Lorain City

Denver-Boulder, CO CMSA

Boulder-Longmont, CO PMSA:

Boulder County
Boulder City
Longmont City

Denver, CO PMSA:

Adams County
Arapahoe County
Denver County
Denver City
Douglas County
Jefferson County

Hartford-New Britain-Middletown, CT CMSA

Bristol, CT PMSA:

Hartford County (pt)
Bristol Town
Bristol City
Burlington Town
Litchfield County (pt)
Plymouth Town

Hartford, CT PMSA:

Hartford County (pt)
Avon Town
Bloomfield Town
Canton Town
East Granby Town
East Hartford Town
East Windsor Town
Enfield Town
Farmington Town
Glastonbury Town
Granby Town
Hartford Town

Hartford City
 Manchester Town
 Marlborough Town
 Newington Town
 Rocky Hill Town
 Simsbury Town
 South Windsor Town
 Suffield Town
 West Hartford Town
 Wethersfield Town
 Windsor Town
 Windsor Locks Town
Litchfield County (pt)
 Barkhamsted Town
 New Hartford Town
Middlesex County (pt)
 East Haddam Town
New London County (pt)
 Colchester Town
Tolland County (pt)
 Andover Town
 Bolton Town
 Columbia Town
 Coventry Town
 Ellington Town
 Hebron Town
 Somers Town
 Stafford Town
 Tolland Town
 Vernon Town
 Willington Town

Middletown, CT PMSA:

Middlesex County (pt)
 Cromwell Town
 Durham Town
 East Hampton Town
 Haddam Town
 Middlefield Town
 Middletown Town
Middletown City
 Portland Town

New Britain, CT PMSA:

Hartford County (pt)
 Berlin Town
 New Britain Town
New Britain City
 Plainville Town
 Southington Town

Los Angeles-Anaheim-Riverside, CA CMSA

Anaheim-Santa Ana, CA PMSA:

Orange County
Anaheim City
Santa Ana City

Los Angeles-Long Beach, CA PMSA:

Los Angeles County
Burbank City
Long Beach City
Los Angeles City
Pasadena City
Pomona City

Oxnard-Ventura, CA PMSA:

Ventura County
Oxnard City
San Buenaventura (Ventura) City

Riverside-San Bernardino, CA PMSA:

Riverside County
Palm Springs City
Riverside City
San Bernardino County
San Bernadino City

New York - Northern New Jersey- Long Island NY-NJ-CT CMSA

Bergen-Passaic, NJ PMSA:

Bergen County
Passaic County
Paterson City

Bridgeport-Milford, CT PMSA:

Fairfield County (pt)
Bridgeport Town
Bridgeport City
Easton Town
Fairfield Town
Monroe Town
Shelton Town
Stratford Town
Trumbull Town

New Haven County (pt)
Ansonia Town
Beacon Falls Town
Derby Town
Milford Town
Milford City
Oxford Town
Seymour Town

Danbury, CT PMSA:

Fairfield County (pt)
Bethel Town
Brookfield Town
Danbury Town
Danbury City
New Fairfield Town
Newtown Town
Redding Town
Ridgefield Town
Sherman Town
~~Litchfield County (pt)~~
Bridgewater Town
New Milford Town

Jersey City, NJ PMSA:

Hudson County
Hoboken City
Jersey City

Middlesex-Somerset-Hunterdon, NJ PMSA:

Hunterdon County
Middlesex County
New Brunswick City
Perth Amboy City
Somerset County

Monmouth-Ocean City, NJ PMSA:

Monmouth County
Ocean County

Nassau-Suffolk County, NY PMSA:

Nassau County
Suffolk County

New York, NY PMSA:

- Bronx County
 - New York City (pt)
- Kings County
 - New York City (pt)
- New York County
 - New York City (pt)
- Putnam County
- Queens County
 - New York City (pt)
- Richmond County
 - New York City (pt)
- Rockland County
- Westchester County
 - White Plains City

Newark, NJ PMSA:

- Essex County
 - Newark City
- Morris County
- Sussex County
- Union County
 - Elizabeth City

Norwalk, CT PMSA:

- Fairfield County (pt)
 - Norwalk Town
- Norwalk City
 - Weston Town
 - Westport Town
 - Wilton Town

Orange County, NY PMSA:

- Orange County

Stamford, CT PMSA:

- Fairfield County (pt)
 - Darien Town
 - Greenwich Town
 - New Canaan Town
 - Stamford Town
- Stamford City

Philadelphia-Wilmington-Trenton, PA-DE-NJ-MD PMSA:

Philadelphia, PA-NJ PMSA:

Bucks County, PA
Chester County, PA
Delaware County, PA
Montgomery County, PA
Norristown Borough
Philadelphia County, PA
Philadelphia City
Burlington County, NJ
Camden County, NJ
Camden City
Gloucester County, NJ

Trenton, NJ PMSA:

Mercer County
Trenton City

Vineland-Millville-Bridgeton, NJ PMSA:

Cumberland County
Bridgeton City
Millville City
Vineland City

Wilmington, DE-NJ-MD PMSA:

Salem County, NJ

Portland-Vancouver, OR-WA CMSA

Portland, OR PMSA:

Clackamas County
Portland City (pt)
Multnomah County
Portland City (pt)
Washington County
Portland City (pt)
Yamhill County

Vancouver, WA PMSA:

Clark County
Vancouver City

San Francisco-Oakland-San Jose, CA CMSA

Oakland, CA PMSA:

Alameda County
Berkeley City
Livermore City
Oakland City

Contra Costa County

San Francisco, CA PMSA:

Marin County
San Francisco County
San Francisco City
San Mateo County

San Jose, CA PMSA:

Santa Clara County
Palo Alto City
San Jose City

Santa Cruz, CA PMSA:

Santa Cruz County
Santa Cruz City

Santa Rosa-Petaluma, CA PMSA:

Sonoma County
Petaluma City
Santa Rosa City

Vallejo-Fairfield-Napa, CA PMSA:

Napa County
Napa City
Solano County
Fairfield City
Vallejo City

Seattle-Tacoma, WA CMSA:

Seattle, WA PMSA:

King County
Auburn City
Seattle City
Snohomish County
Everett City

Tacoma, WA PMSA:

Pierce County
Tacoma City

Albuquerque, NM MSA

Bernalillo County
Albuquerque City

Anchorage, AK MSA

Anchorage Borough
Anchorage City

Baltimore, MD MSA

Anne Arundel County
Annapolis City
Baltimore County
Baltimore City
Carroll County
Harford County
Howard County
Queen Annes County
Baltimore City

Chico, CA MSA

Butte County
Chico City

Colorado Springs, CO MSA

El Paso County
Colorado Springs City

Duluth, MN-WI MSA

St. Louis County, MN
Duluth City

El Paso, TX MSA

El Paso County
El Paso City

Fort Collins, Loveland, CO MSA

Larimar County
Fort Collins City
Loveland City

Fresno, CA MSA

Fresno County
Fresno City

Greensboro-Winston-Salem-High Point, NC MSA

Davidson County
High Point City (pt)
Davie County
Forsyth County
Winston-Salem City
Guilford County
Greensboro City
High Point City (pt)
Randolph County
High Point City (pt)
Stokes County
Yadkin County

Las Vegas, NV MSA

Clark County
Las Vegas City

Medford, OR MSA

Jackson County
Medford City

Memphis, TN-AR-MS MSA

Shelby County, TN
Memphis City
Tipton County, TN

Minneapolis-St. Paul, MN-WI MSA

Anoka, County, MN
Carver County, MN
Chisago County, MN
Dakota County, MN
Hennepin County, MN
Bloomington City
Minneapolis City
Isanti County, MN

Ramsey County, MN
St. Paul City
Scott County, MN
Washington County, MN
Wright County, MN

Modesto, CA MSA

Stanislaus County
Modesto City
Turlock City

Phoenix, AZ MSA

Maricopa County
Mesa City
Phoenix City
Scottsdale City
Tempe City

Provo-Orem, UT MSA

Utah County
Orem City
Provo City

Raleigh-Durham, NC MSA

Durham County
Chapel Hill Town (pt)
Durham City
Franklin County
Orange County
Chapel Hill Town (pt)
Wake County
Raleigh City

Reno, NV MSA

Washoe County
Reno City

Sacramento, CA MSA

El Dorado County
Placer County
Sacramento County
Sacramento City
Yolo County
Davis City
Woodland City

San Diego, CA MSA

San Diego County
Escondido City
San Diego City

Spokane, WA MSA

Spokane County
Spokane City

Stockton, CA MSA

San Joaquin County
Lodi City
Stockton City

Syracuse, NY MSA

Madison County
Onondaga County
Syracuse City
Oswego County

Washington, DC-MD-VA MSA

District of Columbia
Washington City
Calvert County, MD
Charles County, MD
Frederick County, MD
Frederick City
Montgomery County, MD
Prince Georges County, MD
Arlington County, VA
Arlington (CDP)
Fairfax County, VA
Loudon County, VA
Prince William County, VA
Stafford County, VA
Alexandria City, VA
Fairfax City, VA
Falls Church City, VA
Manassas City, VA
Manassas Park City, VA

Other CO Nonattainment Areas Required to Implement Oxygenated Gasoline Programs²:

Missoula, MT
Fairbanks, AK
Grant's Pass, OR
Klamath Co., OR

² Please see the November 6, 1991 Federal Register Notice on Air Quality Designations (56 FR 56694 November 6, 1991) for a more detailed definition of the boundaries for these CO nonattainment areas. This notice is scheduled to be updated shortly.