

## Final Regulation Order

### AREA DESIGNATION CRITERIA FOR STATE AMBIENT AIR QUALITY STANDARDS

#### CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 70302, 70303, 70303.1, 70303.5, 70304, AND APPENDICES 1, 2, AND 3, THEREOF

The preexisting regulation text is set forth below in normal type. The amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions.

Amend sections 70302, 70303, 70303.1, 70303.5, 70304, and Appendices 1, 2, and 3, thereof, title 17, California Code of Regulations, to read as follows:

#### **70302. Geographic Extent of Designations**

(a) An air basin will be the area designated for ozone, nitrogen dioxide, suspended particulate matter (PM10), *fine suspended particulate matter (PM2.5)*, sulfates, and visibility reducing particles. Provided, however, if the state board finds (based on air quality data, meteorology, topography, or the distribution of population and emissions) that there are areas within an air basin with distinctly different air quality deriving from sources and conditions not affecting the entire air basin, the state board may designate an area smaller than an air basin using political boundary lines to the extent practicable. In designating an area smaller than an air basin as nonattainment, the state board will include within the area those sources whose emissions contribute to a violation of a state standard for that pollutant. Contiguous areas which would have the same designation within an air basin will be one designated area.

(b) A county or the portion of a county which is located within an air basin will be the area designated for carbon monoxide, sulfur dioxide, lead (particulate), and hydrogen sulfide. Provided, however, if the state board finds (based on air quality data, meteorology, topography, or the distribution of population and emissions) that there are areas within the county with distinctly different air quality, it may designate a smaller area. In designating an area smaller than a county as nonattainment, the state board will include within the area those sources whose emissions contribute to a violation of a state standard for that pollutant.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 38608, Health and Safety Code.



### **70303. Criteria for Designating an Area as Nonattainment**

(a) The state board will designate an area as nonattainment for a pollutant if:

(1) Data for record show at least one violation of a state standard for that pollutant in the area, and the measurement of the violation meets the representativeness criteria set forth in "Criteria for Determining Data Representativeness" contained in Appendix 1 to this article; or

(2) Limited or no air quality data were collected in the area, but the state board finds, based on meteorology, topography, and air quality data for an adjacent nonattainment area, that there has been at least one violation of a state standard for that pollutant in the area being designated.

(b) An area will not be designated as nonattainment if the only recorded exceedance(s) of that state standard were based solely on data for record determined to be affected by a highly irregular or infrequent event. Data affected by a highly irregular or infrequent event will be identified as such by the executive officer in accordance with the "Air Resources Board Procedure for Reviewing Air Quality Data Possibly Affected by a Highly Irregular or Infrequent Event," set forth in Appendix 2 to this article.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607, and 39608, Health and Safety Code.

#### **70303.1. Criteria for Designating an Area as Nonattainment-Transitional for Pollutants Other than Ozone**

(a) Nonattainment-transitional is a subcategory of the nonattainment designation. The state board will, if requested by a district no later than May 1 of each year pursuant to section 70306, identify that portion of a designated area within the district as nonattainment-transitional for a pollutant other than ozone with a state standard averaging time less than or equal to 24 hours and for which samples are routinely collected every day if it finds that:

(1) Data for record for the previous calendar year are consistent with the criteria established in section 70304(a)(2) and show two or fewer days at each site in the area with violations of a state standard for that pollutant (not including exceedances found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article);

(2) Evaluation of multi-year air quality, meteorological and emission data indicates that ambient air quality either has stabilized or is improving and that every site in the area is expected to reach attainment within three years; and

(3) The geographic extent of the area is consistent with the criteria established in section 70302.

(b) An area designated as nonattainment-transitional for a pollutant is close to attaining the state standard(s) for that pollutant. The nonattainment-transitional designation provides an opportunity for a district to review and potentially to modify its attainment plan. Any modification to an attainment plan must be consistent with state and federal regulations and statutes.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

### **70303.5. Requirements for Ozone Nonattainment-Transitional**

(a) If an area within an air basin is designated as nonattainment for ozone, that area is designated as nonattainment-transitional for ozone if the following conditions are met:

(1) The area is a an entire district within an air basin, or the area is a the entire portion of a district within an air basin consistent with the criteria established in section 70302(a);

(2) Data for record consistent with the criteria established in section 70304(a)(2) are used to determine the number of exceedances for the previous calendar year at each monitoring location in the area;

(3) All data collected during the previous calendar year are considered in the evaluation, including data possibly affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 to this article;

(4) Each day with concentration(s) that exceed the state ozone standard is counted as one exceedance day; and

(5) No monitoring location in the area has more than three exceedance days during the previous calendar year.

(b) If an area qualifies for designation as nonattainment-transitional for ozone for the previous calendar year under section 70303.5(a), and the executive officer has determined that data for the current calendar year indicate more than three exceedance days at any one monitoring location, that area is designated as nonattainment.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 40925.5, Health and Safety Code. Reference: sections 39607 and 40925.5, Health and Safety Code.

### **70304. Criteria for Designating an Area as Attainment**

(a) The state board will designate an area as attainment for a pollutant if:

(1) Data for record show that no state standard for that pollutant was violated at any site in the area; and

(2) Data for record meet representativeness and completeness criteria for a location at which the pollutant concentrations are expected to be high based on the spatial distribution of emission sources in the area and the relationship of emissions to air quality. Data representativeness criteria are set forth in "Criteria for Determining Data Representativeness" contained in Appendix 1 to this article. Data completeness criteria are set forth in "Criteria for Determining Data Completeness" contained in Appendix 3 to this article.

(b) Where there are limited or no air quality data for an area, the state board will designate the area as attainment for a pollutant if it finds that no state standard for that pollutant has been violated in that area based on:

(1) Air quality data collected in the area during the most recent period since 1980 which meet the conditions in (a) above;

(2) Emissions of that pollutant or its precursors in the area have not increased since that period to a level at which the state standard might be exceeded; and

(3) Air quality data collected in the area since the time period in (1) above do not show a violation of the state standard.

(c) Where an area has limited or no air quality data for nitrogen dioxide, sulfur dioxide, sulfates, and lead (particulate), the state board shall designate that area attainment for a pollutant if it finds that no state standard for that pollutant has been violated in that area based on the "Screening Procedure for Determining Attainment Designations for Areas with Incomplete Air Quality Data" set forth in Appendix 4 to this article.

(d) A nonattainment area will not be redesignated as attainment for a pollutant if:

(1) Data for record for the monitoring site showing the greatest violation of a state standard for that pollutant no longer are available; and

(2) No other site has been identified as equivalent by the executive officer.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.

## APPENDIX 1

### CRITERIA FOR DETERMINING DATA REPRESENTATIVENESS

This Appendix describes the criteria to be used in determining the data representativeness of individual air quality measurements and statistics for the purpose of designating areas as described in this Article. Data Representativeness, as that term is used herein, is only related to the determination of whether or not the amount of data reported reflected in an individual air quality measurement or statistic is sufficiently complete to characterize reliably air quality during the respective averaging time of a state standard period. No other kind of representativeness is implied. The criteria for determining data representativeness are summarized in the accompanying table and discussed further, below.

Air quality measurements and statistics are usually computed from short term observed values. For example, an annual arithmetic mean is computed from all available hourly samples. If all the short term values for the statistical time period are available, the calculated statistic is representative. However, because all the short term values for a given period often are not available, a minimum number of observations are needed to provide reasonable assurance that the calculated measurement or statistic value is a reliable estimate for the averaging time specified in the state standard.

In general, air quality measurements and statistics are considered representative if a minimum of 75 percent of all the possible potential short term values are included and are distributed throughout the entire statistical time period. This 75 percent criteria must be met from the averaging time of the initial measurement, up to and including, the final averaging time reflected by the air quality measurement or statistic. For example, a maximum daily statistic must meet the representativeness criteria specified for a "Day." Because a daily statistic reflects a single day, it does not need to meet the representativeness criteria for any other level (Month, Quarter, or Year). In evaluating data representativeness, all measurements are considered, including those identified as affected by a highly irregular or infrequent event under the "Air Resources Board Procedure for Reviewing Air Quality Data Possibly Affected by a Highly Irregular or Infrequent Event," set forth in Appendix 2 to this article.

Individual air quality measurements and statistics used for designating an area as attainment, nonattainment-transitional, or nonattainment must be representative. Furthermore, to ensure that the the group of air quality measurements or statistics used for designating an area as attainment or nonattainment-transitional reflect the time of day and the season of expected high concentrations, these data must also be complete under the "Criteria for Determining Data Completeness" set forth in Appendix 3 to this

article. In contrast, the air quality measurements or statistics used for designating an area as nonattainment are not required to be complete.

To ensure that seasonal variations are accounted for, representative annual statistics are required to have four representative calendar quarters of data. Because three representative months are required for each calendar quarter, the lack of representativeness of the monthly mean concentrations precludes a reliable estimate of a representative calendar quarter, which in turn precludes the representativeness of an annual statistic. Each level of criteria—hour, day, month, quarter, and year—must be met in order to make a representative annual statistic.

For observations made at less than 24-hour intervals, for example, hourly samples, representativeness depends on whether all the individual values are to be used or only a single daily value is to be used. In general, for representative statistics computed from all of the individual values, such as the mean of all hours, 75 percent of the values in the respective period are required. For representative statistics computed from daily values, such as the monthly mean of daily maximum hours, data from 75 percent of the days in the month are required and the data within those days must meet the relevant representativeness criteria.



## CRITERIA FOR REPRESENTATIVENESS OF AIR QUALITY MEASUREMENTS AND STATISTICS

<u>Representative Calendar Statistic</u>	<u>Sampling Time Period</u>	<u>Basis of Statistic or Requirement</u>	<u>Number of Representative Periods Required</u>
Year	Any		4 representative calendar quarters
Quarter	24-hour	Based on a daily sample	3 representative months
	< 24-hours <	Based on a daily statistic; or	69 or more representative calendar days
	< 24-hours <	Based on hourly samples	1,643 or more hours
Month	24-hour	Based on <u>daily infrequent sampling</u> ( <i>1-in-6 day, 1-in-3 day, 1-in-2 day</i> )	<del>4 or more 24-hour samples</del> <u>75% of all potential samples</u>
	< 24-hours <	Based on a daily statistic; or	23 or more representative calendar days
	< 24-hours <	Based on all hourly samples; or	548 or more hours
	< 24-hours <	Based on all 2-hour samples; or	274 or more 2-hour samples
	< 24-hours <	Based on all 3-hour samples	183 or more 3-hour samples
Day	1-hour		6 or more hours in each 1/3 day (hours 0 thru 7, 8 thru 15, 16 thru 23), & missing no more than 2 consecutive hourly samples
	< 2-hour	Based on all 2-hour samples	9 or more samples
	< 3-hour	Based on <u>all</u> 3-hour samples	6 or more samples
	< 24-hour	Based on daily sample	22 but not more than 26 hours of sampling
		<u>N</u>	<u>Number of Samples Needed</u>
Mean of N Hour Period		24	18 or more hourly samples
		8	6 or more hourly samples
		6	5 or more hourly samples
		4	3 hourly samples

- 3 3 hourly samples
- 2 2 hourly samples
- 1 30 minutes or more of sampling

## APPENDIX 2

### AIR RESOURCES BOARD PROCEDURE FOR REVIEWING AIR QUALITY DATA POSSIBLY AFFECTED BY A HIGHLY IRREGULAR OR INFREQUENT EVENT

This Appendix describes the procedures that the Air Resources Board will use for reviewing air quality data possibly affected by a highly irregular or infrequent event with regard to the state ambient air quality standards. All decisions regarding the identification of data as being affected by a highly irregular or infrequent event will be made by the executive officer.

The executive officer will review air quality data for possible identification as affected by a highly irregular or infrequent event if the data are the only exceedances of an state ambient air quality standard in the area or if such identification would otherwise affect the designation of the area.

Three types of highly irregular or infrequent events may be identified:

1. Extreme Concentration Event.
2. Exceptional Event.
3. Unusual Concentration Event.

#### Extreme Concentration Events

An extreme concentration event is an event beyond reasonable regulatory control which causes an exceedance of a state standard. An extreme concentration event is based on a statistical procedure and may not always be linked to a specific identifiable cause. The causes of an extreme concentration event include but are not limited to unusual meteorology.

The steps for identifying an extreme concentration event are:

1. A district (or the executive officer) identifies questionable data.
2. In evaluating a possible extreme concentration event, the executive officer will use the data for the site at which the event is suspected to determine a limit for concentrations expected to recur no more frequently than once in one year. The limit will be determined using the "exponential tail method" described in Procedure for Computing the Values Used in Identifying Extreme Concentration Events (August 1998), which is incorporated by reference herein.

Using conventional rounding procedures, the limit will be consistent with the level of precision in which the state standard is expressed. If the possible extreme concentration exceeds the concentration expected to recur no more frequently than once in one year, the executive officer will consult with the district in identifying the data as affected by an extreme concentration event.

3. When an extreme concentration event is identified, the executive officer will review other information, including but not limited to meteorological data, to determine whether air quality data for other sites in the area were affected by the extreme concentration event.

### **Exceptional Events**

An exceptional event is an event beyond reasonable regulatory control which causes an exceedance of a state standard. An exceptional event must be linked to a specific cause such as an act of nature or unusual human activity. As guidance to the states for determining exceptional events, the federal Environmental Protection Agency (EPA) has published Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events, (EPA-450/4-86-007), July 1986 (the EPA Guideline). The EPA Guideline provides overall criteria for determining whether an event is exceptional with regard to the national standards. The executive officer will use the EPA Guideline as a general basis for reviewing ambient data, but will not be bound by the specific definitions in the EPA Guideline for the various types of exceptional events because those definitions are made on a national basis. In addition, since what may be exceptional in one part of the state may be common in another, each possible event will be evaluated on a case-by-case basis.

The steps for identifying an exceptional event are:

1. A district (or the executive officer) identifies questionable data.
2. If a known exceptional event has occurred, the district gathers relevant data to document the occurrence.
3. If an exceptional event is only suspected, the district investigates available data for the possible event.
4. The district submits to the executive officer a request for identifying the data as affected by an exceptional event and also provides supporting documentation.



5. If the executive officer concurs with the district, he/she will identify the data as affected by an exceptional event.
6. If the district's request for identifying data as affected by an exceptional event cannot be supported, the district will be notified of the reasons. The executive officer will consider any additional data to support the request, but in the absence of any new evidence, will disapprove the request.

## **Unusual Concentration Events**

An unusual concentration event is an event which causes an anomalous exceedance of a state standard and which does not qualify as an extreme concentration event or an exceptional event. An exceedance affected by an unusual concentration event may be identified only for an area designated as attainment or unclassified at the time of the exceedance.

The steps for identifying an unusual concentration event are:

1. A district (or the executive officer) identifies a questionable exceedance(s).
2. If the exceedance(s) has not been identified as having been affected by an extreme concentration event or an exceptional event, and if the area was designated as attainment or unclassified at the time of the exceedance(s), the executive officer will review the exceedance(s) to determine whether it was affected by an unusual concentration event.
3. In evaluating a possible unusual concentration event, the executive officer will consider all relevant information, including but not limited to the amount and characteristics of air quality data, emission data, meteorological data, potential public health and welfare impacts, and any applicable state, district, and federal rules and regulations. To identify the exceedance(s) as affected by an unusual concentration event, the executive officer must find, based on the relevant information, that the impact of the exceedance(s) is limited to the local area, the exceedance(s) is not expected to recur, and that the data do not support a nonattainment designation.

4. If the exceedance(s) qualifies as possibly affected by an unusual concentration event, the executive officer will consult with the district in identifying the exceedance(s) as affected by an unusual concentration event.
5. An area may retain its attainment or unclassified designation based on the identification and exclusion of an exceedance(s) affected by an unusual concentration event for no more than three consecutive years. If the executive officer identifies an exceedance(s) affected by an unusual concentration event in the area in the fourth consecutive year, the area will be redesignated as nonattainment.

NOTE: Authority Cited: sections 39600, 39601, 39607, and 39608, Health and Safety Code. Reference: sections 39607 and 39608, Health and Safety Code.





## APPENDIX 3

### CRITERIA FOR DETERMINING DATA COMPLETENESS

This Appendix describes the criteria to be used in determining data completeness for the purpose of designating areas as attainment or nonattainment-transitional as described in this Article. These Criteria for Determining Data Completeness (Completeness Criteria) apply only to air quality data used in designating an area as attainment or nonattainment-transitional. Air quality data used in designating an area as nonattainment do not need to be complete. The purpose of these data eCompleteness eCriteria is to specify the minimum amount of data deemed necessary to asensure that sampling occurred at times when a violation is most likely to occur.

After a set or group of air quality measurements or statistics are deemed representative under the Criteria for Determining Data Representativeness set forth in Appendix 1 to this article, they are then evaluated under these Completeness Criteria to ensure that the group of representative measurements or statistics reflect the time of day and the season of the year during which high concentrations are likely to occur.

#### **Complete Data**

Data for a site will be complete if there are representative data (as determined in accordance with the Representativeness Criteria in Appendix 1 to this article) during the required hours (see below) of the day during the required months (see below) for the required years (see below).

#### **Required Hours**

The hours of potentially high concentration must be included. Unless a detailed evaluation determines different hours to be appropriate for a specific site, these hours are:

<b><u>Pollutant</u></b>	<b><u>Hours (PST)</u></b>
Ozone	9 am - 5 pm
Carbon Monoxide	3 pm - 9 am (next day)
Nitrogen Dioxide	8 am - 8 pm
Visibility Reducing Particles	10 am - 6 pm
Other Pollutants	Throughout day



## **Required Months**

The months of potentially high concentrations must be included. Unless a detailed evaluation determines different months to be appropriate for a specific site, these months are:

<b><u>Pollutant</u></b>	<b><u>Months</u></b>
Ozone	July - September
Carbon Monoxide	January, November - December
Nitrogen Dioxide	October - December
Sulfur Dioxide	September - December
Sulfates	January, June - December
Lead (Particulate)	January, November - December
Other Pollutants	January - December

## **Required Years for an Attainment Designation**

The number of years to be included *for an attainment designation* is:

- a) Three; or
- b) Two, if during these years the maximum pollutant concentration (not including data found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 *to this article*) is less than three-fourths the applicable state ambient air quality standard; or
- c) One, if during this year the maximum pollutant concentration (not including data found to be affected by a highly irregular or infrequent event under the procedure set forth in Appendix 2 *to this article*) is less than one-half the applicable state ambient air quality standard.

