



Monterey Bay Air Resources District
24580 Silver Cloud Court, Monterey, CA 93940

MEETING DATE:	February 18, 2026	REGULAR
TO:	Board of Directors	
FROM:	Shawn Boyle, Planning and Air Monitoring Supervisor	
SUBJECT:	Receive Presentation on Calendar Year 2025 Air Monitoring Activities	

RECOMMENDATION

Receive Presentation on Calendar Year 2025 Air Monitoring Activities

DISCUSSION

The MBARD Air Monitoring Division operates and maintains an air monitoring network to determine attainment designation with the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) within the North Central Coast Air Basin (NCCAB).

The Air Monitoring Division has prepared this annual report summarizing the activities for 2025. This report highlights the following:

- National Ambient Air Quality Standards (NAAQS)
- The California Ambient Air Quality Standards (CAAQS)
- EPA Air Quality Index (AQI)
- MBARD Air Monitoring Stations
- Attainment vs. Nonattainment designation
- Criteria Pollutants – Ozone, Particulate Matter (PM) - PM₁₀ & PM_{2.5}
- Ozone, PM₁₀ & PM_{2.5} measurement summaries
- MBARD PM_{2.5} Sensor Network
- Meteorological Monitoring Summary
- Wildfire Activity - Wildfire Smoke Air Quality Advisory
- Spare the Air – San Lorenzo Valley
- MBARD website enhancements

ATTACHMENTS

2025 Annual Report – Air Monitoring Division

Agenda Item No. 23

2025 ANNUAL REPORT

AIR MONITORING

February 2026



Ambient Air Monitoring

The Monterey Bay Air Resources District (MBARD) operates and maintains an air monitoring network to determine compliance with state and federal ambient air quality standards within the North Central Coast Air Basin (NCCAB). A typical air monitor is a sampling instrument that measures air pollutant concentrations over a specified time period, as defined by air quality standards. This annual report provides information on the measured air quality concentrations and air quality trends in Monterey, San Benito, and Santa Cruz counties for calendar year 2025.

Ambient Air Quality Standards

The Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have adopted ambient air quality standards for certain air pollutants where public health concerns have been established. The primary standards for “criteria pollutants” are based on established permissible airborne pollutant levels developed from medical and scientific studies on the effects of each pollutant on public health and welfare. A secondary standard is also prescribed to protect human welfare (visibility, crop damage, building damage).

SIX CRITERIA POLLUTANTS

EPA has established **National Ambient Air Quality Standards (NAAQS)** for the following six pollutants to protect public health:

- ground-level ozone
- particle pollution (also known as particulate matter, including PM_{2.5} and PM₁₀)
- carbon monoxide
- sulfur dioxide
- nitrogen dioxide
- lead

In addition to the EPA standards, CARB has set air quality standards for the same federal criteria pollutants as well as other air pollutants (**see Appendix A**). In the MBARD jurisdiction, the air monitoring network measures ozone, particulate matter, carbon monoxide, and nitrogen dioxide. However, MBARD’s two main criteria pollutants of concern are **ozone** and **particulate matter** (PM_{2.5} and PM₁₀).

AIR QUALITY INDEX

EPA created the **Air Quality Index (AQI)** to communicate to the public whether air pollution levels are healthy or unhealthy. The AQI is a color-coded tool used by air agencies around the country to communicate air quality to the public. The AQI is divided into six categories, each corresponding to a different level of health concern.

Each category also has a specific color, which helps to quickly determine whether air quality is reaching unhealthy levels. The AQI levels range from “good,” represented by a green color, to “hazardous,” represented by a maroon color.

Table 1 – US Air Quality Index – Ozone and Particulate Pollution

AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

How does the AQI work?

Think of the AQI as a yardstick that runs from 0 to 500. The higher the AQI value, the greater the level of air pollution and the greater the health concern. For example, an AQI value of 50 or lower indicates good air quality, while a value over 300 indicates hazardous air quality.

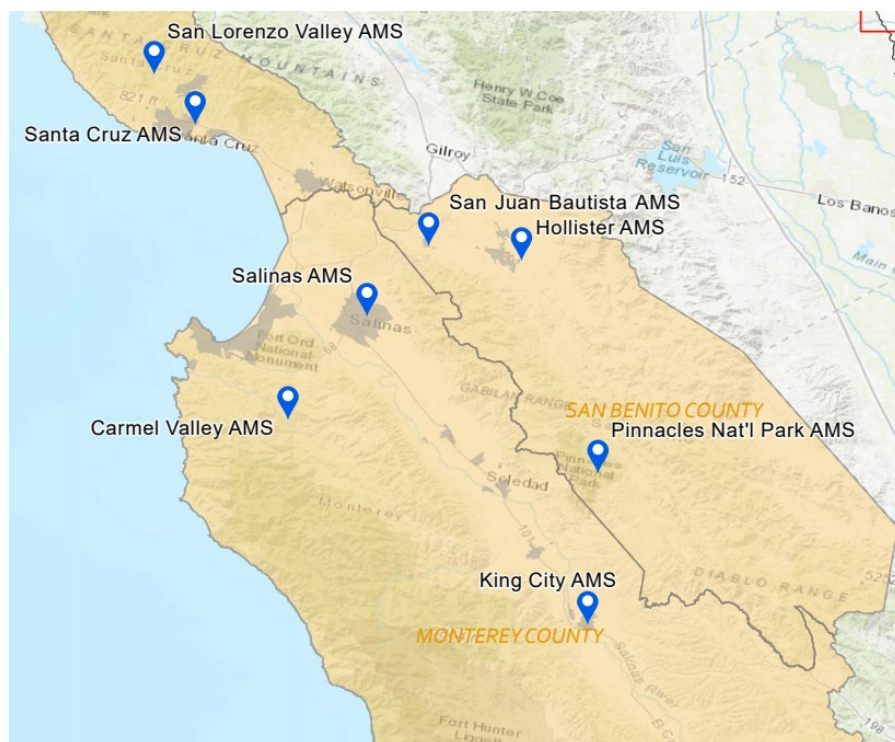
For each pollutant, an AQI value of 100 generally corresponds to an ambient air concentration that equals the level of the short-term national ambient air quality standard for protection of public health. AQI values at or below 100 are generally thought of as satisfactory. When AQI values are above 100, air quality is unhealthy: first for certain sensitive groups, then for everyone as AQI values increase. MBARD’s regulatory air monitors and smoke sensor network (**see Figure 13**) visually displays the AQI color on our website as an indication of pollution levels.

Air Monitoring Stations

Air quality in the North Central Coast Air Basin (NCCAB) is measured by a network of eight (8) regulatory ambient air monitoring stations. Figure 1 below shows the air monitor locations. One of these eight stations is located at Pinnacles National Park, which is operated and maintained by the National Park Service.

- Six (6) stations currently measure Ozone.
- Six (6) stations currently measure PM_{2.5}.
- Three (3) stations currently measure PM₁₀.

Figure 1 – MBARD Jurisdiction Air Monitoring Station Map



Ozone

Ozone (O₃) forms in the atmosphere from a chemical reaction between nitrous oxides (NO_x – NO and NO₂) and volatile organic compounds (VOCs) in the presence of sunlight. Ozone concentrations typically increase as sunlight intensity and temperatures increase, peaking midday or in the afternoon. NO_x and VOC emissions stem from human activities, such as industrial processes, motor vehicles, and other sources.

Ozone is good in the upper stratosphere because it blocks high-energy ultraviolet (UV) radiation. However, ground-level ozone is considered a criteria pollutant. Ozone is a strong oxidant gas that attacks plant and animal tissue. It can cause impaired breathing, reduced lung capacity, and worsen conditions like asthma, especially among children, the elderly, and the infirm. Ozone can also cause damage and limit crop yields.

Ozone is a pollutant of particular concern in California, where geography, climate, and emissions from commercial and industrial sources, as well as millions of motor vehicles, contribute to exceedances of air quality standards. Ozone reactions can also lead to secondary formation of PM_{2.5}.

Table 2 - Ozone Ambient Air Quality Standards

Pollutant	Averaging Time	CALIFORNIA STANDARDS	NATIONAL STANDARDS*	
		Concentration	Primary Concentration	Secondary Concentration
Ozone	1 hour	0.09 ppm	--	--
	8 hour	0.070 ppm	0.070 ppm	0.070 ppm

ppm=parts per million

Particulate Matter (PM₁₀ & PM_{2.5})

Ambient air quality standards have been established for two classes of particulate matter: PM₁₀ (inhalable particulate matter less than 10 microns in aerodynamic diameter or about 1/25 the diameter of a human hair), and PM_{2.5} (fine particulate matter 2.5 microns or smaller in aerodynamic diameter or about 1/70 the diameter of a human hair). Both types of PM can consist of particles with varying compositions and toxicities.

PM_{2.5} tends to pose a greater health risk because these particles are smaller. These particles can get lodged deep in the lungs and enter the bloodstream, causing both short and long-term illnesses, including childhood asthma, breast cancer, and premature death. Sources of PM pollution include diesel exhaust, motor vehicles, smoke impacts from open burning and home heating with wood, wildfire smoke, paved and unpaved roadways, windblown dust from soils, agricultural operations, demolition and construction activities, and other factors.

Table 3 – PM₁₀ Ambient Air Quality Standards

Pollutant	Averaging Time	CALIFORNIA STANDARDS	NATIONAL STANDARDS	
		Concentration	Primary Concentration	Secondary Concentration
Respirable Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	--	--

µg/m³=micrograms per cubic meter

Table 4 - PM_{2.5} Ambient Air Quality Standards

Pollutant	Averaging Time	CALIFORNIA STANDARDS	NATIONAL STANDARDS	
		Concentration	Primary Concentration	Secondary Concentration
Respirable Particulate Matter (PM _{2.5})	24 hour	--	35 µg/m ³	35 µg/m ³
	Annual Arithmetic Mean	12 µg/m ³	9 µg/m ³	15 µg/m ³

µg/m³=micrograms per cubic meter

Attainment vs. Nonattainment

The NAAQS are used by EPA to designate a region as either “attainment” or “nonattainment” for each criteria pollutant. A nonattainment designation can trigger additional regulations to reduce pollution levels and bring the region into attainment.

For most pollutants, the NAAQS allow a standard to be exceeded a certain number of times each calendar year without resulting in a nonattainment designation. Additionally, exceedances

MONTEREY BAY AIR RESOURCES DISTRICT

caused by exceptional events may be excluded from attainment/nonattainment determinations at EPA's discretion. Exceptional events are unusual or naturally occurring events that can affect air quality but are not reasonably controllable or preventable and are unlikely to recur at a particular location. Examples include wildfires or tornadoes.

The **California Ambient Air Quality Standards (CAAQS)** are generally more restrictive than the federal NAAQS standard.

Table 5 – 2025 Predicted Attainment Status for the North Central Coast Air Basin

Pollutant	State Designation	Federal Designation
Ozone (O₃)	Attainment	Attainment
Inhalable Particulates (PM₁₀)	Nonattainment	Attainment
Fine Particulates (PM_{2.5})	Attainment	Attainment
Carbon Monoxide (CO)	Monterey Co.-Attainment	Attainment
	San Benito Co.-Unclassified	Attainment
	Santa Cruz Co.-Unclassified	Attainment
Nitrogen Dioxide (NO₂)	Attainment	Attainment
Sulfur Dioxide (SO₂)	Attainment	Attainment
Lead	Attainment	Attainment

Ozone Summary

In calendar year 2025, there were **no exceedances** of the **1-hour ozone CAAQS** or the **8-hour CAAQS and NAAQS**. MBARD did not identify any unusual or exceptional events impacting ozone concentrations in the jurisdiction during calendar year 2025, although wildfires burned throughout much of California, creating smoke that can increase ozone levels. **Figures 2 through 7** below summarize the 2025 calendar year ozone concentrations in Monterey, Santa Cruz, and San Benito counties.

Also in 2025, MBARD had to begin implementing the EPA mandate for “*Ozone Absorption Cross-Section Implementation in the U.S. Ambient Air Monitoring Network*”. These updated procedures require enhanced ozone sampling criteria, calibration procedures, and instrument flow checks. To meet this requirement, MBARD purchased additional sampling and calibration equipment with grant funding, along with funds from the general fund. These additional ozone sampling and calibration procedures will require more staff time to accomplish.

MONTEREY COUNTY

Figure 2 – Daily 1-Hour Peak Ozone Concentrations [parts per billion]

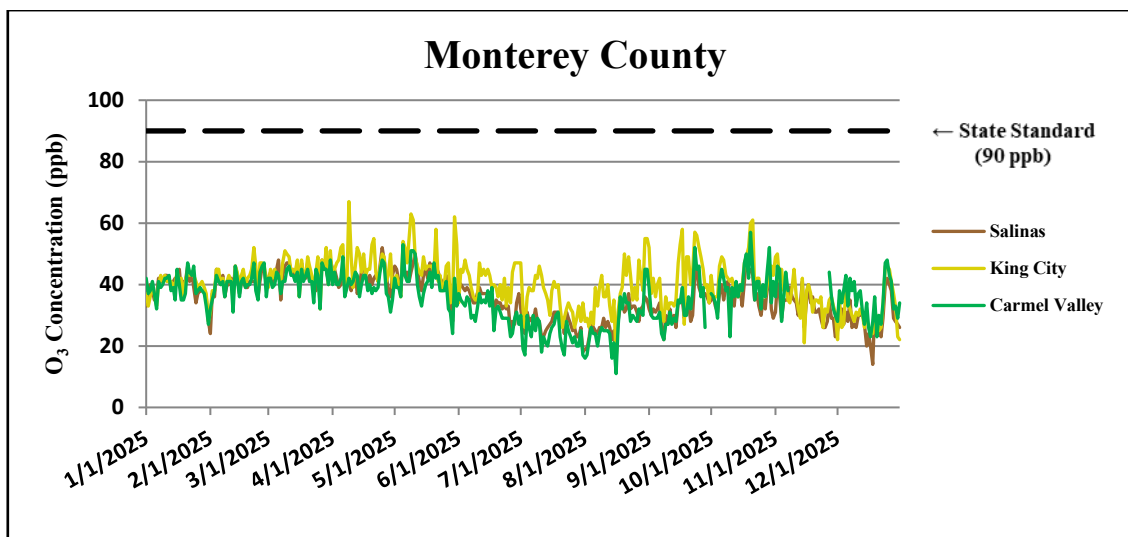
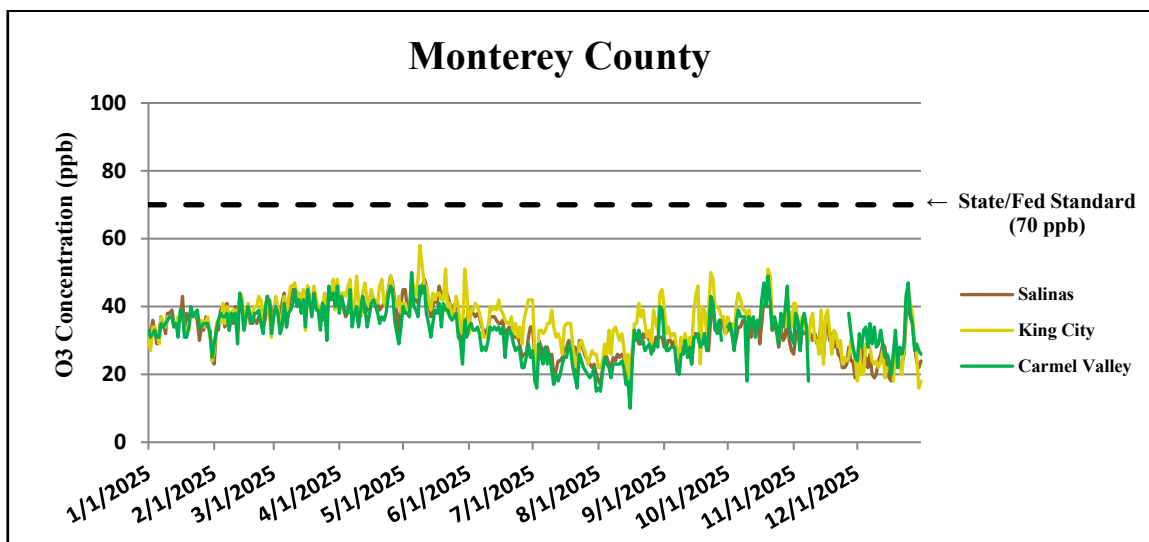


Figure 3 – Daily 8-Hour Peak Ozone Concentrations [parts per billion]



SANTA CRUZ COUNTY

Figure 4 – Daily 1-Hour Peak Ozone Concentrations [parts per billion]

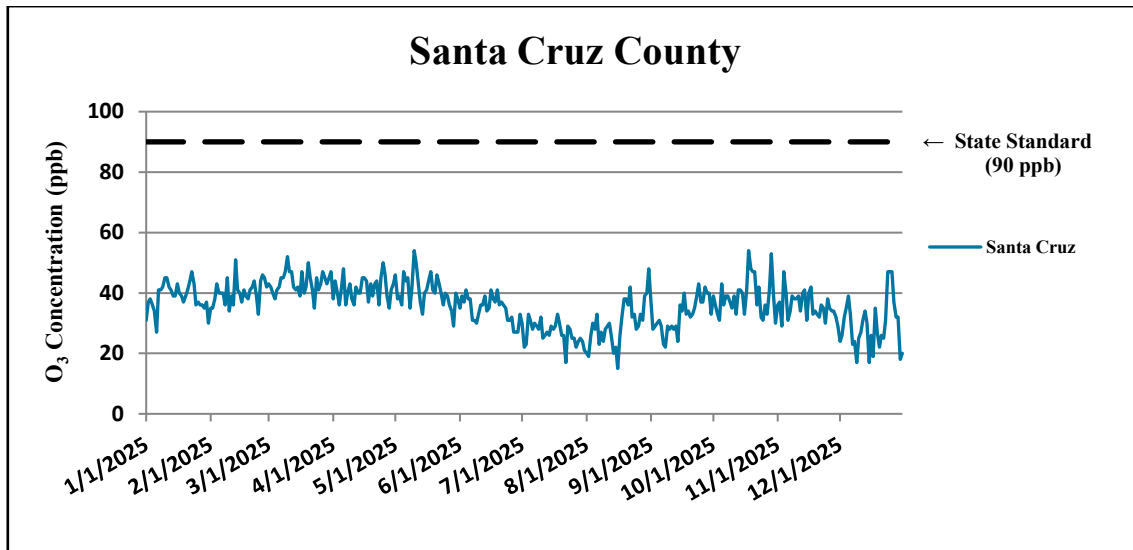
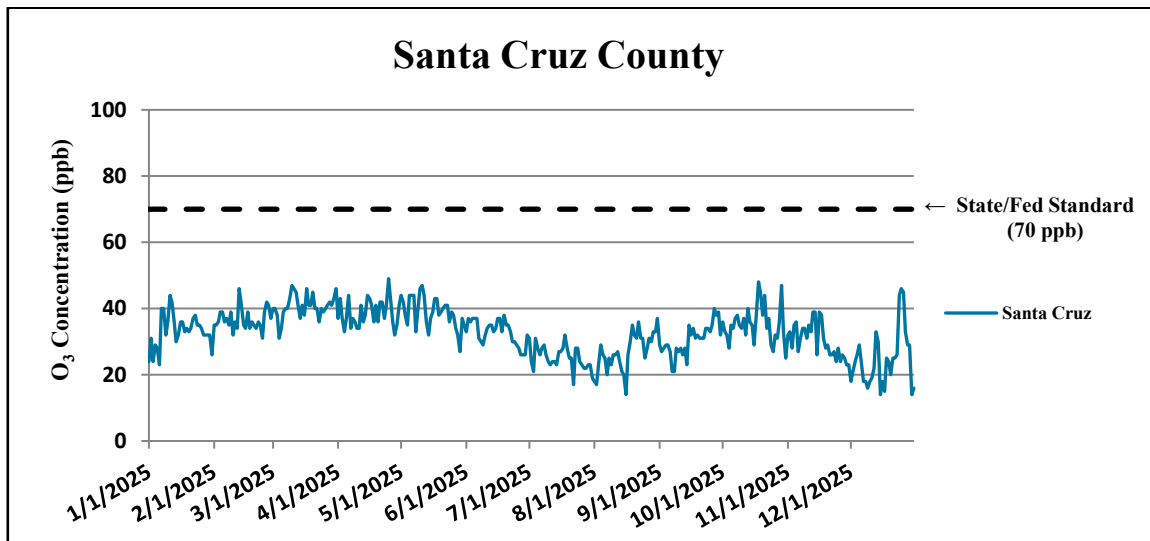


Figure 5 – Daily 8-Hour Peak Ozone Concentrations [parts per billion]



SAN BENITO COUNTY

Figure 6 – Daily 1-Hour Peak Ozone Concentrations [parts per billion]

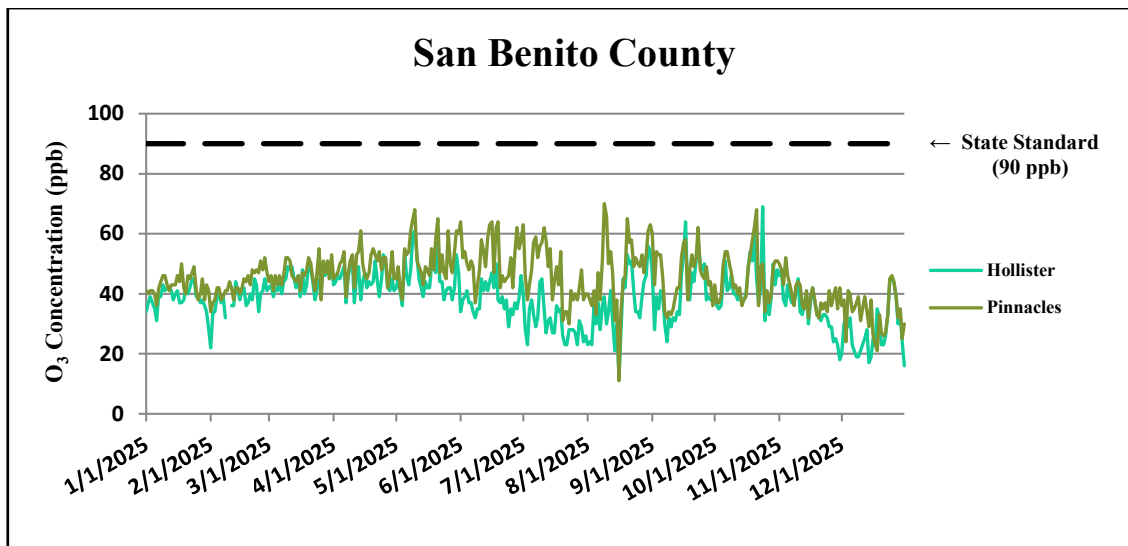
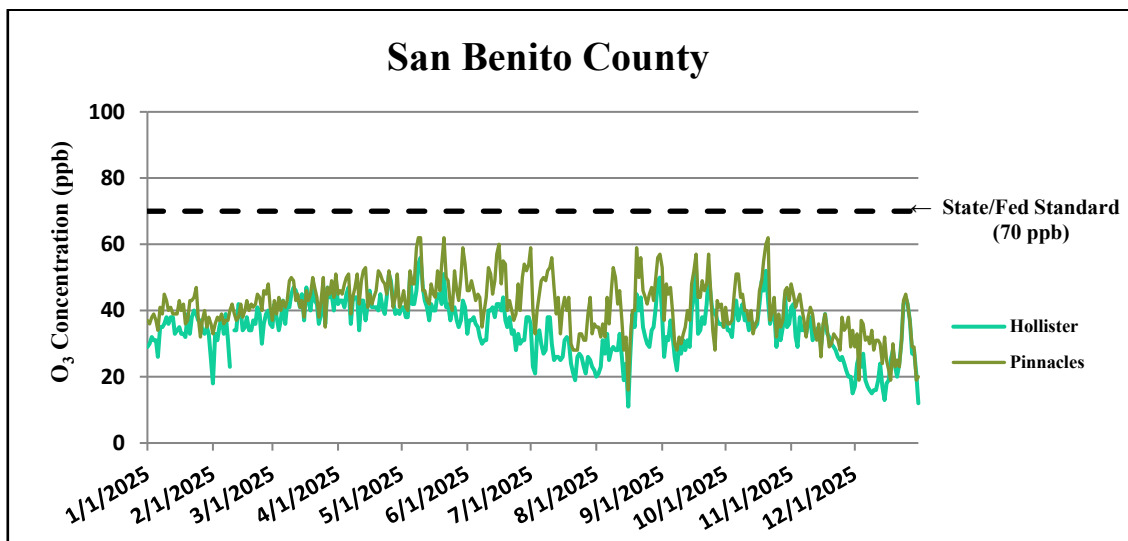


Figure 7 – Daily 8-Hour Peak Ozone Concentrations [parts per billion]

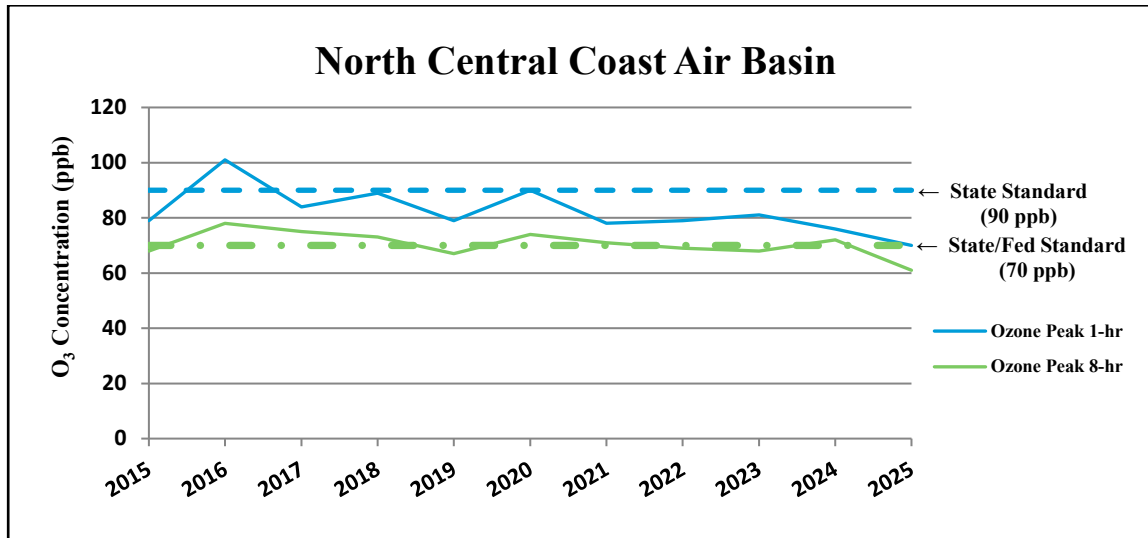


10-Year Trends

The following charts show the 10-year trends in ozone concentration.

NCCAB 10-YEAR TRENDS (2015-2025)

Figure 8 – 10-Year Peak 1 Hour & 8 Hour Average Ozone Concentrations [parts per billion]



PM₁₀ Summary

In 2025, MBARD conducted PM₁₀ monitoring using continuous measurement devices at the Hollister, King City, and San Juan Bautista stations. The King City and Hollister sites have a history of detecting periodic exceedances of the California standard caused by fugitive dust emissions on windy days. A violation of the state standard occurs when PM₁₀ exceeds a 24-hour average of 50µg/m³. An exceedance does not necessarily indicate a violation of the standard if it is caused by an exceptional event, such as wildfire smoke.

The NCCAB is currently attaining NAAQS for PM₁₀; however, it remains in non-attainment of the CAAQS. This status is mainly a result of exceedances at the King City station in Monterey County, due to dust particles associated with natural meteorological conditions and agricultural operations (tilling fields) throughout the Salinas Valley.

In 2025, there were **10 exceedances** of the **state 24-hour PM₁₀** standard. **Table 6** summarizes the locations, dates, and concentrations of these exceedances, and Figure 9 graphically depicts the 2025 monitoring data.

Usually, these exceedances result from the typical annual pattern of dry-weather conditions and agricultural operations that create windblown dust, impacting the monitors over the 24-hour averaging period. An increase in Santa Ana-type wind events is typical during the afternoon of the autumn months of the year. **The greater the wind speed, the higher the risk of PM₁₀ exceedances.**

In 2025, the exceedances occurred in May, June, August, and September, compared with 2024, when they occurred in July, August, October, and November at the King City station.

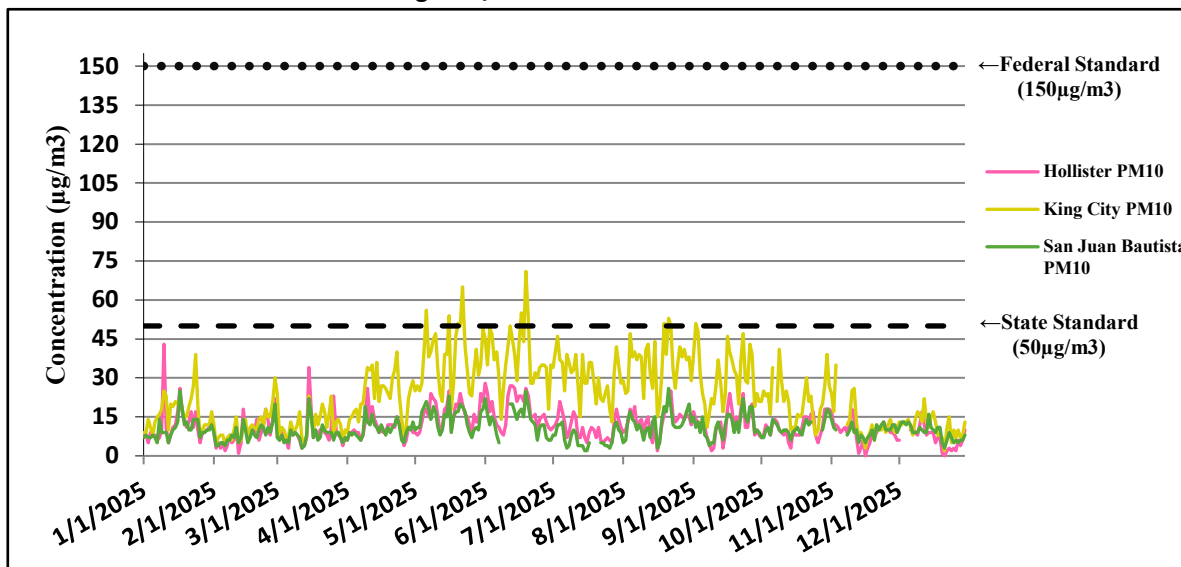
Lastly, MBARD gained permission from EPA to cease PM₁₀ sampling at the San Juan Bautista special purpose monitor site. MBARD ceased collecting data operations on January 1, 2026.

Table 6 – Measured 24-Hour PM₁₀ Exceedances (> 50 µg/m³) in 2025

Station Location	Date	24-Hour Concentration	Comments
King City	5/6/2025	56 µg/m ³	Short-term wind event
King City	5/16/25	54 µg/m ³	Short-term wind event
King City	5/20/2025	51 µg/m ³	Short-term wind event
King City	5/22/2025	65 µg/m ³	Short-term wind event
King City	6/17/2025	55 µg/m ³	Short-term wind event
King City	6/19/2025	71 µg/m ³	Short-term wind event
King City	6/20/2025	52 µg/m ³	Short-term wind event
King City	8/19/2025	51 µg/m ³	Short-term wind event
King City	8/21/2025	53 µg/m ³	Short-term wind event
King City	9/2/2024	51 µg/m ³	Short-term wind event

MONTEREY BAY AIR RESOURCES DISTRICT

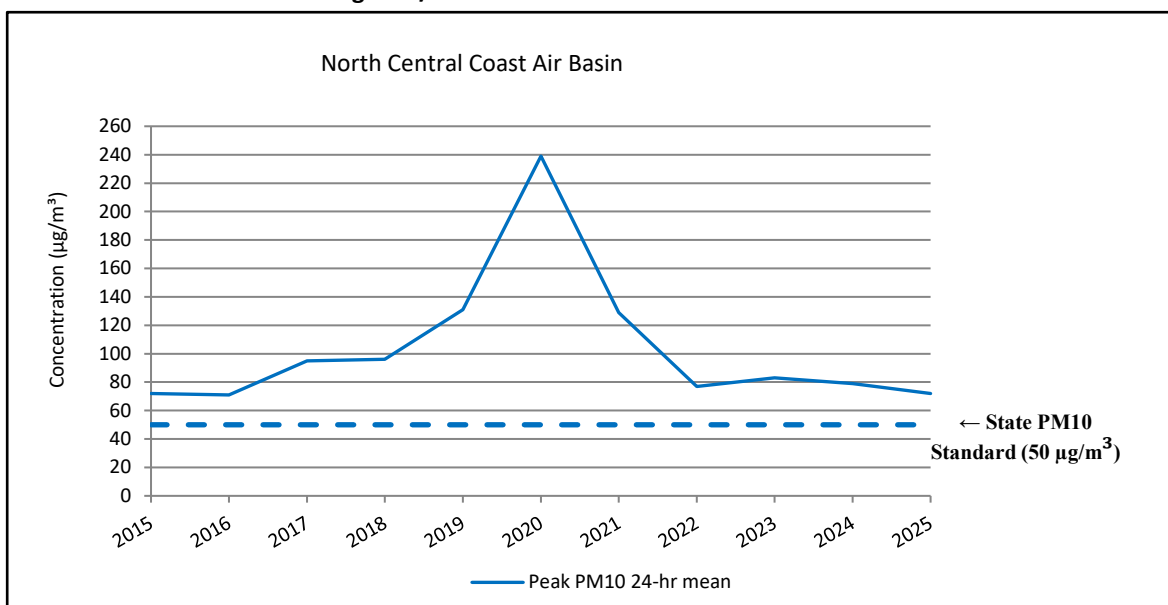
Figure 9 - PM₁₀ Concentrations – Jan-Dec 2025
Std. Micrograms/Cubic Meter of Particulates 10 microns or less



Values above the State standards are exceedances of health-based standards.

PM₁₀ 10-YEAR TRENDS

Figure 10 – Yearly Peak Average PM₁₀ Concentrations
Micrograms/Cubic Meter of Particulates 10 microns or less



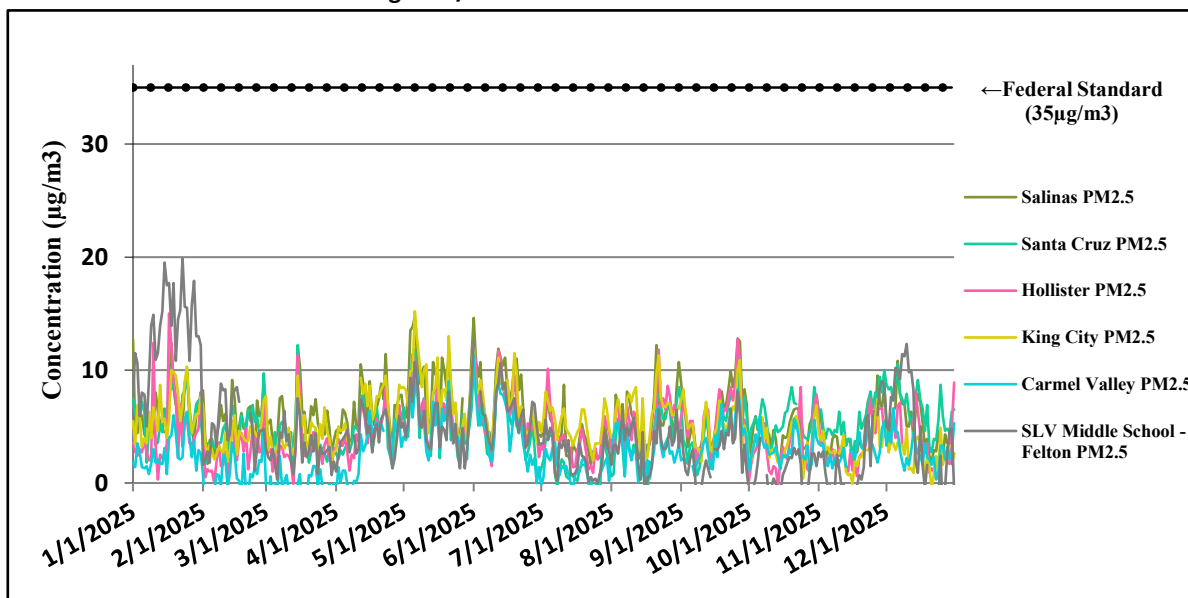
PM_{2.5} Summary

MBARD monitors PM_{2.5} at stations located in Salinas, Santa Cruz, Hollister, Carmel Valley, King City, and Felton. In 2024, MBARD was fortunate to have no exceedances of the 24-hour NAAQS for PM_{2.5}.

The MBARD jurisdiction was also fortunate to have had minimal impacts from wildfire smoke generated by wildfires that occurred at various times and locations across California.

The NCCAB is currently in attainment with the state and federal PM_{2.5} AAQS.

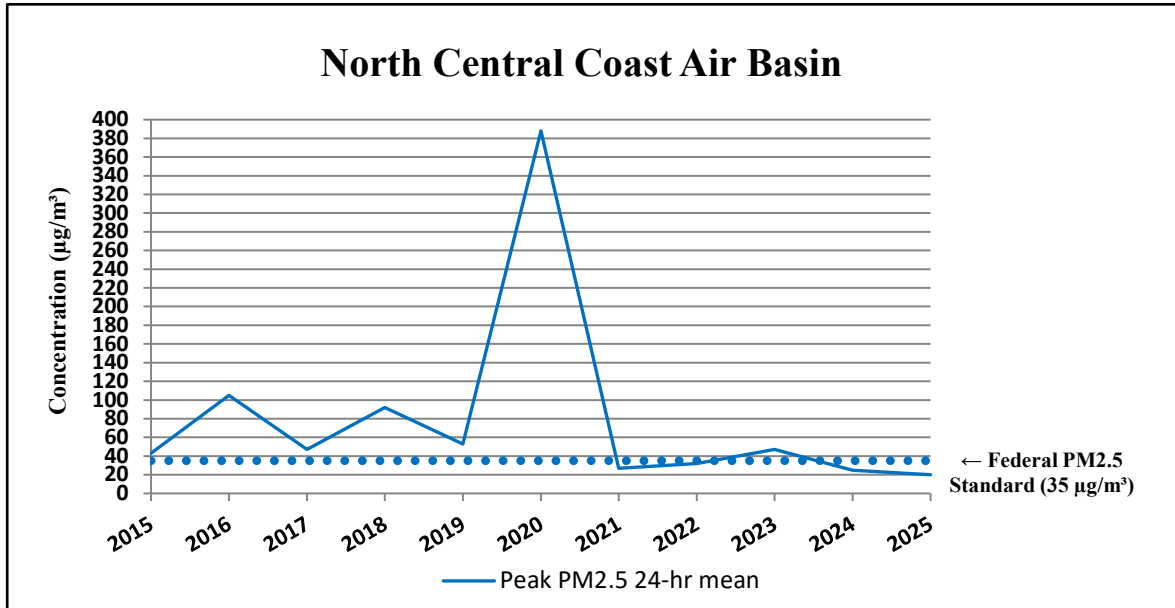
Figure 11 - PM_{2.5} Concentrations – Jan-Dec 2025
Micrograms/cubic Meter of Particulates 2.5 microns or less



Values above the State standards are exceedances of health-based standards.

PM_{2.5} 10-Year Trends

Figure 12 – Yearly Peak Average PM_{2.5} Concentrations
Micrograms/cubic Meter of Particulates 2.5 microns or less



PM_{2.5} Sensor Network Summary

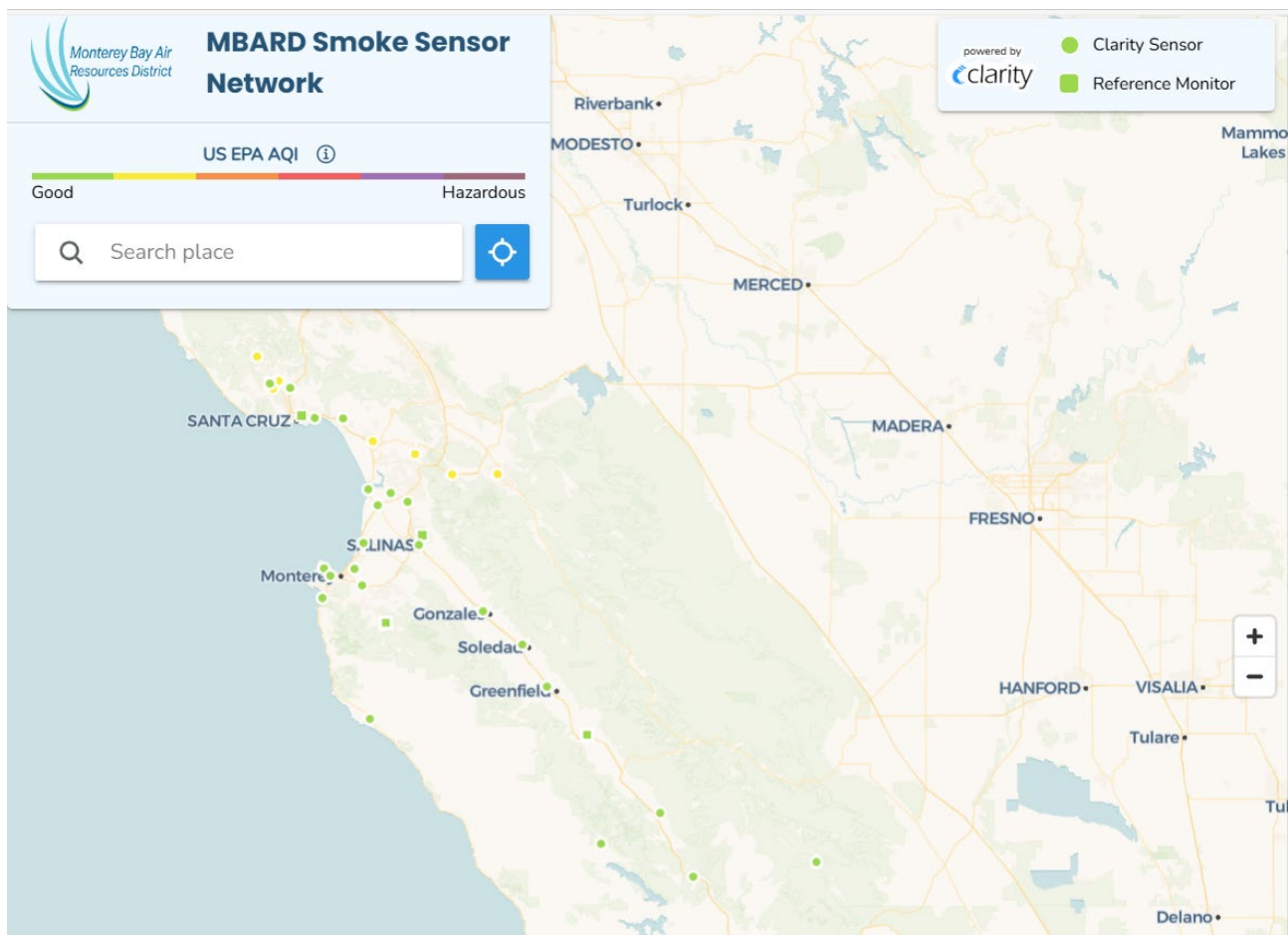
MBARD operates a PM_{2.5} sensor network utilizing Clarity s-Node sensors throughout the North Central Coast Air Basin to monitor smoke impacts from wildfires and other emission sources. These sensors are installed in incorporated municipalities, unincorporated populated areas, and in the San Lorenzo Valley Smoke Sensitive Area.

MBARD's smoke sensor network measures PM_{2.5} concentrations to support smoke management of various outdoor burning, wildfire impacts, fine particle emissions from home heating with wood, and other emission sources. The sensor data is displayed online to provide the public with air quality characterizations based on EPA's AQI. This sensor data also supports MBARD's online pollutant forecasting and wood smoke curtailment programs. Temporary sensor networks may be installed to detect PM_{2.5} from burns conducted at the former Fort Ord or other large, prescribed burns, as needed.

In 2025, MBARD relocated one Clarity sensor to Moss Landing and obtained two additional Clarity sensors, where one was installed at Elkhorn School in the Elkhorn/Prunedale area and one in Parkfield in southeastern Monterey County.

Figure 13 – MBARD Smoke Sensor Network Map

<https://www.mbard.org/wildfire-smoke-information-and-resources>



Meteorological Monitoring Summary

MBARD also monitors and reports hourly meteorological data at sites in Salinas, Hollister, Santa Cruz, King City, Carmel Valley, and Felton. Parameters recorded are wind speed, wind direction, and ambient temperature. Meteorological measurements are critical to understanding air quality. These measurements directly affect and support MBARD air quality forecasting and smoke management programs. Meteorological data is also used to understand pollutant flux in the air basin and when responding to citizen complaints.

Wildfire Activity - Wildfire Smoke Air Quality Advisory

The MBARD jurisdiction had **14 wildfires** in 2025 which burned approximately 133 acres in Monterey County and 843 acres in San Benito County (Approximately **976 acres** total acres burned in the NCCAB in 2025).

The approximate number of fires and the acreage burned are down from 2,558 acres in 2024.

(CalFire defines a “wildfire” as consisting of burning of 10 acres or greater.)

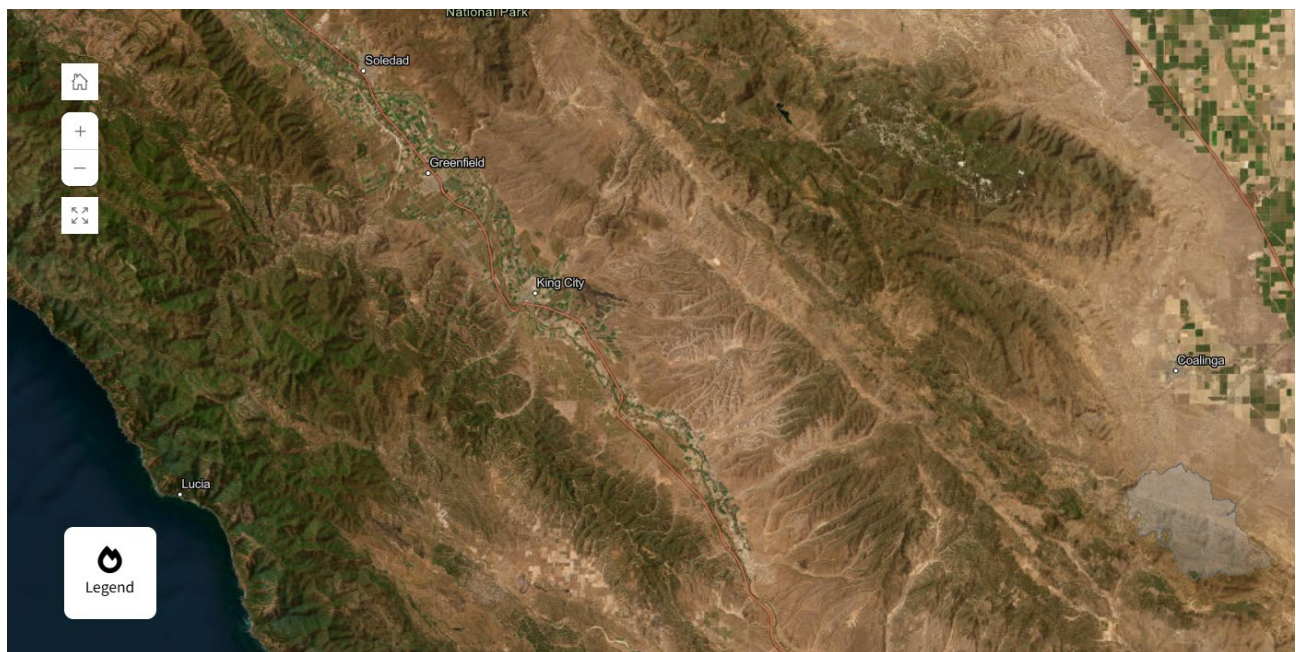
MBARD will issue wildfire smoke advisories when the air monitoring instrumentation and sensor network measure elevated PM_{2.5} concentrations.

The advisory highlights guidelines for the public to consider to reduce smoke impacts, such as staying indoors, shutting windows, and limiting activities like wood burning, driving, lawn mowing, and leaf blowing.

The advisory also directs the public to the MBARD website for current air quality data and information on the health effects of wildfire smoke.

MBARD was fortunate not to issue a Wildfire Smoke Air Quality Advisory in 2025. The NCCAB did have a presence of wildfire smoke during the various fires that occurred in South Monterey County as well as the large fires that occurred in San Luis Obispo County during the year.

Figure 14 – Wildfire burn areas (shaded gray) in the NCCAB - 2025



Spare the Air – San Lorenzo Valley

To reduce wintertime wood smoke in the San Lorenzo Valley, MBARD has implemented a **voluntary** Spare the Air program to notify the community of days when wood burning is discouraged due to poor air quality conditions. During a Spare the Air alert, residents are asked to choose an alternative heating source such as natural gas, propane, electricity, or wood pellets. Spare the Air alerts are issued during the colder months, between November and April each year.

MBARD was fortunate not to have to issue a voluntary Spare the Air advisory in 2025.

Website Enhancements

MBARD updated the Clarity Particulate Matter Smoke Sensor Map

[Current Air Quality & Forecast - Monterey Bay Air Resources District](#)

Summary

In 2025, the overall air quality in the MBARD jurisdiction can be categorized as “good” on the AQI chart for ozone and particulate matter. Geography and meteorological conditions, whether favorable or unfavorable, are a major factor in air quality in the NCCAB. Impacts from windblown dust due to prevailing wind direction and soil disturbance activities may keep MBARD in non-attainment for the state 24-hour PM₁₀ standard. Other anticipated impacts in the future include smoke from wildfires, home heating with wood-burning devices, and prescribed and agricultural burning.

Moving forward to 2026, MBARD will strive to continue to monitor, assess, advise, and improve air quality initiatives to help maintain public access to air monitoring data.

MONTEREY BAY AIR RESOURCES DISTRICT

Appendix A

Table of Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	9.0 µg/m ³	15.0 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (7/16/24)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On February 7, 2024, the national annual PM_{2.5} primary standard was lowered from 12.0 µg/m³ to 9.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15.0 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (7/16/24)