

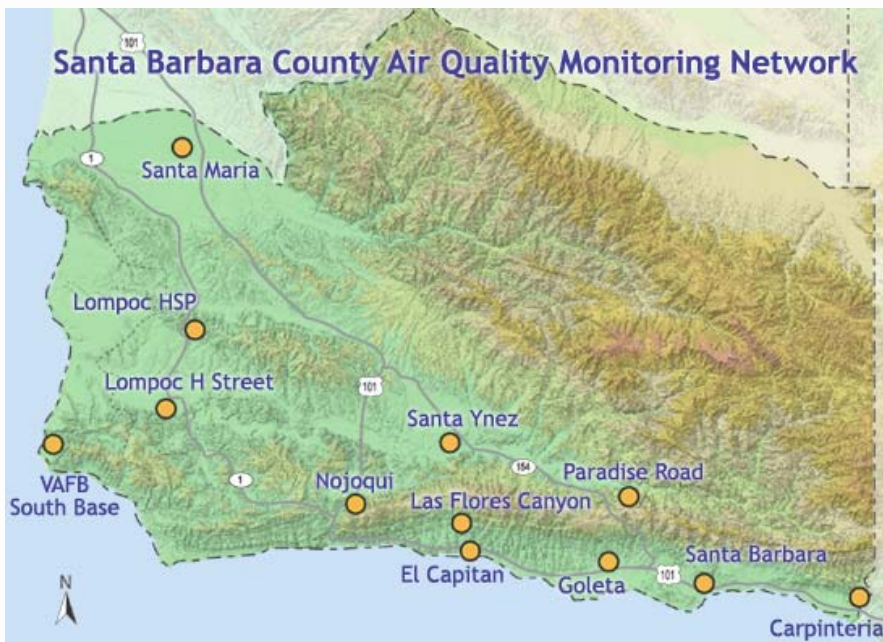


Monitoring Our Air

In Santa Barbara County, a network of 17 stations monitors what's in the air we breathe. The stations are small, portable structures containing electronic instruments to measure the concentrations of air pollutants. Twelve stations, shown below, measure ground-level ozone, a principal component of smog, continuously 24 hours a day. Data are available in real time on our website. Most stations also measure weather conditions, and some measure levels of particulate matter less than 10 microns in diameter (PM10), fine particles suspended in the air, over 24 hours every 6 days. Four stations, in Santa Maria, Santa Barbara, Goleta and Lompoc continuously measure levels of (PM10) and PM less than 2.5 microns in diameter (PM2.5). Other pollutants measured at our stations include carbon monoxide, nitrogen oxides, and sulfur dioxide.

Data collected are summarized in regular required reports to the California Air Resources Board and the U.S. Environmental Protection Agency, and in APCD's Annual Air Quality Report. Data are also used for planning and permitting to help predict future pollution.

Ozone Monitoring Stations in Santa Barbara County



Frequently Asked Questions

Are the monitoring stations staffed?

No. Data are transmitted automatically to APCD. The stations do require regular visits by technicians to calibrate equipment, change filters, and perform routine maintenance and repairs.

Do the stations only measure pollution levels?

No. Instruments also record weather conditions, including temperature, wind speed, and wind direction. This helps the APCD track trends and evaluate the likely cause of high pollution levels. In an emergency, data on wind speed and direction could help us predict the movement of a fire or toxic cloud, and determine whether an evacuation is necessary.

What happens when the air pollution levels are high?

We watch air pollution levels daily, and if any station shows levels above a certain threshold, the APCD is required to notify public officials, schools, hospitals, convalescent homes, and radio and TV stations, and to advise people to curb their outdoor activities. Only rarely does the air in our county reach a level that would require the APCD to make these public notifications.

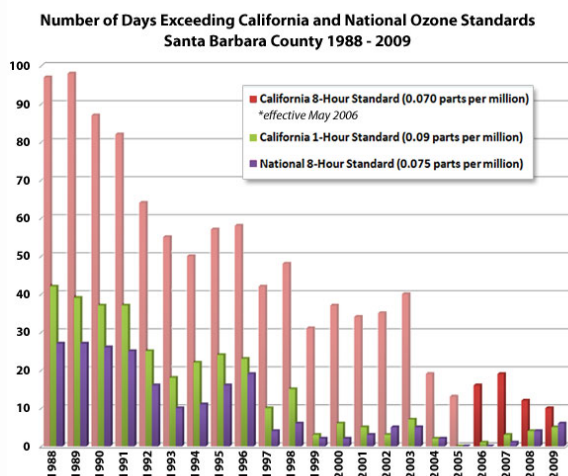
Types of Monitoring Stations

Stations fall into two primary categories: SLAMS and PSD stations. Six SLAMS (State and Local Air Monitoring Stations) measure urban and regional air quality. Two SLAMS stations are operated by the California Air Resources Board (Santa Barbara and Santa Maria) and five by the APCD (Lompoc, Santa Ynez, El Capitan, and Goleta). All of these stations measure concentrations of ozone. In addition, some stations measure levels of carbon monoxide, nitrogen oxides, particulates (both PM10 and PM2.5), and sulfur dioxide.

Eleven PSD (Prevention of Significant Deterioration) stations are used to determine baseline air quality and the impacts of specific operations, for example large oil and gas facilities. These stations monitor the air around a facility to determine if there are any significant impacts on the air quality caused by the facility being in operation. While most PSD stations are located near the facility, some have been located in distant areas to measure background concentrations of pollutants, or to measure regional pollutants, such as ozone, in areas downwind from the facility.

Improving Air Quality

Our air does not currently meet state standards for ozone and PM10 particulate matter, and we attained the federal ozone standard by only a small margin. However, ozone levels have been going down steadily over the past years. The chart below shows the number of times our air quality has exceeded state and federal standards for ozone.



Issues

Siting of Stations

Each monitoring station is sited to meet one or more of the following objectives:

- to determine representative concentrations of air pollution in highly populated areas;
- to determine the impact of specific businesses or other sources of pollution;
- to determine general background pollution levels in areas not directly affected by cars, businesses and other man-made pollution sources;
- to determine the highest pollution levels in the county. The network of all stations combined must meet all four objectives.

The Air Quality Index (AQI)

The Air Quality Index (AQI) is a measure of air quality based on a percentage of the federal air quality standard. An AQI of 100 means the pollutant level is equal to the federal standard for that pollutant. The higher the number, the more air pollution we are breathing. An AQI below 100 means the air quality is better than the standard, and above 100 can be considered unhealthy.

Agencies report the AQI for the pollutant that is of greatest concern in the area. In Santa Barbara County, we report the AQI for ozone, based on the federal 8-hour standard.

You Can Learn More...

To view ozone levels updated hourly, visit our website at www.OurAir.org

For more information, call us at (805) 961-8800.