

Air Quality October Report

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Contact Information

Air Quality Program Information

City of Albuquerque Environmental Health
Department Director - (505) 768-2712

Ambient Air Monitoring (505) 768-1966

- National Ambient Air Quality Standards

Enforcement and Compliance - (505) 768-1972

- Facility Inspections
- Fugitive Dust Control Permit Applications
- Asbestos Abatement Notifications
- Woodburning Exemptions

Permitting - (505) 768-1948

- Review of Permit Applications for Major and Minor Sources
- Air Dispersion Modeling
- Open Burn Permits
- Issuance of Health Alerts (smoke, dust, and ozone)
- Weather Forecasting for Special Events (i.e. Balloon Fiesta and Senior Olympics)

Control Strategies - (505) 768-2660

- Air Quality Planning
- Air Quality Regulation Development
- State Implementation Plan Development
- Air Quality Control Board Support

Quality Assurance - (505) 768-1966

- Reporting to EPA
- Review & Data Validation
- Air Quality & Seasonal Pollen Trends Analysis

Vehicle Pollution Management - (505) 764-1110

- Vehicle Emissions Testing
- Station Certification
- Inspector Training
- Failed Test Resource Center
- Smoking Vehicles

Public Health Initiatives—311

- Air Quality Complaints
- Outdoor Air Quality

Albuquerque-Bernalillo County Air Quality Control Board Members

Lauren Meiklejohn (City), Chair
Maxine Paul (City), Vice Chair
Judy Calman (County)
Dr. Elis Eberlein (City)
Dr. Johnnye Lewis (County)
Elizabeth Reitzel (City)
Kitty Richards (County)

Board Contact Information

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Director's Message for October

Within our troposphere, which begins at the Earth's surface and extends upward to about 4 to 12 miles, ozone (O₃) is a product of atmospheric reactions between volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). Control strategies for lowering O₃ levels are not necessarily achieved by answering the question of quantity of the both NO_x and VOCs. This can be said primarily because the atmospheric concentration of O₃ formed in the troposphere is not directly proportion to the initial maximum concentrations of both VOCs and NO_x.

Skipping all the atmospheric chemistry that leads to the understanding of the complexity of O₃ formation, Haagen-Smit first presented the ozone isopleth diagram that empirically represents the VOC-NO_x-O₃ relationship in the 1950s. Today, ozone chemistry is better understood and isopleths are generated by models that use photochemical reaction mechanisms. Plotting all the results of the modeling unequivocally shows that the VOC/NO_x ratio is extremely important in the O₃ formation process. Understanding this concept is key to understanding how reductions in VOC and NO_x affect O₃ concentrations.

Modeling shows that the reduction of peak O₃ concentrations is dependent on the initial VOC/NO_x ratio and not necessarily the overall quantity of each pre-cursor chemical in the troposphere. As an example, at initial VOC/NO_x ratios greater than 8-1 or 10-1, O₃ concentrations are basically unaffected by VOC concentrations and can be driven down more by NO_x control. At initial ratios less than 8-1 or 10-1, lowering VOCs at a constant NO_x results in lower peak ozone concentrations. Furthermore, at these ratios lowering both VOCs and NO_x proportionately and at the same time yields a similar result.

For EHD, the question of what is the appropriate control strategy for lowering ambient O₃ concentrations can only be answered once VOC data is attained. EHD has not monitored VOCs for several years. A strategy to begin monitoring VOCs again is under development and will be implemented in Spring 2023, prior to the beginning of the next O₃ production season. This is not to say that overall changes in VOC and NO_x, without concentrating on determining the ratios for O₃ production control, does not have a potential positive affect in other areas due to the dynamic aspect of the chemical reactions in the atmosphere. These chemicals are also responsible for the production of such things as nitric acid, peroxyacetyl nitrate, nitrogen dioxide, and various aerosol particles, several shown to be harmful to public health and the environment. But regardless, having an understanding of the contribution to such chemical reactions with only half of the pre-cursor stream in the equation still may result in only half a control strategy for ozone.

Control Strategies Report



Staffing Update

Efforts are underway to rebuild the Control Strategies Division's regulatory development capacity, and to find a new permanent liaison to the Air Board. EHD conducted interviews for the Air Quality Control Board Liaison and Air Quality Regulation Development Coordinator positions in September and hopes to have some new hires to announce soon.

Regulatory Updates

There are no new regulatory updates this month. EHD continues to monitor EPA's recent proposals to amend the National Emissions Standards for Hazardous Air Pollutants for gasoline distribution facilities and New Source Performance Standards for bulk gasoline terminals, and to remove emergency affirmative defense provisions from 40 CFR Part 70 (State Operating Permit Programs).

Pending State Implementation Plan (SIP) Submittals

In July 2021, EHD and the New Mexico Environment Department (NMED) submitted good neighbor SIP certifications for the 2015 ozone National Ambient Air Quality Standard (NAAQS) to EPA demonstrating that New Mexico does not cause or contribute to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in any other state. EPA is currently evaluating these SIP submittals and has not proposed any action on them yet.

Upcoming SIP Submittals

EHD and NMED continue to work collaboratively on their regional haze SIPs for the second planning period and are in regular communication with EPA regarding their progress. The agencies anticipate completing draft SIPs by the end of this year, formal consultations with federal land managers early next year, and hearings before the Air Quality Control Board and Environmental Improvement Board in late 2023, well before EPA's September 29, 2024 deadline to approve the plans or issue a Federal Implementation Plan.

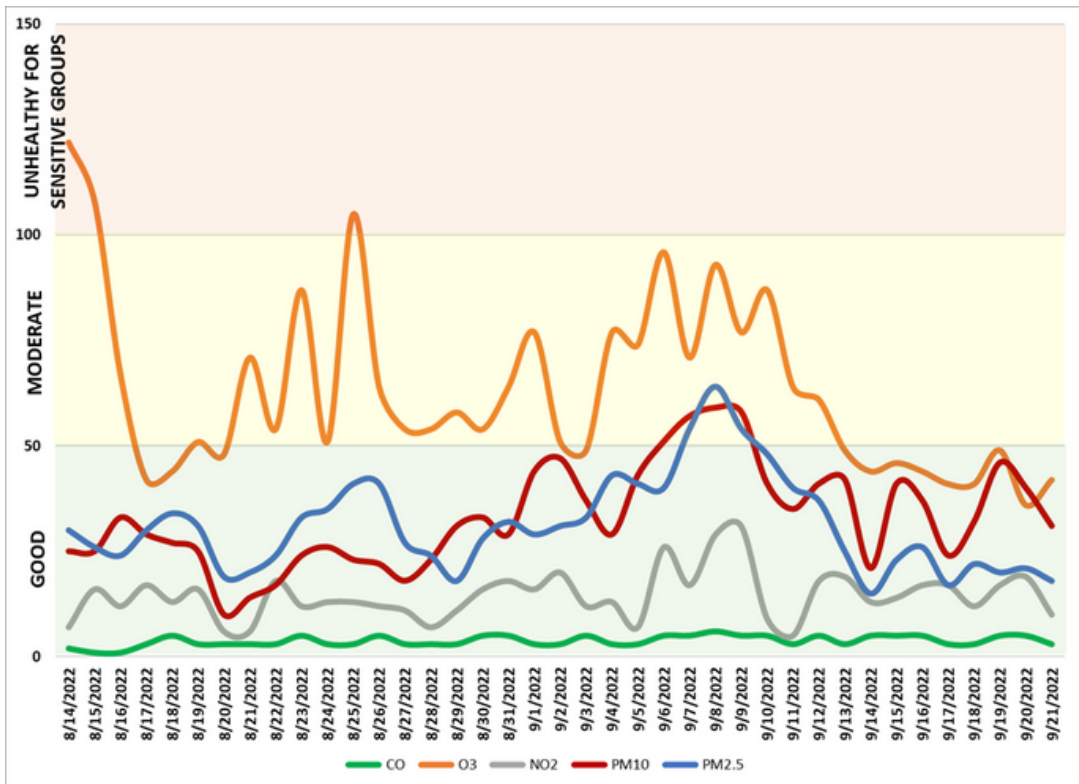
Other Upcoming Submittals

In May 2022, EPA determined that Bernalillo County has frequently recurring PM10 (coarse particulate matter, or dust) exceedances due to high winds and that the Air Quality Program must develop a mitigation plan for windblown dust pursuant to the 2016 Exceptional Events Rule. EHD has until May 2024 to submit its plan to EPA.

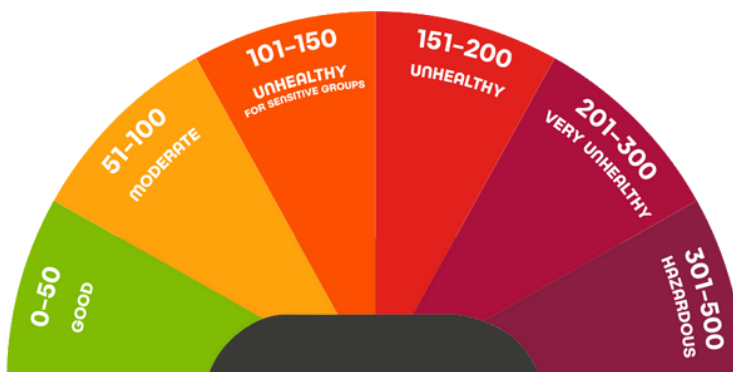
Recent Air Quality Data

Air Quality Index (AQI) values indicate how clean or polluted ambient air is. The higher the value, the greater the level of air pollution and the greater the health concern. The AQI in Bernalillo County is measured for five nationally regulated air pollutants: Carbon Monoxide (CO), Ozone (O3), Nitrogen Dioxide (NO2), Coarse Particulate Matter (PM10), and Fine Particulate Matter (PM2.5). [Learn more and see the Daily Air Quality Update.](#)

Bernalillo County AQI Values, August 14 – September 21, 2022



Air Quality Index



Recent Air Quality Data Continued

Health Alerts Issued

The Air Quality Program did not issue any health alerts during the month of September.

Opt-in for real time health alerts via text message by texting “ABQHEALTH” to the number 226787 to opt into the English language list, or “ABQSALUD” to opt into the Spanish language list. These lists are intended for general health alerts that may affect the entire community, at a high priority level, including high levels of air pollutants, including smoke, blowing dust, and ozone.

DART (Data Acquisition in Real Time) Monitoring

EHD is still awaiting a final report from EPA on the DART monitoring trial conducted by EHD, EPA, and NMED earlier this year. Once EHD receives the report, it will provide an update in a future Air Quality Program Report.

Mobile Air Quality Monitoring Trailer

EHD continues to work to bring the mobile monitoring trailer currently parked in the San Jose neighborhood fully online. The trailer has been collecting particulate matter data (PM10 and PM2.5) since mid-April, volatile organic compound (VOC) data since mid-June, black carbon and woodsmoke data since early September, and carbon monoxide (CO) and sulfur dioxide (SO₂) data since mid-September. EHD expects to bring the ozone (O₃) monitor online in early October. Supply chain problems continue to delay the acquisition of calibration gas needed to bring the nitrogen dioxide (NO₂) monitor online, and repairs are yet to be completed on the pneumatic meteorological tower.

EHD continues to evaluate how to make the data from the trailer publicly available. The quantity of raw data makes it difficult to present in a comprehensive and meaningful way, in particular the VOC data. Once EHD determines how best to provide the data, it will provide an update in a future Air Quality Program Report. [Learn more about the trailer and why it is located in the San Jose neighborhood.](#)

Air Quality Permitting Report

Links to pending applications for new or modified stationary sources of air pollution and a list of applications under preliminary review and not yet deemed administratively complete are available [here](#).

Sign up to receive public notices regarding pending applications for construction and/or operating permits by electronic mail [here](#).

Permit Applications Received

In the month of September, the Permitting Division received air quality permit applications from the following:

- University of New Mexico Hospitals – Lamberton Facility, Ophthalmology, Psychiatric Center, and Research Incubator Building
- Sandia National Laboratories
- Sumco Phoenix Corporation

Update on Certain Applications Under Review

UNMH - Main Campus

The application from the University of New Mexico Hospitals was deemed complete on August 22, 2022, and the public comment period on this application ended on September 28, 2022. As of the end of September, the Permitting Division had not yet started its technical review of this application.

Curia

The application from Curia was deemed complete on August 13, 2022, and the public comment period on this application ended on September 21, 2022. As of the end of September, the Permitting Division had not yet started its technical review of this application.

U.S. Air Force – KAFB 89th Munitions 898th Munitions Squadron Building

The application from the U.S. Air Force -Kirtland Air Force Base was deemed complete on July 29, 2022, and the public comment period on this application ended on September 4, 2022. As of the end of September, the Permitting Division had not yet started its technical review of this application.

Permits Issued/Denied

On September 16, 2022, the Permitting Division issued a construction permit modification to Presbyterian Healthcare Services for its Energy Center located at 1002 Silver Ave SE, Albuquerque, New Mexico.

Vehicle Pollution Management Report

Program Operations:

The Vehicle Pollution Management Division (VPMD) is responsible for the Vehicle Emissions Inspection and Maintenance Program for the Bernalillo County area. For calendar year 2022 through the end of August, our program has conducted 165,691 vehicle emissions inspections, VPMD's failed test resource center has performed 3,779 retests of certified failed tests, and our training program has certified 351 new and recertifying emissions inspectors.

Program Highlights:

In September, an existing Air Care Station permanently closed and a new location opened, keeping the total number at 127 Air Care Stations that are certified to conduct vehicle emissions inspections in the Albuquerque area.

VPMD is continuing our FY23 annual audit efforts of our certified Air Care Stations. VPMD has completed audits of about 97 of the 127 stations. The audits consist of a site inspection and compliance evaluation of the emissions gas analyzer. Emissions inspectors and emissions inspection records are also audited continuously throughout the year.



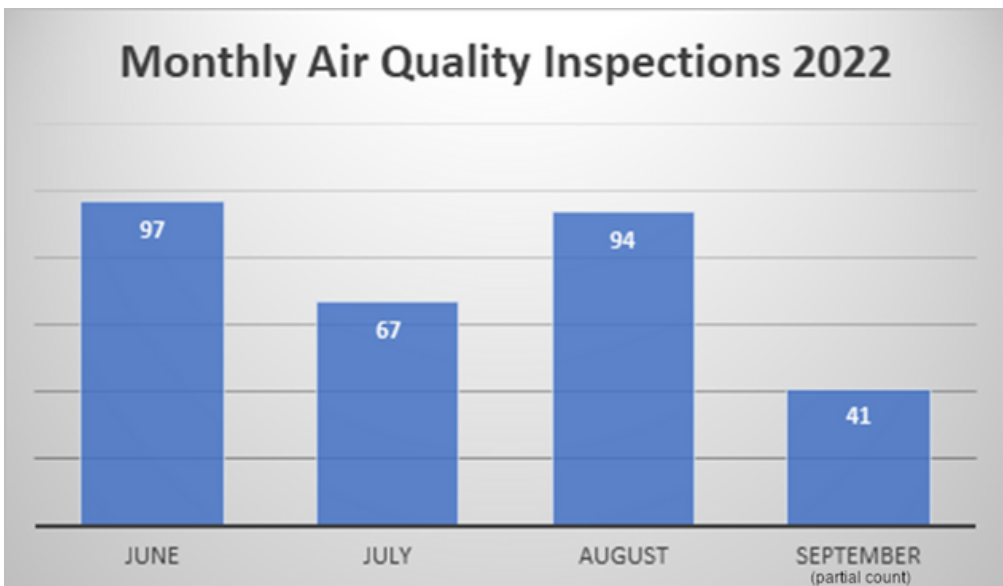
Enforcement and Compliance Report



In the past month, the Air Quality Program (AQP) has issued 2 Compliance Order and settled 1 Notices of Violation.

Below is a graph showing the number of inspections performed over the past 4 months. Due to the Air Program Report submittal deadline to the Air Board, the number for September is only a partial count.* Additional information regarding what sites were inspected and when, can be found [here](#).

Search inspection records by facility name or address [here](#).



*In order to provide the Air Program Report to the Air Board a week in advance of its monthly meeting, the Program must begin compiling the data and drafting the report before the preceding month has ended. As a result, the number of inspections shown for September is only a partial count and does not include inspections performed at or near the end of the month. A complete tally of September inspections will be provided in next month's Air Program Report.

Community Engagement

The Clarity Node S air quality monitors for the Health Equity Council's Neighborhood Food Hub Citizen Science Air Quality Monitoring Project are now calibrated for nitrogen dioxide (NO₂) and fine particulate matter (PM 2.5)! EHD Community Liaison and Project Co-Principal Investigator, María Gallegos, has been working with the Health Council to get the monitors mounted at the 6 sites in the International District. She has also been working with the Health Council to finalize the quality assurance project plan, which will ensure that the data collected is considered valid by EPA. This is a big step in community capacity building! EHD is in the process of researching, gathering information and reaching out to other EJ communities to potentially partner on similar projects.

Example of community monitor calibrated data:

Hour of Day (Evaluation Period, Hourly)

