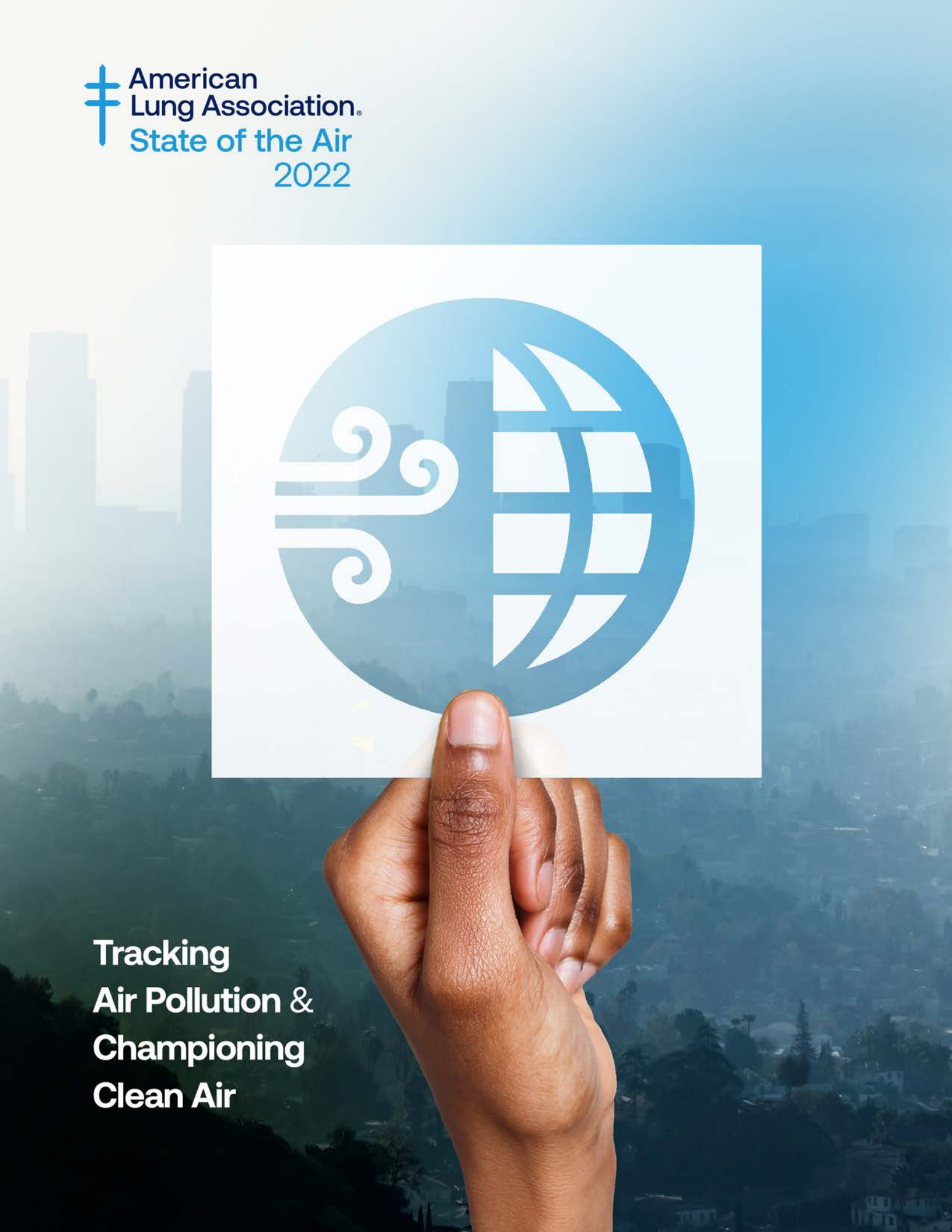
American Lung Association.

State of the Air 2022



Tracking Air Pollution & Championing Clean Air

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Acknowledgments

The American Lung Association "State of the Air" 2022 is the result of the hard work of many.

We would like to thank: Allen S. Lefohn of A.S.L. and Associates, who compiled the data; John Balmes, M.D., who served as expert volunteer reviewer for the health impacts section; Randy Tibbott of Our Designs, Inc., who designed the print version; Doug Manners, a volunteer writer/editor in Denver, CO, who helped with story collection, and storytellers Bailey B., Jaime K., Lee M. and Alia V.

Great appreciation goes to the National Association of Clean Air Agencies which strove to make this report better through comments, review and concerns. Many of its members reviewed and commented on the individual state data presented and the methodology to make this report more accurate. We also appreciate the assistance of members of the Association of Air Pollution Control Agencies, who also reviewed data from their states. We appreciate them all as our partners in the fight against air pollution. This report should in no way be construed as a comment on the work any of these agencies do.

"State of the Air" 2022 would not have been possible but for the twenty years of inspiration, dedication and hard work of the late Janice E. Nolen. We miss her every day.

The American Lung Association assumes sole responsibility for the content of "State of the Air" 2022.

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Why "State of the Air"?

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set health-based limits, called National Ambient Air Quality Standards (NAAQS), for six dangerous outdoor air pollutants: particulate matter, ozone, nitrogen oxides, sulfur dioxide, carbon monoxide and lead. "State of the Air" looks at two of the most widespread and dangerous pollutants from this group, fine particulate matter and ozone.

The NAAQS identify what is considered a safe level of each pollutant to breathe, based on the most recent health and medical science, including an adequate margin of safety for those most at risk. These standards alert the public when pollution levels place Americans' health at risk and require states and local governments to take steps to reduce emissions to attain the standards. The standards are also used to inform families with children, seniors, people with lung or heart disease and others when air pollution levels are dangerous through color-coded air quality alerts, so they can take steps to limit their exposure. Under the Clean Air Act, the standards must be based solely on what is needed to protect health.

Setting national health-based standards and requiring states that violate the standards to enact plans to clean up their air pollution problems have been a great benefit to the public health of the nation. Since the Clean Air Act was passed in 1970, emissions of these outdoor air pollutants, including ozone and particle pollution, have fallen by 78%, according to EPA. But as "State of the Air" 2022 shows, millions of Americans are still breathing unhealthy air.

For long-time Los Angeles area residents, poor air quality isn't always top of mind, with smog and bad air days a regular occurrence.

Lee M. has lived in Southern California for 12 years. The change in air quality is noticeable when away, such as during his visits to Portland, Oregon.

"When you go to other places, you realize it's not as fresh as it could be," he says. "There's that feeling when you get off the train in Portland—it's green, I can breathe and it doesn't smell like cars."

Lee considers air quality when choosing where to live. He avoids living near freeways due to noise and air concerns but still has to regularly clean his porch of soot and dust, especially when winds blow wildfire smoke into the region.

"Clean air makes for a better place to be."

Lee M.
West Hollywood, California

Purpose and History of "State of the Air"

In the year 2000, the American Lung Association launched its annual "State of the Air" report to provide the public with easy-to-understand information about the quality of the air in their local communities based on the credible data and sound science that EPA is required to use to set the air quality standards.

For the first several years, "State of the Air" focused solely on ozone pollution and included data for five populations at increased risk—children, older adults, children with asthma, adults with asthma and people with emphysema. In 2004, changes to the air quality standards and the deployment of air pollution monitoring enabled the addition of short-term and year-round fine particle pollution to the report. Over time, accumulating scientific evidence has shown significant health harms from both ozone and particle pollution among other groups of vulnerable individuals. "State of the Air" has accommodated this new information by gradually adding populations-at-risk categories to its reporting. "State of the Air" 2022 now includes data for 10 vulnerable groups.

Since its inception, "State of the Air" has been tremendously successful in raising awareness about particle pollution and ozone, two of the most dangerous and pervasive air pollutants nationwide. The American Lung Association is proud and grateful that the public, the media, clean air advocates and decision-makers have used this report every day, year after year, to call attention to the work that remains to be done to protect the health of all Americans from the threat of air pollution.

How "State of the Air" Can Be Used

We write and release "State of the Air" every year to make information on air quality and health clear and accessible to everyone. We show the progress each community has made and how much more needs to be done to achieve healthy air. In this report, you'll find information on local air quality nationwide. You'll also find the latest roundup of the research on how air pollution affects health. With these tools, you can help keep your lungs and your family's lungs safer from unhealthy air.

This report also includes ideas for how you can become a champion for clean air. First, we have suggestions for concrete actions you can take to reduce your own contributions to air pollution and climate change. And second, we invite you to take

advocacy action with the American Lung Association. Our report includes policy recommendations for every level of government. Your voice is powerful, and when you tell your leaders that your lungs depend on stronger limits on air pollution, you make a compelling case. Please share your story and add your name to our petition—and then, take the next step. Reach out to your representatives at every level of government, share the "State of the Air" results for your community, and call on them to take action to protect public health.

State of the Air 2022 Methodology

Statistical Methodology: The Air Quality Data

Data Sources

Ozone and short-term particle pollution: The data on air quality throughout the United States were obtained from the U.S. Environmental Protection Agency's Air Quality System (AQS). The American Lung Association contracted with Dr. Allen S. Lefohn, A.S.L. & Associates, Helena, Montana, to characterize the hourly averaged ozone concentration information and the 24-hour averaged $PM_{2.5}$ concentration information for the three-year period for 2018-2020 for each monitoring site.

Year-round particle pollution: Design values for the annual $PM_{2.5}$ concentrations by county for the period 2018-2020 were retrieved November 23, 2021, from data posted on May 24, 2021, at the U.S. Environmental Protection Agency's website at https://www.epa.gov/air-trends/air-quality-design-values.

The Lung Association received critical assistance from members of the National Association of Clean Air Agencies and the Association of Air Pollution Control Agencies. With their assistance, all state and local agencies were provided the opportunity to review and comment on the data in draft tabular form. The Lung Association reviewed all discrepancies with the agencies and, if needed, with Dr. Lefohn at A.S.L. & Associates. The American Lung Association wishes to express its continued appreciation to the state and local air directors for their willingness to assist in ensuring that the characterized data used in this report are correct.

Ozone Data Analysis

The 2018, 2019 and 2020 AQS hourly ozone data were used to calculate the daily 8-hour maximum concentration for each ozone-monitoring site. The hourly averaged ozone data were downloaded on June 29, 2021, following the close of the authorized period for quality review and assurance certification of data. Only the hourly average ozone concentrations derived from FRM and FEM monitors were used in the analysis. The data were considered for a three-year period for the same reason that EPA uses three years of data to determine compliance with the ozone standard: to prevent a situation in any single year where anomalies of weather or other factors create air pollution levels that inaccurately reflect the normal conditions. The highest 8-hour daily maximum concentration in each county for 2018, 2019 and 2020, based on EPA-defined ozone season, was identified.

The current National Ambient Air Quality Standard for ozone is 70 parts per billion (ppb) measured over eight hours. EPA's Air Quality Index reflects the 70 ppb standard. A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the ozone level was within the ranges identified by EPA based on the EPA Air Quality Index:

8-hour Ozone Concentration	Air Quality Index Levels
0-54 ppb	Good (Green)
55-70 ppb	Moderate (Yellow)
71-85 ppb	Unhealthy for Sensitive Groups (Orange)
86-105 ppb	Unhealthy (Red)
106-200 ppb	Very Unhealthy (Purple)
>200 ppb	Hazardous (Maroon)

The goal of this report was to identify the number of days that 8-hour daily maximum concentrations in each county occurred within the defined ranges. This approach provided an indication of the level of pollution for all monitored days, not just those days that fell under the requirements for attaining the National Ambient Air Quality Standards. Therefore, no data capture criteria were applied to eliminate monitoring sites or to require a number of valid days for the ozone season.

The daily maximum 8-hour average concentration for a given day is derived from the highest of the 17 consecutive 8-hour averages beginning with the 8-hour period from 7:00 a.m. to 3:00 p.m. and ending with the 8-hour period from 11:00 p.m. to 7:00 a.m. the following day. This follows the process EPA uses for the current ozone standard adopted in 2015 but differs from the form used under the previous 0.075 ppm 8-hour average ozone standard that was established in 2008. All valid days of data within the ozone season were used in the analysis. However, for computing an 8-hour average, at least 75 percent of the hourly concentrations (i.e., 6-8 hours) had to be available for the 8-hour period. In addition, an 8-hour daily maximum average was identified if valid 8-hour averages were available for at least 75 percent of possible hours in the day (i.e., at least 13 of the possible 17 8-hour averages). Because EPA includes days with inadequate data (i.e., not 75 percent complete) if the standard value is exceeded, our data capture methodology also included the site's 8-hour value if at least one valid 8-hour period were available, and it was 71 ppb or higher.

As instructed by the Lung Association, A.S.L. & Associates included the exceptional (e.g., wildfires) and natural events (e.g., stratospheric intrusions) that were identified in the database and identified for the Lung Association the dates and monitoring sites that experienced such events. Some data have been flagged by the state or local air pollution control agency to indicate that they had raised issues with EPA about those data. For each day across all sites within a specific county, the highest daily maximum 8-hour average ozone concentration was recorded and then the results were summarized by county for the number of days the ozone levels were within the ranges identified above.

Following receipt of the above information, the American Lung Association identified the number of days each county, with at least one ozone monitor, experienced air quality designated as orange (Unhealthy for Sensitive Groups), red (Unhealthy) or purple (Very Unhealthy). When insufficient data were available in any year, an "incomplete" was identified for the 3-year period. Insufficient data exist for various reasons. For example, when a specific monitor was used for a special study and the monitor was then discontinued in other years, an "incomplete" is assigned.

Short-Term Particle Pollution Data Analysis

A.S.L. & Associates identified the maximum daily 24-hour AQS $PM_{2.5}$ concentration for each county in 2018, 2019 and 2020 with monitoring information. The 24-hour $PM_{2.5}$ data were downloaded on August 4, 2021, following the close of the authorized period for quality review and assurance certification of data. In addition, on August 4, 2021, hourly averaged $PM_{2.5}$ concentration data were characterized into 24-hour average $PM_{2.5}$ values by EPA and provided to A.S.L. & Associates. Using these results, A.S.L. & Associates prepared a table by county that summarized, for each of the three years, the number of days the maximum of the daily $PM_{2.5}$ concentration was within the ranges identified by EPA based on the EPA Air Quality Index, as adopted by EPA on December 14, 2012:

24-hour $PM_{2.5}$ Concentration	Air Quality Index Levels
0.0 µg/m³ to 12.0 µg/m³	Good (Green)
12.1 µg/m³ to 35.4 µg/m³	Moderate (Yellow)
35.5 µg/m³ to 55.4 µg/m³	Unhealthy for Sensitive Groups (Orange)
55.5 µg/m³ to 150.4 µg/m³	Unhealthy (Red)
150.5 µg/m³ to 250.4 µg/m³	Very Unhealthy (Purple)
greater than or equal to 250.5 µg/m³	Hazardous (Maroon)

All previous data collected for 24-hour average $PM_{2.5}$ were characterized using the AQI thresholds listed above.

The goal of this report was to identify the number of days that the maximum in each county of the daily $PM_{2.5}$ concentration occurred within the defined ranges. This approach provided an indication of the level of pollution for all monitored days, not just those days that fell under the requirements for attaining the national ambient air quality standards. Therefore, no data capture criteria were used to eliminate monitoring sites. Both 24-hour averaged PM data, as well as hourly averaged PM data averaged over 24 hours were used. Included in the analysis are data collected using only FRM and FEM methods, which reported hourly and 24-hour averaged data. As instructed by the Lung Association, A.S.L. & Associates included the exceptional and natural events that were identified in the database and identified for the Lung Association the dates and monitoring sites that experienced such events. Some data have been flagged by the state or local air pollution control agency to indicate that they had raised issues with EPA about those data. For each day across all sites within a specific county, the highest daily maximum 24-h $PM_{2.5}$ concentration was recorded and then the results were summarized by county for the number of days the concentration levels were within the ranges identified above.

Following receipt of the above information, the American Lung Association identified the number of days each county, with at least one $PM_{2.5}$ monitor, experienced air quality designated as orange (Unhealthy for Sensitive Groups), red (Unhealthy), purple (Very Unhealthy) or maroon (Hazardous).

Description of County Grading System

Ozone and Short-Term Particle Pollution (24-hour $PM_{2.5}$)

The grades for ozone and short-term particle pollution (24-hour $PM_{2.5}$) were based on a weighted average calculation. To determine weighted averages, the Lung Association followed these four steps separately for each pollutant in each county:

1. Assigned weighting factors to each category of the Air Quality Index. Days of poor air quality were given the following weighting factors:

   Orange days 1.0
   Red days 1.5
   Purple days 2.0
   Maroon days 2.5

This ensured that days when the air pollution levels were worse received appropriately greater weight.

2. Multiplied the total number of days within each AQI category by their assigned factor, and added all the categories to calculate a total:

   Total = [Orange days x 1] + [Red days x 1.5] + [Purple days x 2] + [Maroon days x 2.5]

3. Divided the total by three to determine the weighted average, since the monitoring data were collected over a three-year period:

   Weighted Average = Total ÷ 3

Weighted average was then used to determine each county's grades for ozone and 24-hour $PM_{2.5}$ according to the following table:

Weighted Average	Grade
0.0	A
0.3 to 0.9	B
1.0 to 2.0	C
2.1 to 3.2	D
3.3 or higher	F

All counties with a weighted average of zero (corresponding to no exceedances of the standard over the three-year period) were given a grade of "A."

For ozone, an "F" grade was set to generally correlate with the number of unhealthy air days that would place a county in nonattainment for the ozone standard.

For short-term particle pollution, fewer unhealthy air days are required for an F than for nonattainment under the $PM_{2.5}$ standard. The national air quality standard is set to allow two percent of the days during the three years to exceed 35 µg/m^3 (called a "98th percentile" form) before violating the standard. That would be roughly 21 unhealthy days in three years. The grading used in this report would allow only about one percent of the days to be over 35 µg/m^3 (called a "99th percentile" form). The American Lung Association supports using the tighter limits in a 99th percentile form as a more appropriate standard that is intended to protect the public from short-term episodes or spikes in pollution.

Weighted averages allow comparisons to be drawn based on severity of air pollution. For example, if one county had nine orange days and no red days, it would earn a weighted average of 3.0 and a D grade. However, another county that had only eight orange days but also two red days, which signify days with more serious air pollution, would receive an F. That second county would have a weighted average of 3.7.

Note that this system differs significantly from the methodology EPA uses to determine violations of both the ozone and the 24-hour $PM_{2.5}$ standards. EPA determines whether a county violates the standard based on the fourth maximum daily 8-hour ozone reading each year averaged over three years. Multiple days of unhealthy air beyond the highest four in each year are not considered. By contrast, the system used in this report recognizes when a community's air quality repeatedly results in unhealthy air throughout the three years. Consequently, some counties will receive grades of "F" in this report, showing repeated instances of unhealthy air, while still meeting the EPA's 2015 ozone standard. The American Lung Association's position is that the evidence shows that the 2015 ozone standard, although stronger than the 2008 standard, still fails to adequately protect public health.

Counties were ranked by weighted average. Metropolitan areas were ranked by the highest weighted average among the counties within a given Metropolitan Statistical Area as of 2020 as defined by the White House Office of Management and Budget (OMB).

Year-Round Particle Pollution (Annual $PM_{2.5}$)

Since no comparable Air Quality Index exists for year-round particle pollution (annual $PM_{2.5}$), the grading was based on the 2012 National Ambient Air Quality Standard for annual $PM_{2.5}$ of 12 µg/m3. Counties that EPA listed as being at or below 12 µg/m3 were

given grades of “Pass.” Counties that EPA listed as being at or above 12.1 µg/m3were given grades of “Fail.” Where insufficient data existed for EPA to determine a design value, those counties received a grade of “Incomplete.”

Design value is the calculated concentration of a pollutant based on the form of the national ambient air quality standard and is used by EPA to determine whether the air quality in a county meets the standard. Counties were ranked by design value. Metropolitan areas were ranked by the highest design value among the counties within a given Metropolitan Statistical Area as of 2020 as defined by the OMB.

Statistical Methodology: Population Data

The Lung Association calculates the county population at risk from these pollutants based on the population from the entire county where the monitor is located. The Lung Association then calculates the metropolitan population at risk based upon the largest metropolitan area that contains that county. Not only do people from that county or metropolitan area circulate within the county and the metropolitan area, but the air pollution also circulates to that monitor from throughout the county and metropolitan area.

Details about how the populations-at-risk numbers are derived can be found in the Data Table Notes.

Key Findings

More than **4 in 10** Americans live in places with unhealthy levels of air pollution.

People of color are 3.6 times more likely than white people to live in a county with 3 failing grades

The "State of the Air" 2022 report finds that despite decades of progress on cleaning up sources of air pollution, more than 40% of Americans—over 137 million people—are living in places with failing grades for unhealthy levels of particle pollution or ozone. This is 2.1 million more people breathing unhealthy air compared to last year's report. Nearly 9 million more people were impacted by daily spikes in deadly particle pollution than reported last year. In the three years covered by this report, Americans experienced more days of "very unhealthy" and "hazardous" air quality than ever before in the two-decade history of "State of the Air."

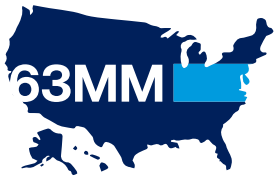
The "State of the Air" report looks at two of the most widespread and dangerous air pollutants, fine particles and ozone. The air quality data used in the report is collected at official monitoring sites across the United States by the federal, state, local and Tribal governments. The Lung Association calculates values reflecting the air pollution problem and assigns grades for daily and long-term measures of particle pollution and daily measures of ozone. Those values are also used to rank cities (metropolitan areas) and counties. This year's report presents data from 2018, 2019 and 2020, the most recent quality-assured nationwide air pollution data publicly available. *See **About This Report** for more detail about the methodology for data collection and analysis.*

"State of the Air" 2022 is the 23rd edition of this annual report, which was first published in 2000. From the beginning, the findings in "State of the Air" have reflected the successes of the Clean Air Act, as emissions from transportation, power plants and manufacturing have been reduced. In recent years, however, the findings of the report have added to the evidence that a changing climate is making it harder to protect human health. The three years covered by "State of the Air" 2022 ranked among the seven hottest years on record globally. Spikes in particle pollution and high ozone days related to wildfires and extreme heat are putting millions more people at risk and adding challenges to the work that states and cities are doing across the nation to clean up air pollution.

The combination of policy-driven reductions in emissions on the one hand and climate change-fueled increases in pollution on the other hand is resulting in a widening disparity between air quality in eastern and western states. Fifteen years ago, in the 2007 "State of the Air" report, 136 counties in 36 states got failing grades for spikes in particle pollution, including 31 counties in 7 states west of the Rocky Mountains. In 2022, 96 counties in 15 states got failing grades for short-term particles, and 86 of them were in 11 western states. Historically urban, industrialized eastern and midwestern states like New Jersey, New York and Ohio, which in 2007 had 21 counties on the list between them, are now getting passing grades. A similar story can be told for annual particle pollution. In 2007, 73 counties in 18 states got failing grades for annual particle pollution, and all but 8 counties in California and one in Montana were east of the Rockies. In 2022, all of the 21 counties that got a failing grade for annual particle pollution were in 5 western states.

Again this year, "State of the Air" finds that the burden of living with unhealthy air is not shared equally. Close to 19.8 million people live in the 14 counties that failed all three measures. Of those, 14.1 million are people of color. People of color were 61% more likely than white people to live in a county with a failing grade for at least one pollutant, and 3.6 times as likely to live in a county with failing grades for all three pollutants.

In "State of the Air" 2022, Fresno, California displaced Fairbanks, Alaska as the metropolitan area with the worst short-term particle pollution and Bakersfield, California continued in the most-polluted slot for year-round particle pollution for the third year in a row. Los Angeles remains the city with the worst ozone pollution in the nation, as it has for all but one of the 23 years tracked by the "State of the Air" report.



More than 63 million Americans live in counties with **F grades** for spikes in daily particle pollution.

Short-term Particle Pollution Trends

In the years 2018, 2019 and 2020, some 63.2 million people lived in the 96 counties that earned an F for unhealthy spikes in particulate matter air pollution. This represents close to 8.9 million more people over a larger area than in last year's "State of the Air" report, and more people than in any of the last seven reports—since the current version of the Air Quality Index was adopted.

Even compared with the past two years of "State of the Air" reports—in which many cities and counties experienced their highest weighted average number of days ever reported for fine particle pollution—results this year were again worse throughout much of the western U.S.

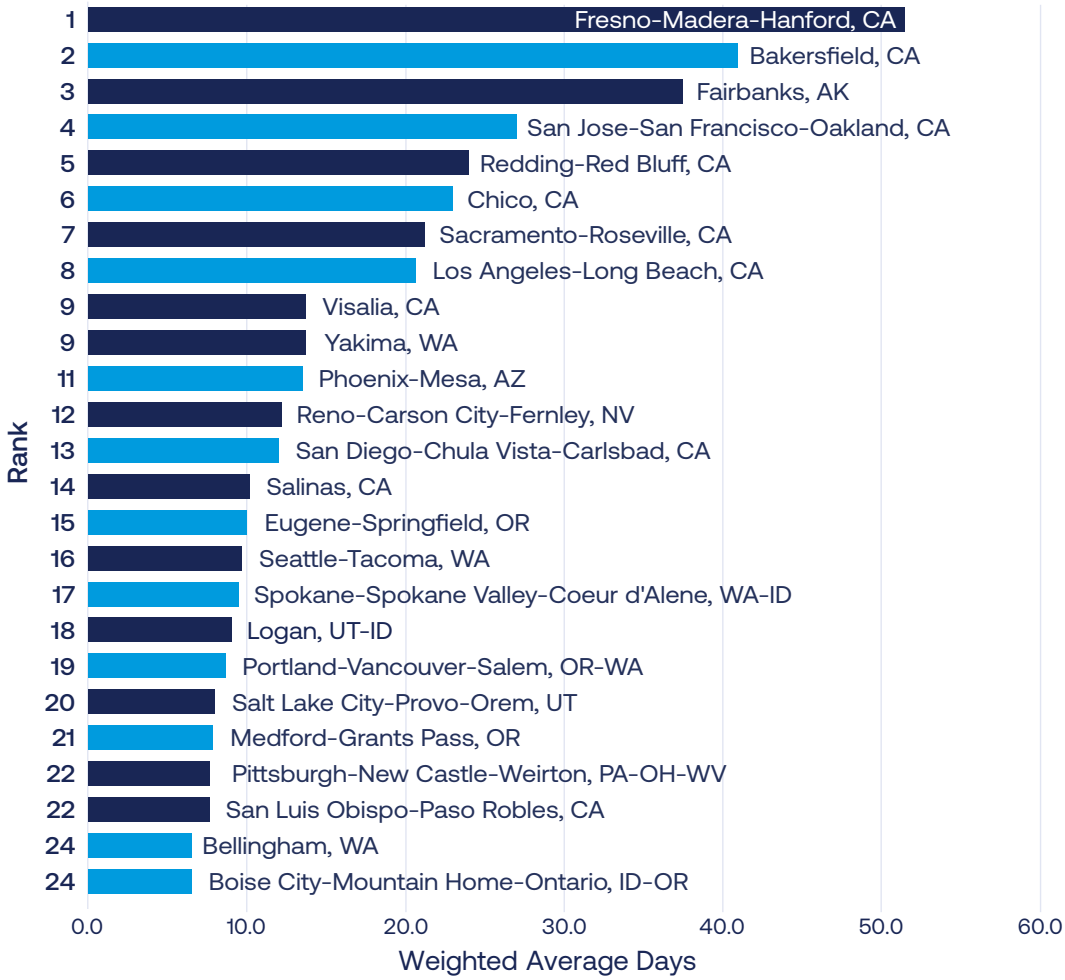
Among those cities ranked in the worst 25, more had poorer air quality than showed improvement, with the weighted average number of days with high levels of fine particle pollution worsening on average by 3.6 (from 12.9 to 16.5), a 28% increase. Eight cities on this list posted their highest-ever weighted average number of days with unhealthy levels of particle pollution and two, Fairbanks, Alaska and Redding-Red Bluff, California, did so for their third report in a row.

Twenty of last year's worst 25 cities remained listed among the 25 worst in this year's report, though their relative ranks shifted around quite a bit. The five cities new to the list in 2022 were Salinas, San Luis Obispo and San Diego in California; Boise, Idaho and Bellingham, Washington.

Missoula, Montana; El Centro and Santa Barbara, California; Lancaster, Pennsylvania and Las Vegas all moved off the list of worst 25 cities. However, in two of these (Lancaster and Las Vegas), the air quality actually got worse. In fact, because the weighted averages for fine particles worsened so much generally, all five of these cities, plus Denver and Fort Collins, Colorado, posted weighted averages for particle pollution in the 2022 report higher than that of the 25th-ranked city in last year's report.

Of all 25 cities, only one, Salt Lake City, posted its best performance ever for this pollutant—as it had in last year's report. Its rank improved to 20th worst in this year's report, from 17th last year, and 7th worst two years ago.

25 Cities Most Polluted by Daily PM



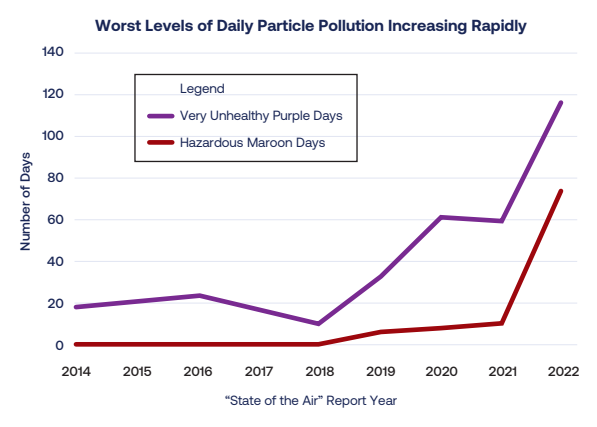
All but one of the 25 worst cities for short-term particle pollution are in the western U.S.

In "State of the Air" 2022, only one city among the 25 worst for short-term particle pollution is not in the western U.S. Pittsburgh again showed improvement and moved to 22nd worst in this year's report, yet it remained the worst metro area in the country east of Utah for this pollutant measure.

Of the remaining 24 worst cities, 11 were in California, nine in the Pacific Northwest and four in the Southwest. This continues a shifting geographic trend driven in large part by the increasing number and size of wildfires resulting from climate change-induced heat and drought.

Extreme Pollution Levels on the Rise

In the last several years, Americans have been seeing media coverage of catastrophic wildfires in the western U.S. Images of iconic cities like San Francisco bathed in an eerie orange glow that darkened the sky in the middle of the day were reminiscent of those deadly air pollution events of the mid-twentieth century that prompted the passage of the Clean Air Act.



Wildfires in the western U.S. are not only increasing the number of days and places with unhealthy levels of particle pollution. They are also increasing the severity of pollution, resulting in a sharp rise in the number of days designated as either purple or maroon. These are the levels on the Air Quality Index that carry the strongest health warnings. On purple very unhealthy days, "The risk of health effects is increased for everyone." On maroon hazardous days, a health warning of emergency conditions is issued, saying, "Everyone is more likely to be affected".

"State of the Air" 2022 includes 26 counties across six western states where levels spiked to "hazardous," the highest "maroon" level in the Air Quality Index, on a total of 74 days, far outstripping the ten such days in last year's report. These counties are home to 4.5 million people. During the three years covered by the report, 116 "very unhealthy" or "purple" air quality days were recorded in 47 counties across eight states, home to some 34 million people. This was almost twice the number of such days recorded in either of the previous two reports, and more than ten times as many as were reported in "State of the Air" 2018.

Year-round Particle Pollution Trends

Some 20.3 million people live in the 21 counties where year-round particle pollution levels do not meet the national air quality standard, and that receive a failing grade in "State of the Air" 2022. This is slightly fewer people living in counties with unhealthy levels of year-round particle pollution than in the past three years' reports, but higher than in reports published in 2017 and 2018.

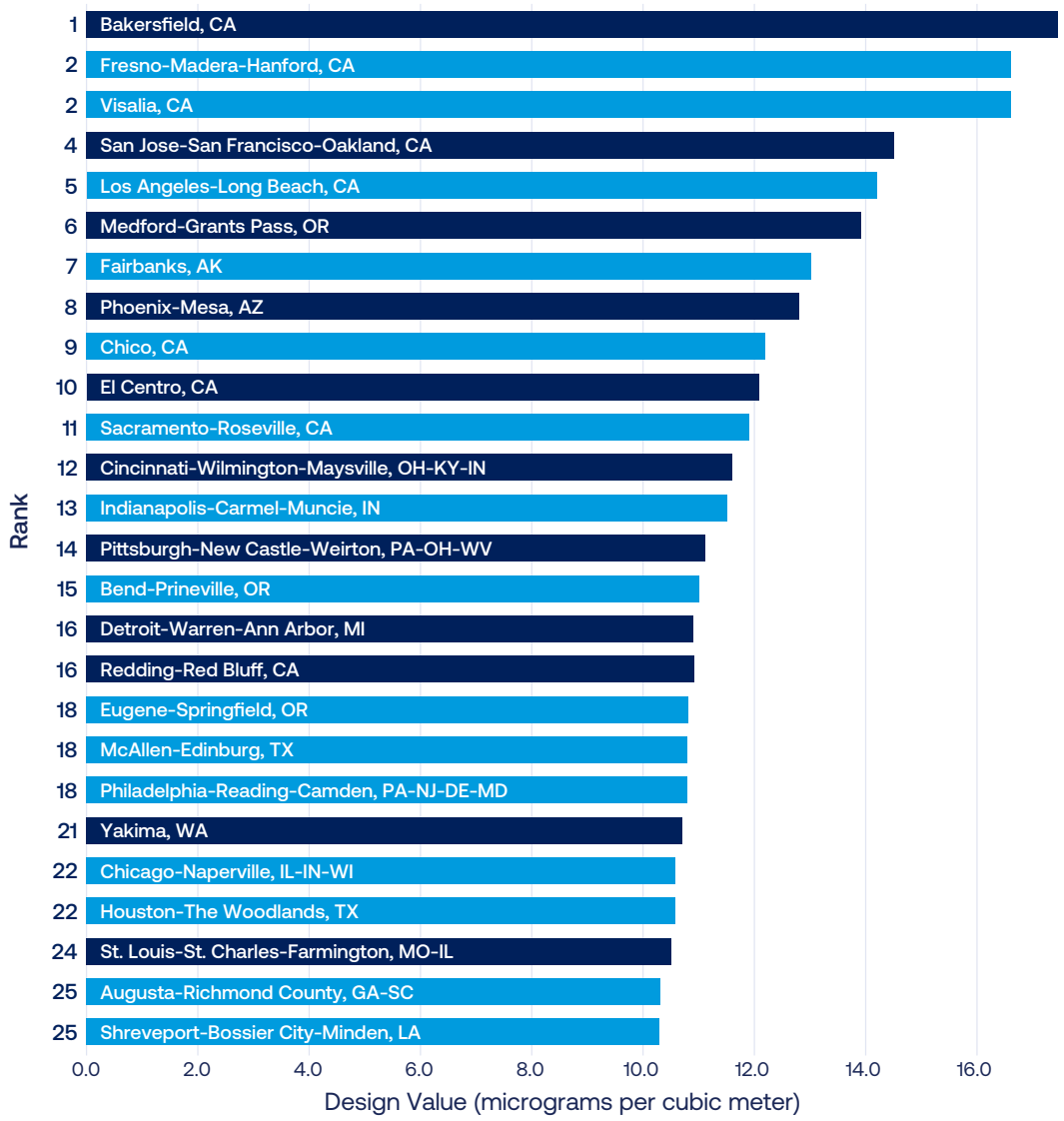
By its nature, the year-round measure of average particle pollution is not as volatile as the daily measure. Changes over time may look smaller, but because they represent recurring exposures over many days and weeks, small differences can have a big impact on public health. The 25 most polluted cities for year-round particle pollution (which actually includes 26 cities this year, because of a tie for 25th place) continued last year's trend of worsening slightly, by an average of 0.2 micrograms per cubic meter (from 12.0 to 12.2).

Eighteen cities suffered worse year-round levels during 2018-2020 than in last year's report, and four reported their worst ever: Medford-Grants Pass and Bend-Prineville, Oregon; Redding-Red Bluff, California; and Yakima, Washington. In contrast, six of

the most polluted cities had lower year-round levels, including Detroit and Pittsburgh, which reported their lowest levels ever. Pittsburgh, a city long notorious for its industrial pollution, showed the most improvement of any of the cities on this list, lowering its average annual particle pollution level by 1.3 micrograms per cubic meter, and achieving a passing grade for the first time.

New on the worst 25 list this year were Chico, California; Bend-Prineville, Oregon; Yakima, Washington; and Augusta, Georgia. Cleveland, Missoula and New York all improved enough to leave the list.

25 Cities Most Polluted by Annual PM



Unlike the worst 25 cities for the daily measure of particle pollution, the worst 25 cities for long-term particle pollution were more distributed around the country. In addition to cities most affected by western wildfires, cities with high power plant emissions as well as local industrial and mobile sources continued to show up on this list. These included Cincinnati, Indianapolis, Pittsburgh, Detroit, Philadelphia, Chicago, Houston, St. Louis, Augusta and Shreveport.

For year-round average levels of fine particles, all cities but the ten most polluted meet the current national air quality standards and get a passing grade in "State of the Air". However, evidence shows that no threshold exists for harmful effects from particle pollution, even below the official standard. The Lung Association continues to advocate for standards more protective of health for fine particle pollution. *See **Recommendations for Action**.*

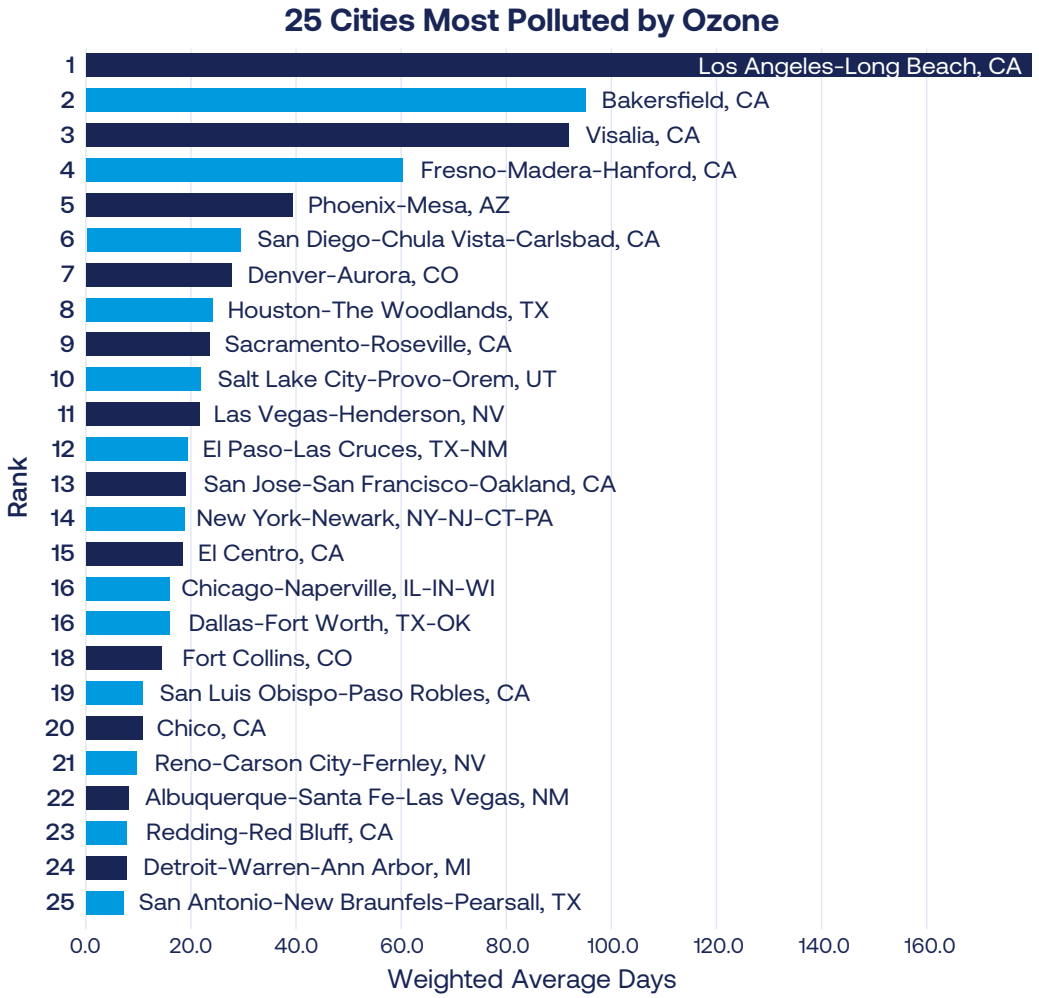
Ozone Pollution Trends

3 out of every 8 Americans live in counties with **F grades** for **ozone smog**

Exposure to unhealthy levels of ozone air pollution continues to make breathing difficult for millions of Americans all across the country. In the years 2018, 2019 and 2020, more than 122.3 million people lived in the 156 counties that earned an F for ozone. That is fewer than in the past four reports, but more than the 116.5 million people in the 2017 report. There are still a lot of vulnerable people, including 27.8 million children and 18.5 million people age 65 or older, exposed to ozone air pollution and increased risk of harm.

The list of 25 cities with the worst ozone pollution in "State of the Air" 2022 and their order of ranking remained relatively stable compared with last year's report. Cities that improved enough to move off the list were Milwaukee and Sheboygan, Wisconsin; Philadelphia; and the Washington-Baltimore metro area. They were replaced by San Luis Obispo, Reno, Detroit and San Antonio.

Cities in the West and the Southwest continue to dominate the most ozone-polluted list. California retains its historic distinction of having the most cities on the list, with 11 of the 25 most-polluted cities. The Southwest fills most of the remaining slots, with an equal number. In this year's report, only three of the worst 25 cities for ozone are east of the Mississippi River. And no metropolitan areas in the Pacific Northwest, the Mid-Atlantic or the Southeast rank among the 25 worst cities most polluted by ozone.



Overall, the 25 most ozone-polluted cities in the U.S. experienced fewer bad air days on average from 2018 to 2020 than did those in last year's report covering 2017 to 2019. Five California cities on the list plus the New York metro area recorded their fewest days of high ozone in the report's 23-year history, although three of them are still among the ten most ozone-polluted cities in the nation.

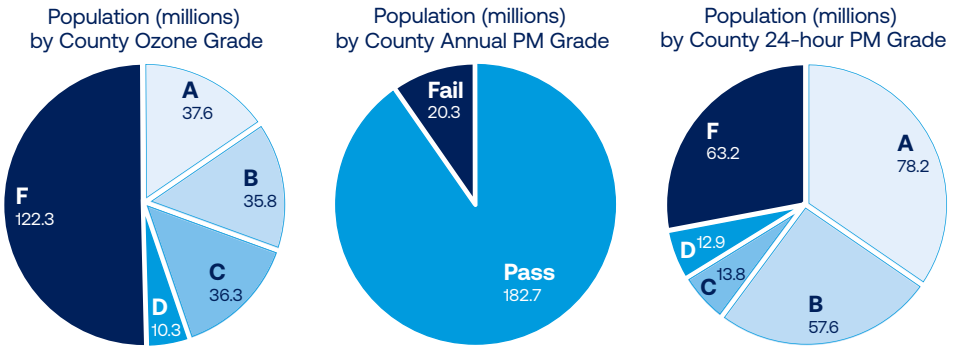
The geographical distribution of cities with the worst ozone problems continues a trend seen over the past six reports: fewer eastern cities and more western cities. Oil and gas extraction and population growth in the Southwest and improved cleanup of power plants in the East have shifted the cities that experienced the greatest number of unhealthy ozone days. However, there are still problems in the East, not only from mobile sources and industry, but also from transported pollution when ozone and ozone precursors enter from upwind sources, nearby and even from as far as the Midwest. For example, Fairfield County, Connecticut is the county with the highest ozone in the eastern half of the nation, in part because of pollution transported from other states.

Higher temperatures over longer periods also make a difference. Although cleanup of ozone precursor pollutants has been working to reduce ozone concentrations, climate change, with its higher temperatures and more frequent stagnation events, plays a significant role in making the number of unhealthy ozone days higher than it would otherwise be. Simply, climate change is undercutting the progress we would have made. The Lung Association continues to advocate for standards more protective of health for ozone pollution that better reflect the current science. *See **Recommendations for Action** for details.*

The three years covered by **State of the Air 2022** ranked among the **seven hottest years** on record globally.

Populations at Risk

Nearly 263 million people live in the 932 counties for which there is data for at least one pollutant in this year's report. The proportion of the population in those counties varies by pollutant (see Figure 4). The majority of U S counties actually don't have monitors—which means that many communities, especially rural ones, don't have official monitored information on their air quality. It is important to note that the population numbers included in this section are only for those places that collect air pollution data, and do not reflect the entire population of these groups in the U.S.



All of the more than 137 million Americans living in places with failing grades for unhealthy levels of ozone or particle pollution are at risk of harm to their health. But some groups of people are especially vulnerable to illness and death from their exposure. *See **People at Risk** for more detail about the factors that contribute to increased risk.*

The number of people in these high-risk groups in "State of the Air" 2022 are as follows:

- **People of color**—Some 72 million people of color live in counties that received at least one failing grade for ozone and/or particle pollution. Over 14 million people of color live in counties that received failing grades on all three measures, including nearly 10 million Hispanics.
- **People experiencing poverty**—More than 15.9 million people with incomes meeting the federal poverty definition live in counties that received an F for at least one pollutant. Over 2.6 million people in poverty live in counties failing all three measures.
- **Children and older adults**—Some 31 million children under age 18 and nearly 21 million adults age 65 and over live in counties that received an F for at least one pollutant. Almost 4.7 million children and 2.8 million seniors live in counties failing all three measures.
- **People with underlying health conditions**
  - **Asthma**—2.3 million children and nearly 10 million adults with asthma live in counties that received an F for at least one pollutant. More than 320,000 children and 1.4 million adults with asthma live in counties failing all three measures.
  - **Chronic Obstructive Pulmonary Disease (COPD)**—Over 6.1 million people with COPD live in counties that received an F for at least one pollutant. Almost 800,000 people with COPD live in counties failing all three measures.
  - **Lung Cancer**—More than 66,000 people diagnosed with lung cancer in 2018 live in counties that received an F for at least one pollutant. And 7,400 people diagnosed with lung cancer live in counties failing all three measures.
  - **Cardiovascular Disease**—More than 8 million people with cardiovascular disease live in counties that received an F for at least one pollutant. More

than 1 million people live in counties failing all three measures.

- **Pregnancy**—Adverse impacts from air pollution have been shown both for those who are pregnant as well as for the developing fetus. More than 1.5 million pregnancies were recorded in 2020 in counties that received at least one F for particle pollution. Of those, 210,000 are in counties that received failing grades for all three measures.

*For more detail about the number of people at risk by grade and by pollutant, see **Data Table 1**. The populations at risk are also included by county in the **State Data Tables**.*

Most Polluted Places to Live

In addition to the 25 worst cities for each pollutant listed above, the 25 most polluted counties for ozone and particle pollution are ranked in the tables below:

Daily PM Ranking	State	County
1	CA	Fresno
2	CA	Mono
3	CA	Kern
4	CA	Kings
5	AK	Fairbanks North Star
6	CA	Inyo
7	CA	Siskiyou
8	OR	Klamath
9	CA	Stanislaus
10	CA	San Joaquin
11	CA	Tehama
12	CA	Madera
13	CA	Colusa
14	CA	Butte
15	CA	Sacramento
16	CA	Los Angeles
17	CA	Merced
18	CA	Mendocino
19	CA	Placer
20	CA	Nevada
21	CA	Plumas
21	CA	Sutter
23	WA	Okanogan
24	CA	Calaveras
25	CA	Alameda
25	CA	Contra Costa

Annual PM Ranking	State	County
1	CA	Mono
2	CA	Kern
3	CA	Kings
3	CA	Tulare
5	OR	Klamath
6	CA	Plumas
7	CA	Fresno
8	CA	Stanislaus
9	CA	San Bernardino
10	OR	Jackson
11	CA	Riverside
11	CA	San Joaquin
13	CA	Madera
14	MT	Lincoln
15	CA	Merced
16	AK	Fairbanks North Star
16	CA	Los Angeles
18	AZ	Pinal
19	CA	Butte
19	OR	Josephine
21	CA	Imperial
22	WA	Okanogan
22	CA	Sacramento
24	CA	Sutter
25	OH	Hamilton

Ozone Ranking	State	County
1	CA	San Bernardino
2	CA	Riverside
3	CA	Los Angeles
4	CA	Kern
5	CA	Tulare
6	CA	Fresno
7	AZ	Maricopa
8	CA	San Diego
9	CO	Jefferson
10	TX	Harris
11	CA	El Dorado
11	CA	Kings
13	UT	Salt Lake
14	NV	Clark
15	CA	Mariposa
16	CA	Orange
17	CA	Madera
18	NM	Doña Ana
19	CA	Stanislaus
20	CT	Fairfield
21	CA	Imperial
22	NM	Eddy
23	CO	Douglas
24	AZ	Pinal
25	IL	Cook
25	CA	Merced
25	TX	Tarrant

Fourteen counties received failing grades for all 3 measures of pollution: Butte, Fresno, Imperial, Kern, Kings, Los Angeles, Madera, Merced, Riverside, San Bernardino, San Joaquin, Stanislaus, and Tulare in California, and Pinal in Arizona.

Cleanest Places to Live

Many cities in the U.S. enjoy air that is considered clean for one or more of the pollution measures tracked in "State of the Air." In this year's report, 64 of the cities for which there is monitoring data had zero high ozone days and 80 cities had zero high short-term particle days (32 fewer than last year). Because year-round particle pollution is scored differently, the cleanest cities for this measure can be ranked. As a result of ties for the 25th best metro area, there are 31 cities on this year's list. *See **Data Tables 3a-c**.*

Ten cities rank on all three cleanest cities lists for particle pollution and ozone. They had zero days high in particle pollution or ozone and are among the 31 cities with the lowest year-round particle levels. Added to the list this year are Bangor, Maine (returning after

a one-year break due to incomplete data); and Charlottesville, Harrisonburg and Virginia Beach, Virginia. Lincoln, Nebraska; and Elmira, NY returned after coming onto the list last year. The other three again repeat their appearance on this list.

Listed alphabetically, these cities are:

- Bangor, ME
- Burlington-South Burlington-Barre, VT
- Charlottesville, VA
- Elmira-Corning, NY
- Harrisonburg-Staunton, VA
- Lincoln-Beatrice, NE
- Roanoke, VA
- Urban Honolulu, HI
- Virginia Beach-Norfolk, VA-NC
- Wilmington, NC

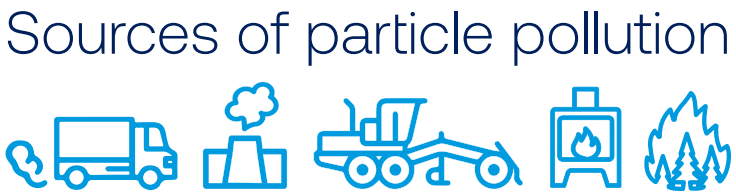
Health Impact of Air Pollution

Health Effects of Particle Pollution

Particle pollution—also known as particulate matter—is a deadly and growing threat to public health in communities around the country. The more researchers learn about the health effects of particle pollution, the more dangerous it is recognized to be.

What is Particle Pollution?

Particle pollution refers to a mixture of tiny bits of solids and liquids in the air we breathe. Particle pollution comes from many sources. Factories, power plants, and diesel- and gasoline-powered motor vehicles (cars, trucks and buses) and equipment either directly emit fine particles or generate other pollutants such as nitrogen oxides (NOx), known as precursors because they can then form into fine particles in the atmosphere. Other sources of particle pollution include wildfires, burning wood in wood stoves or residential fireplaces and burning biomass for electricity.



Individual particles may be too small to be visible, but when pollution levels are high, they can make the air appear thick and hazy. Researchers and regulators categorize particles according to size, grouping them as coarse, fine and ultrafine. Coarse particles, called PM_{10}, can include wind-blown dust, ash, pollen and smoke. Fine particles, $PM_{2.5}$, are most often a by-product of burning wood or fossil fuels. The tiniest are called ultrafine particles, or $PM_{0.1}$, which are also produced by combustion.

The differences in size make a big difference in where and how particles affect our health. Our bodies' natural defenses help us to keep coarse particles out of the deepest parts of our lungs, although these particles do deposit in the larger airways. However, those defenses do not keep smaller fine or ultrafine particles from penetrating to the air sacs of the lungs. Many of these particles get trapped in the air sacs, while the smallest are so minute that they can pass from the air sacs into the bloodstream and disperse to other organs of the body.

What Can Particles Do to Your Health?

Particle pollution can be very dangerous to breathe, especially at higher concentrations. It can trigger illness, hospitalization and premature death. Researchers estimate that $PM_{2.5}$ is responsible for nearly 48,000 premature deaths in the United States every year.[1]

Short-Term Exposure

Short-term spikes in particle pollution that last from a few hours to a few days can kill. Premature deaths from breathing these particles can occur on the very day that particle levels are high, or up to a month or two afterward. Most premature deaths are from respiratory and cardiovascular causes. Particle pollution does not just make people die a few days earlier than they might otherwise—in many cases these deaths would not have occurred for years if the air were cleaner.[2]

Studies linking short-term exposure to $PM_{2.5}$ to death from all causes have been accumulating for a number of years. Taken together, this body of research provides consistent evidence of positive associations between particle pollution and mortality across diverse geographic locations and in populations with a wide range of demographic characteristics. Recently, a large international study found an association between short-term exposure to $PM_{2.5}$ and daily all-cause, cardiovascular and respiratory mortality in more than 600 cities across the globe.[3]

Summertime should be a great time to be outdoors in Montana, with warm weather and sunshine in a state full of natural splendors. But wildfire smoke often forces people to stay indoors.

Bailey B. lives in Butte, a western Montana city surrounded by mountains on three sides. Some days in the summer, thick smoke fully obscures the mountains. "There are times you can't go outside in the summertime," she says.

"There's no point in going outside if you can't breathe."

She notices more issues with runny noses, irritated eyes and coughing when wildfire smoke is in the air. Her father-in-law, who uses supplemental oxygen, can't leave the house on such days without wearing a good mask.

A Montana resident for the last 12 years, Bailey looks forward to hiking and camping in the summer, but she says wildfire smoke makes her consider spending those months elsewhere.

"The air quality in Montana is bad enough that if I could leave in the summers, I would."

Bailey B.
Butte, Montana

Even low daily levels of fine particles can be deadly. A 2016 study found that people aged 65 and older in New England faced a higher risk of premature death from particle pollution, even in places that met current standards for short-term particle pollution.[4] Looking nationwide in a 2017 study, researchers found more evidence that older adults faced a higher risk of premature death even when levels of short-term particle pollution remained well within the current national standards. This was consistent whether the older adults lived in cities, suburbs or rural areas.[5]

Particle pollution also has many other harmful effects, ranging from decreased lung function to heart attacks. Extensive research has linked short-term increases in particle pollution to:

- increased mortality in infants;[6]
- increased hospital admissions for cardiovascular disease, including heart attacks and strokes;[7]
- increased hospital admissions and emergency department visits for chronic obstructive pulmonary disease (COPD);[8]
- increased severity of asthma attacks and hospitalization for asthma among children.[9,10]

Year-Round Exposure

Decades of research have firmly established that breathing particle pollution day in and day out can also be deadly. Across numerous seminal studies that looked at different groups of people living in different parts of the country, the results consistently showed a clear relationship between exposure to particulate matter and mortality.[11]

Recent research using publicly available data on a cohort of more than one million adults in the U.S. reconfirmed that long-term exposure to $PM_{2.5}$ was associated with elevated risks of early death. The increased risk was primarily associated with death from cardiovascular and respiratory causes, including heart disease, stroke, influenza and pneumonia. Researchers also found a similar association between exposure to fine particle pollution and an increased risk of death from lung cancer among never-smokers.[12] Another study of 68.5 million Medicare-enrolled adults in the United States between 2000 and 2016 found a 6-8% increase in risk of all-cause mortality for every 10μg/m^3 increase in $PM_{2.5}$.[13]

Research has also linked year-round exposure to particle pollution to a wide array of serious health effects at every stage of life, from conception through old age. Among pregnant people, fetuses and children, long-term particle pollution exposure is linked to:

- Increased risk of preterm birth and low birth weight;[14]
- Increased fetal and infant mortality;[15]
- Reduced lung development and impaired lung function in children;[16]
- Higher likelihood of children developing asthma.[17]

In adults, long-term particle pollution exposure is linked to:

- Increased risk from existing cardiovascular and respiratory disease, including a worsening of heart disease, atherosclerosis and COPD;[18,19]
- Higher likelihood of developing diabetes;[20]
- Higher likelihood of getting lung cancer and of dying from it;[21]
- Impaired cognitive functioning and an increased risk of Parkinson's disease, Alzheimer's disease and other dementias later in life.[22,23]

The good news is, cleaning up particle pollution makes a difference. Research has shown a consistent relationship between decreasing $PM_{2.5}$ concentrations and improving respiratory health in children and adults in communities that have reduced their levels of year-round particle pollution.[24]

Particle Pollution and COVID-19

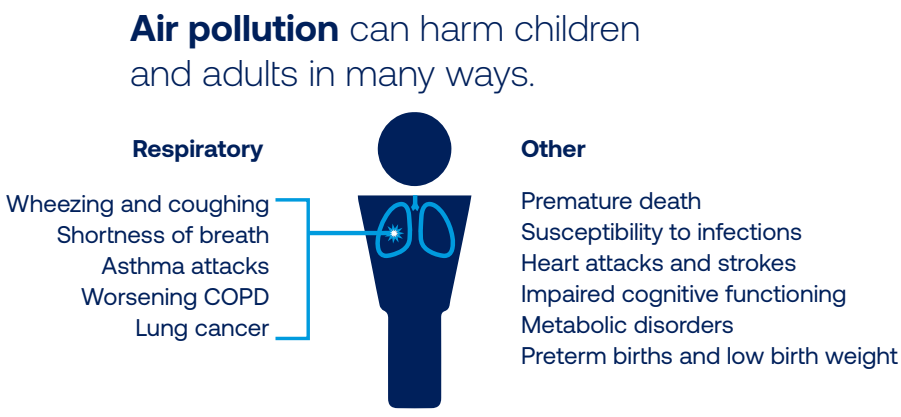
In the early days of the COVID-19 pandemic, several well-respected research teams in the U.S. set out to investigate possible links between long-term exposure to air pollution, especially $PM_{2.5}$, and increased risk of infection and death from the SARS CoV-2 virus that causes the disease. Using the limited population-based data available at the time, some of them found a positive association and estimates of a specific percentage of COVID deaths attributable to air pollution. However, there were a number of methodological issues that may have influenced their results. The virus had not yet reached many parts of the country; community testing was extremely limited; the number of infections and death was probably dramatically undercounted; and little was known about how the disease was spreading through the population.

Since that time, the virus has become more widespread and better understood, but much remains uncertain about the nature of the mechanisms linking exposure to air pollution with COVID-19-related infection, severity and death. But some connections are clear. Air pollution is known to impact the functioning of the immune system and increase susceptibility to respiratory infections in general. Air pollution also increases the risk of chronic lung and cardiovascular diseases that put people at higher risk of poor outcomes from COVID-19. Communities of color, which have been especially hard hit by the pandemic, are also disproportionately exposed to unhealthy air.[25]

Who is Most at Risk From Particle Pollution?

Anyone who lives where particle pollution levels are high is at risk. Some people face higher risk, however, based on their underlying health and other characteristics. (*See the **People at Risk** section for more information about vulnerable groups.*) Research has shown that the groups at the greatest risk from particle pollution include:

- Pregnant people and fetuses;[26]
- Infants, children and older people (>65 years of age);[27]
- People with lung disease, especially asthma, but also people with COPD;[28]
- People with cardiovascular disease;[29]
- People with lung cancer;[30]
- People of color;[31]
- Current or former smokers;[32]
- People with low incomes;[33] and
- People who are obese or have diabetes.[34]



Health Effects of Ozone Pollution

Ozone air pollution, sometimes known as smog, is one of the most widespread pollutants in the United States. It is also one of the most dangerous. Scientists have studied the effects of ozone on human health for decades. Hundreds of studies have confirmed that ozone harms people at levels currently found in many parts of the United States.

What is Ozone?

Ozone is a gas composed of molecules with three oxygen atoms. (The oxygen we need for life is made up of molecules with two oxygen atoms). Ozone forms in the lower atmosphere when a combination of other pollutants, usually nitrogen oxides (NOx) and volatile organic compounds (VOCs), "cook" together in sunlight through a series of chemical reactions. NOx and VOCs are produced primarily when fossil fuels such as gasoline, diesel, oil, natural gas or coal are burned or when solvents and some other chemicals evaporate. NOx is emitted from power plants, motor vehicles and other sources of high-heat combustion. VOCs are emitted from motor vehicles, oil and gas operations, chemical plants, refineries, factories, gas stations, paint, consumer products and other sources.

If these ingredients are present under the right conditions, they react to form ozone. Sunlight is key, with higher temperatures increasing ozone production. Because the reactions take place in the atmosphere, ozone often shows up downwind of the sources of the original emissions, sometimes many miles from where it formed.

Ozone air pollution is sometimes called ground-level ozone, to distinguish it from the much higher-altitude stratospheric ozone layer that protects the Earth from damaging ultraviolet rays from the sun.

What Can Ozone Pollution Do to Your Health?

Ozone gas is a powerful lung irritant. When it is inhaled into the lungs, it reacts with the delicate lining of the airways, causing inflammation and other damage that can impact multiple body systems. Ozone exposure can also shorten lives.

Ozone has a serious effect on the respiratory system, both in the short term and over the course of years of exposure. When ozone levels are high, many people experience breathing problems such as chest tightness, coughing and shortness of breath, often within hours of exposure. Even healthy young adults may experience respiratory symptoms and decreased lung function.[35]

Other breathing problems that have been tied to short-term exposure to ozone include:

- Worsening of symptoms, increased medication use, and increased emergency department visits and hospital admissions for people with asthma and COPD;[36]
- Susceptibility to respiratory infections such as pneumonia, resulting in an increased likelihood of emergency department visits and hospitalizations.[37]

Living with ozone pollution long term may cause lasting damage to respiratory health, including:

- Development of new cases of asthma in children;[38]
- Damage to the airways, leading to development of COPD;[39]

- Increased allergic response.[40]

The inflammation and systemic stress caused by short- and long-term exposure to ozone can also do damage to tissues, DNA and proteins throughout the body, which can cause or worsen other disease conditions over time. These include:

- Increased risk of metabolic disorders, including glucose intolerance, hyperglycemia and diabetes;[41]
- Impact on the central nervous system, including brain inflammation, structural changes and increased risk of cognitive decline;[42,43]
- Increased likelihood of reproductive and developmental harm, including reduced fertility, preterm birth, stillbirth and low birth weight;[44,45]
- Possible cardiovascular effects—although according to the most recent EPA review, the evidence linking ozone to heart disease, heart failure and stroke is mixed.[46]

The damage ozone does to the body can be deadly. Recent research has affirmed earlier findings that short-term exposure to ozone, even at levels below the current standard, likely increases the risk of premature death, particularly for older adults.[47] There is also a growing body of evidence that long-term exposures to ambient ozone may be associated with an increased risk of cardiovascular and respiratory disease mortality.[48]

Who is Most at Risk from Ozone Pollution?

Anyone who spends time outdoors where ozone pollution levels are high may be at risk. Some people face a higher-than-average risk, however, because of their underlying health and other characteristics. (*See the **People at Risk** section for more information about vulnerable groups.*) Research has shown that the groups at greatest risk from ozone pollution include:

- Pregnant people and fetuses;[49]
- Children;
- Anyone 65 and older;
- People with existing lung disease such as asthma and COPD;
- People who work or exercise outdoors.[50]

People at Risk

The health burden of air pollution is not evenly shared. There are people more at risk of illness and death from air pollution than others. Several key factors affect an individual's level of risk:

- Exposure—Where someone lives, where they go to school and where they work make a big difference in how much air pollution they breathe. In general, the higher the exposure, the greater the risk of harm.
- Susceptibility—Pregnant people and their fetuses, children, older adults and people living with chronic conditions, especially heart and lung disease, may be physically more susceptible to the health impacts of air pollution than other adults.
- Access to healthcare—Whether or not a person has health coverage, a healthcare provider and access to linguistically and culturally appropriate health information may influence their overall health status and how they are impacted by environmental stressors like air pollution.
- Psychosocial stress—There is increasing evidence that non-physical stressors such as poverty, racial/ethnic discrimination and fear of deportation can amplify the harmful effects of air pollution.

These risk factors are not mutually exclusive and often interact in ways that lead to significant health inequities among subgroups of the population.

People of Color

Research has shown that people of color are more likely to be exposed to air pollution and more likely to suffer harm to their health from air pollution than white people.[51,52] Much of this inequity can be traced to the long history of systemic racism in the United States. Practices such as redlining, the discriminatory outlining of riskier neighborhoods by mortgage lenders, institutionalized residential segregation in the 20th century, impairing the ability of many people of color to build wealth and limiting their mobility and political power. Over the years, decision-makers have found it easier to place sources of pollution, such as power plants, industrial facilities, landfills and highways, in economically disadvantaged communities of color than in more affluent, predominantly white neighborhoods. The resulting disproportionate exposure to air pollution has contributed to high rates of emergency department visits for asthma and other diseases[53,54]

People of color are also more likely than white people to be living with one or more chronic conditions that make them more susceptible to the health impact of air pollution, including asthma, diabetes and heart disease.[55]

People Experiencing Poverty

There is evidence that having low income or living in lower income areas puts people at increased risk from air pollution, although the correlation is not as strong as with race and ethnicity.[56,57] People living in poverty are more likely to live in close proximity to sources of pollution and have fewer resources to relocate than people with more financial security.[58] Poverty itself, along with the problems that beset many low-income communities, such as lack of safety, have been associated with increased psychosocial distress and chronic stress, which in turn make people more vulnerable to pollution-related health effects.[59] People with low income also have lower rates of health coverage and less access to quality and affordable health care to provide relief to them when they get sick.

Children

Children are both more susceptible to harm from air pollution and more likely to be exposed than adults. The growth and development of a child's lungs and breathing ability start in utero and continue into early adulthood. Exposure to air pollution at any stage of that development process can have both immediate and lasting impacts on developing lungs and children's health. In addition, the body's defenses that help adults fight off infections are still developing in children. Children have more respiratory infections than adults, which also seems to increase their susceptibility to air pollution.[60]

Children breathe more rapidly and inhale more air relative to their size than do adults. They are more likely to spend time outdoors, running around, being active and breathing hard. Consequently, they are more exposed to polluted outdoor air than adults typically are.

Older Adults

Much of the illness and premature death caused by air pollution occurs in older adults, who are at increased risk of harm for several reasons. As a person ages, the normal process of thinning and weakening of the lung tissue and the supporting muscle and bones of the ribcage results in diminishing lung function over time. The increased impairment that results from exposure to air pollutants then has an add-on effect, putting stress on the lungs and heart. Older people are also more likely to be living with chronic diseases, and there is evidence that co-existing chronic lung, heart or circulatory conditions may worsen following exposure to environmental pollutants.[61]

The strength of the immune system also declines with age, leaving older people at greater risk of contracting infections and less able to get them under control before they become serious. Because exposure to air pollution increases susceptibility to respiratory infections, it also increases the risk of severe illness and death in older adults.

People with Underlying Health Conditions

For the millions of people in the U.S. living with illnesses such as asthma, COPD, diabetes, heart disease and lung cancer, exposure to air pollution places them at greater risk of harm to their health than those without disease. The cellular injury and systemic inflammation triggered by breathing ozone and particle pollution put additional stress on people's lungs, heart and other organs already compromised by disease. This can result in a worsening of symptoms, increased medication use, more frequent emergency department visits and hospitalizations, an overall reduced quality of life and, far too often, premature death.

Pregnant People and Fetuses

Pregnancy is always a susceptible time for both the mother and the developing fetus. The pregnant body undergoes dramatic physiological changes in hormone levels, metabolism and circulation throughout months of gestation. The rapid and complex development of the fetus is a precisely timed and sequenced process. The inflammation and oxidative stress resulting from exposure to air pollution during pregnancy can increase the risk of hypertensive disorders, including preeclampsia, in the mother and lead to intrauterine inflammation and damage to the placenta that can disrupt the growth and development of the fetus. Fetal health may also be impacted in a number of ways by environmental contaminants that have been shown to cross the placenta.[62]

Exposure to both ozone and particle pollution during pregnancy is strongly associated with premature birth, low birth weight and stillbirth. These risks are amplified in pregnancies where the mother is already at higher risk, such as people of color and those chronic conditions, especially asthma.[63]

People with a Smoking History

There is some recent evidence suggesting that current and former smokers are at greater risk of health harm from exposure to fine particle pollution compared with never-smokers. They are more likely to develop lung cancer and to die prematurely.[64] Smoking damages the lungs, heart, blood vessels and other organs.[65] This impairment leaves the person with a smoking history more vulnerable to the health impact of air pollution than a never-smoker.

For people with lung conditions like asthma, checking the air quality is a regular part of life.

"It's something we automatically think about before we do outside activities," says LA resident Jaime K., who has asthma. "If the air quality is bad, we don't go out to the grocery store, out for walks or out to play with my daughter."

She says in an ideal world, she'd live near the ocean. But because housing costs by the water are so high, she purchased a home further inland near a highway. Despite using air filters to improve the air quality inside, soot builds up daily due to vehicles and, increasingly, wildfire smoke.

"No matter how much I clean," Jaime says, "I always have a layer of dust the next day."

Jaime K.
Los Angeles, California

Emerging Threats

Since the passage of the Clean Air Act in 1970, the federal, state, local and Tribal governments and businesses, community leaders and advocates have invested years of effort into reducing the public health threat from air pollution. By many measures, the air the nation breathes is dramatically cleaner than it was 50 years ago. "State of the Air" has documented this long-term improvement over the past 22 years. In recent years, however, new threats have emerged that are causing air pollution levels to rise and the potential harm to vulnerable populations to increase.

Climate Change

The scientific evidence has clearly shown for years that impacts from climate change threaten human health. These health impacts are no longer a concern for the future. They're happening now. What remains to be seen is how much these impacts increase in severity, how much action to reduce greenhouse gas emissions is able to mitigate them, and how much communities are able to adapt to the impacts that can't be avoided.

The rising global temperatures and disruption of short- and long-term weather patterns caused by climate change are putting the health Americans at risk. The impacts of

climate change currently being experienced in communities nationwide include an increase in extreme weather events, deterioration of air quality from increased ozone formation and wildfire smoke, expansion of the range of disease-carrying pests and increased stresses that affect mental health and well-being.

People and communities are differentially exposed to these climate-related hazards as well as being disproportionately affected by climate-related health risks. Populations experiencing greater health risks include children, older adults, low-income communities and some communities of color.

"State of the Air" largely focuses on the health harms linked to increases in particle pollution and ozone, but increasing heat itself is another significant risk factor that adds to the climate vulnerability of some of the same populations who face increased risk from air pollution.[66] Children are especially vulnerable to extreme heat. They spend more time playing outside and participating in vigorous activity than the average adult. Their bodies have a high surface area-to-mass ratio, so must divert more blood flow to their skin to dissipate heat, which may strain other bodily functions.[67]

Among older adults, increased heat and exposure to air pollution raises the risk of premature death and results in more emergency room visits and hospital admissions, especially among those older adults who spend more time outdoors. The physical changes associated with aging—including those that affect breathing and movement—can make it even more difficult to respond to climate change. In the past two decades, heat-related mortality for older persons has almost doubled, reaching a record high 19,000 deaths in 2018.[68] Heat waves also significantly increase the risk of illness and death in people living with chronic lung disease.[69]

Wildfires

Wildfires are posing a growing threat to public health in many parts of the U.S. Increased heat and drought caused by climate change are resulting in larger, more frequent fires that blanket communities in smoke and leave residents gasping for air. Smoke from large fires can spread over hundreds or thousands of miles, polluting the air breathed by millions of people. In the years 2016-2019, individuals in the U.S. experienced a 19% increase in the number of days they were exposed to high wildfire risk compared to 2001-2004.[70]

Wildfire smoke is a complex mixture of fine and course particulate matter and gases, including carbon monoxide, nitrogen oxides, volatile organic compounds and air toxics. The chemical composition of wildfire smoke varies widely depending on the location of the fire and the material burned. The details of how these differences impact health is the subject of ongoing research.[71]

The most widespread health threat from smoke is from fine particles. Like other sources of fine particle pollution, wildfire smoke can be extremely harmful to the lungs, especially for children, older adults and people with asthma, COPD, chronic heart disease and diabetes. Recent research has confirmed that severe wildfire episodes are associated with increased risk of hospital admissions for respiratory diseases for Medicare recipients.[72] Pregnant people exposed to wildfire smoke are more likely to experience adverse pregnancy outcomes, including preterm birth.[73] There is also strong evidence linking smoke exposure to increased risk of premature death.[74]

The health impact of breathing wildfire smoke for extended periods of time, year after year, as is happening in some hard-hit communities, remains unknown.

E-Commerce Shipping and Transport

The COVID-19 pandemic has transformed personal shopping behavior, accelerating the shift from in-store shopping for products and services to ordering them online. This has increased demand for fast, personalized delivery service and has resulted in

a rising number of delivery trucks and vans on neighborhood streets, supported by a proliferation of warehouses, distribution centers and long-distance haulers on highways. To maximize their efficiency, large retailers and shipping companies are clustering new warehouses together in sprawling complexes, often in already highly-polluted communities. More traffic in and out of these areas, especially since the bulk of it is diesel-powered, brings more unhealthy air pollution to the communities where it is concentrated.[75] The U.S. EPA estimates that 72 million Americans live along major truck freight routes, and notes that they are more likely to be people of color and have lower incomes.[76]

Changes in consumer behavior have also had a major impact on port cities, which are dealing with an increase in cargo imports. The rapid growth in shipping traffic has resulted in backlogs of ships idling in harbors and off-shore waiting to unload, as well as increased congestion of the port-related cargo freight system of trucks, trains and planes. Between January and September 2021, the busy Ports of Los Angeles and Long Beach in California saw an average increase of 20 percent in cargo movement compared to the same time in 2019 prior to the COVID-19 pandemic. According to estimates from the California Air Resources Board, as of October 2021, the increased congestion had resulted in overall container ship emissions increases of 20 tons per day (tpd) of oxides of nitrogen (NOx) and 0.5 tpd of particulate matter. This increase in NOx emissions from container ships is roughly equivalent to the total emissions from 5.8 million passenger cars. Additionally, the increased diesel particulate emissions are comparable to the exhaust particulate emissions from almost 100,000 diesel trucks.[77]

Exposure to traffic-related pollution is a serious health hazard to those living in freight-impacted communities. The mixture of emissions has been linked to poor birth outcomes, reduced lung and cognitive development, development and worsening of chronic respiratory and cardiovascular diseases, increased risk of dementia, cancer and premature death.[78] Unfortunately, the health burden for e-commerce-related pollution tends to disproportionately impact disadvantaged communities. Since low-income communities and communities of color make up a significant proportion of residents in disadvantaged communities, they are often burdened with the negative by-products of congestion and exposure to on-road emissions.[79]

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Recommendations for Personal Action and Policy Change

Alia V. resides in an area with periodically severe air pollution. Yet there are many aspects of Houston she loves, such as its tremendous cultural and educational resources. The city also has green transportation initiatives, including a municipal hybrid fleet.

In summer, she and her husband limit their kids' time outside on ozone action days. Because public transit options in the region are limited, she relies on her car to travel even on days with high ozone levels.

She says awareness about the importance of air quality is on the rise locally, although it's a problem that really demands a statewide approach. For example, increasing the incentive to opt for electric vehicles "would help people balance their transportation needs with sustainability."

Also, with Houston being near the Gulf of Mexico, there are numerous oil refineries just south of the city. "There have been from time to time chemical fires where you'll have air impacts," Alia says. "When those things occur, people stay indoors."

Alia V.
Houston, Texas

We need action at every level to clean up air pollution and address climate change.

Individuals

You can take action to protect yourself and your family from the dangers of air pollution. Regardless of its grade or ranking in this report, any community can experience days with unhealthy levels of air pollution. Some simple precautions will reduce your risk:

1. Check daily air pollution forecasts in your area at airnow.gov. The color-coded forecasts let you know when the air is unhealthy in your community. When the air is bad, move your exercise plans and other activities indoors.
2. Protect yourself from wildfire smoke if you live in a fire-prone area. Learn more about using masks and creating a clean room inside your home with our wildfire resources at Lung.org/wildfire.
3. Reduce your own contributions to air pollution. Prioritize walking, biking and public transit over gasoline-powered vehicles. Conserve electricity and purchase your power from clean, non-combustion sources if you can. Don't burn wood, leaves or trash. Learn more about how to reduce your impact with our Stand Up For Clean Air initiative at Lung.org/air.

Local Governments

Local governments have the power to help ensure that city and county operations are zero-emission and that residents have the ability to choose zero-emission forms of transportation and electricity. These actions must benefit the communities most impacted by unhealthy air.

1. Adopt a climate action plan. Reduce city- and county-wide emissions by supporting walking, biking and transit and zero-emission-vehicle infrastructure, and ensuring that building and parking policies support these goals. Include measures to address the impacts of climate change on residents, including health impacts.
2. Purchase zero-emission fleet vehicles. Commit to purchasing zero-emission garbage and recycling trucks, transit buses, school buses and other vehicles.
3. Establish purchasing goals for renewable, non-combustion electricity. Power city and county operations with truly clean sources of electricity like wind, solar, geothermal or tidal.

State, Territorial and Tribal Governments

1. Set a clean or renewable electricity standard or clean peak standard that phases out the use of coal, oil, natural gas (also known as methane gas) and other combustion and replaces it with wind, solar, geothermal and tidal and other non-combustion forms of electricity. Do not allow for the increased use of biomass or municipal solid waste for electricity because of their contributions to particle pollution.
2. Invest in air quality monitoring. In addition to EPA funding placement of air quality monitors, communities should increase monitoring to capture pollution levels that disproportionately impact communities near polluting sources in order to address them.
3. States: Use Clean Air Act authority to adopt the California zero-emissions standards for light-, medium- and heavy-duty vehicles. These include California's Low-Emission Vehicle criteria pollutant and greenhouse gas regulations; Zero-Emission Vehicle regulations; and Advanced Clean Trucks regulations.

Federal Government

Every federal agency, the White House and Congress must act now to dramatically reduce air and climate pollution and drive an urgent nationwide transition to zero-emission transportation and electricity. 40% of the investments made to meet these goals must improve air quality, health and life in underserved communities. Key, urgent

opportunities for action include:

1. Congress must pass investments in zero-emission electricity and transportation into law. Key investments included in the House-passed Build Back Better Act urgently need to be passed into law in order to drive the nationwide zero-emission transition needed to clean up harmful air pollution and address climate change.
2. EPA must propose and finalize strong new emissions standards that transition the nation's cars and trucks to zero-emission vehicles. EPA must set stronger standards for greenhouse gas emissions for light-duty vehicles beginning in Model Year 2027. EPA must finalize a strong rule for heavy-duty vehicles this year and adopt an additional rule beginning in Model Year 2030.
3. EPA must set a stronger national standard for particulate matter. The research shows that the new standard should be set at 8 micrograms per cubic meter annually, and 25 micrograms per cubic meter daily, to protect those at greatest risk of harm. Not only will stronger standards drive cleanup of polluting sources nationwide, they will also mean that families across the country are better informed about when their local air quality may put their health at risk at Lung.org/sota-petition.
4. EPA must set a stronger national standard for ozone. The scientific evidence shows that a standard of 60 parts per billion would better protect people from harm, especially those at greatest risk. As with particulate matter, stronger standards will not only ensure cleanup of polluting sources, but also better empower people to avoid dangerous levels of this pollutant.

Data Table Notes

*See **Methodology** for a full explanation of data sources and calculations made for state grades.*

Notes for state grades tables

1. Not all counties have monitors for either ozone or particle pollution. If a county does not have any monitors for either pollutant, that county's name is not on the list in these tables. The decision about monitors in the county is made by the state and the U.S. Environmental Protection Agency, not by the American Lung Association.
2. **INC** (Incomplete) indicates that monitoring is underway for that pollutant in that county, but that the data are incomplete for all three years.
3. **DNC** (Data Not Collected) indicates that data on that particular pollutant is not collected in that county.
4. The **Weighted Average (Wgt. Avg)** was derived by adding the three years of individual level data (2018-2020), multiplying the sums of each level by the assigned standard weights (i.e. 1=orange, 1.5=red, 2.0=purple and 2.5=maroon) and calculating the average. Grades are assigned based on the weighted averages as follows: A=0.0, B=0.3-0.9, C=1.0-2.0, D=2.1-3.2, F=3.3+.
5. The **Design Value** is the calculated concentration of a pollutant based on the National Ambient Air Quality Standard for $PM_{2.5}$, which is 12 µg/m^3. Counties with design values of 12 or lower received a grade of "Pass" for Annual $PM_{2.5}$. Counties with design values of 12.1 or higher received a grade of "Fail."

Notes for at-risk groups tables

1. **Total Population** is based on 2020 U.S. Census and represents the at-risk populations in counties with ozone or $PM_{2.5}$ pollution monitors; it does not represent the entire state's sensitive populations.
2. Those **18 & under** and **65 & over** are vulnerable to ozone and $PM_{2.5}$. Do not use them as population denominators for disease estimates—that will lead to incorrect estimates.
3. **Pediatric asthma** estimates are for those under 18 years of age and represent the estimated number of people who had asthma in 2020 based on the state rates when available or national rates when not (Behavioral Risk Factor Surveillance System, or BRFSS), applied to county population estimates (U.S. Census).
4. **Adult asthma** estimates are for those 18 years and older and represent the estimated number of people who had asthma during 2020 based on state rates (BRFSS) applied to county population estimates (U.S. Census).
5. **COPD** estimates are for adults 18 and over who had ever been diagnosed with chronic obstructive pulmonary disease, which includes chronic bronchitis and emphysema, based on state rates (BRFSS) applied to county population estimates (U.S. Census).
6. **Lung cancer** estimates are for all ages and represent the estimated number of people diagnosed with lung cancer in 2018 based on state rates (**StateCancerProfiles.gov**) applied to county population estimates (U.S. Census).
7. **Cardiovascular disease** estimates are for adults 18 and over who have been diagnosed within their lifetime, based on state rates (BRFSS) applied to county population estimates (U.S. Census). CV disease includes coronary heart disease, stroke and heart attack.
8. **Pregnancy** estimates are for females 18-49 and based on state rates of pregnancies resulting in live births applied to population estimates (U.S. Census).
9. **Poverty** estimates include all ages and come from the U.S. Census Bureau's Small Area Income and Poverty Estimates program. The estimates are derived from a model using estimates of income or poverty from the Annual Social and Economic Supplement and the Current Population Survey, 2020. Puerto Rico poverty estimates come from the U.S. Census Bureau's American Community Survey, 2015-2019.
10. **People of color** are defined as anyone Hispanic or non-Hispanic Black, Asian, American Indian/Alaska Native, Native Hawaiian and Other Pacific Islander, or two or more races and are based on 2020 county population estimates (U.S Census).
11. Adding across rows does not produce valid estimates. Adding the at-risk categories (asthma, COPD, poverty, etc.) will double-count people who fall into more than one category.

Table 1 Populations at Risk by Grade and by Pollutant

People at Risk from Short-Term Particle Pollution (Daily $PM_{2.5}$)

	Chronic Diseases					Age Groups							
In Counties Where the Grades Were:	Adult Asthma	Pediatric Asthma	COPD	Lung Cancer	CV Disease	Under 18	65 and Over	Pregnancies	Poverty	People of Color	Total Population	Number of Counties
Grade A (0.0)	5,734,749	1,333,719	3,912,594	44,544	5,287,400	16,630,671	13,514,488	833,388	8,840,372	32,159,146	78,153,295	294
Grade B (0.3-0.9)	4,036,892	996,474	2,905,338	33,048	3,803,298	12,858,220	9,056,218	665,620	7,217,479	25,851,553	57,593,948	146
Grade C (1.0-2.0)	1,031,963	239,824	689,288	7,572	895,521	2,976,493	2,159,726	158,477	1,643,073	5,352,485	13,774,271	50
Grade D (2.1-3.2)	830,223	235,696	532,798	6,339	714,146	3,224,138	1,675,988	157,226	1,721,676	7,407,114	12,897,111	25
Grade F (3.3+)	4,681,901	1,019,040	2,720,932	25,741	3,551,545	14,267,119	9,675,591	680,976	7,217,076	35,240,543	63,241,786	96
National Population in Counties with $PM_{2.5}$ Monitors	16,640,524	3,906,948	10,980,883	119,804	14,557,845	51,019,482	36,807,399	2,548,703	27,131,651	107,556,089	230,325,170	645

People at Risk from Year-Round Particle Pollution (Annual $PM_{2.5}$)

	Chronic Diseases					Age Groups							
In Counties Where the Grades Were:	Adult Asthma	Pediatric Asthma	COPD	Lung Cancer	CV Disease	Under 18	65 and Over	Pregnancies	Poverty	People of Color	Total Population	Number of Counties
Pass	13,156,179	3,116,225	8,928,186	97,167	11,777,051	40,243,948	29,474,018	2,032,020	21,158,008	82,263,444	182,703,927	499
Fail	1,462,707	328,136	823,853	7,648	1,062,210	4,786,996	2,911,151	214,907	2,724,854	14,169,688	20,302,100	21
National Population in Counties with $PM_{2.5}$ Monitors	16,640,524	3,906,948	10,980,883	119,804	14,557,845	51,019,482	36,807,399	2,548,703	27,131,651	107,556,089	230,325,170	645

People at Risk from Ozone

	Chronic Diseases				Age Groups						
In Counties Where the Grades Were:	Adult Asthma	Pediatric Asthma	COPD	CV Disease	Under 18	65 and Over	Pregnancies	Poverty	People of Color	Total Population	Number of Counties
Grade A (0.0)	2,605,910	612,719	2,010,342	2,689,958	8,026,888	6,930,736	392,291	4,365,338	13,549,365	37,586,978	240
Grade B (0.3-0.9)	2,595,751	619,427	1,916,031	2,553,986	7,602,697	6,329,609	381,417	3,832,800	11,949,060	35,768,125	166
Grade C (1.0-2.0)	2,678,221	599,029	1,791,867	2,401,595	7,877,603	6,085,969	389,497	3,939,828	13,943,492	36,287,551	145
Grade D (2.1-3.2)	767,110	185,688	520,639	675,480	2,311,567	1,653,471	115,882	1,017,025	3,415,703	10,344,606	45
Grade F (3.3+)	8,828,767	2,090,081	5,497,608	7,232,858	27,757,159	18,504,790	1,369,131	14,303,845	65,603,244	122,346,191	156
National Population in Counties with Ozone Monitors	17,635,298	4,143,925	11,856,179	15,713,475	54,008,577	39,903,719	2,668,425	27,800,815	109,146,398	244,496,238	798

Table 2a People at Risk in 25 U.S. Cities Most Polluted by Short-Term Particle Pollution (Daily $PM_{2.5}$)

2022 Rank	Metropolitan Statistical Areas	Total Population	Under 18	65 and Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	People of Color	Poverty
1	Fresno-Madera-Hanford, CA	1,311,371	365,101	168,092	24,912	88,818	48,526	491	62,048	13,508	933,115	209,238
2	Bakersfield, CA	901,362	258,380	104,230	17,630	60,364	31,826	337	40,622	9,077	611,843	159,609
3	Fairbanks, AK	95,651	22,646	11,227	1,687	6,590	3,143	46	4,605	1,259	29,538	6,565
4	San Jose-San Francisco-Oakland, CA	9,608,006	2,033,942	1,517,721	138,782	712,280	415,252	3,588	537,189	101,110	6,022,743	826,883
5	Redding-Red Bluff, CA	243,521	53,827	51,222	3,673	17,848	12,030	91	15,712	2,164	59,800	33,037
6	Chico, CA	212,744	42,938	39,082	2,930	15,926	9,726	79	12,496	2,241	63,972	35,963
7	Sacramento-Roseville, CA	2,650,900	597,440	441,110	40,765	193,091	116,063	988	150,362	27,195	1,279,967	298,099
8	Los Angeles-Long Beach, CA	18,629,661	4,149,249	2,728,079	283,114	1,361,923	773,668	6,951	999,687	199,345	13,040,678	2,227,753
9	Visalia, CA	468,680	141,778	55,595	9,674	30,688	16,485	175	21,064	4,807	341,854	79,348
9	Yakima, WA	251,879	73,890	36,210	5,401	17,214	9,376	124	12,831	2,523	146,837	36,781
11	Phoenix-Mesa, AZ	5,114,212	1,173,151	849,985	94,573	383,476	230,864	2,110	303,432	54,016	2,334,152	580,518
12	Reno-Carson City-Fernley, NV	644,730	132,772	123,579	9,498	48,994	39,083	316	50,916	6,363	227,711	64,613
13	San Diego-Chula Vista-Carlsbad, CA	3,332,427	707,614	496,393	48,282	246,524	138,923	1,246	178,459	35,587	1,852,772	306,807
14	Salinas, CA	430,906	111,407	62,634	7,602	30,015	17,209	161	22,152	4,259	305,910	47,870
15	Eugene-Springfield, OR	382,986	68,706	78,637	4,775	33,375	19,305	182	23,919	3,632	72,400	54,433
16	Seattle-Tacoma, WA	4,952,595	1,037,744	752,054	75,859	378,575	203,486	2,437	275,903	54,443	1,802,210	391,416
17	Spokane-Spokane Valley-Coeur d'Alene, WA-ID	745,213	163,109	134,569	11,977	56,205	33,165	360	46,140	7,802	109,959	90,477
18	Logan, UT-ID	144,219	43,117	15,148	2,713	10,848	4,030	41	5,732	2,125	22,766	12,685
19	Portland-Vancouver-Salem, OR-WA	3,282,871	693,419	535,218	48,703	273,290	145,553	1,573	184,102	32,465	908,893	313,266
20	Salt Lake City-Provo-Orem, UT	2,672,368	770,573	285,283	47,473	206,440	77,200	715	111,241	37,614	631,570	179,524
21	Medford-Grants Pass, OR	309,897	61,999	74,925	4,309	26,047	17,166	148	21,307	2,477	57,246	39,758
22	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,593,177	487,318	548,492	55,269	213,963	160,478	1,588	228,249	25,364	372,912	267,874
22	San Luis Obispo-Paso Robles, CA	282,249	49,195	60,460	3,357	21,870	14,227	106	18,390	2,736	90,044	28,338
24	Bellingham, WA	231,016	43,776	42,341	3,200	18,112	10,130	114	14,109	2,599	51,174	26,423
24	Boise City-Mountain Home-Ontario, ID-OR	853,555	206,584	133,709	15,354	61,661	37,302	388	50,968	10,132	182,416	77,941

Notes:

Cities are ranked using the highest weighted average for any county within that Combined Metropolitan Statistical Area or Metropolitan Statistical Area.

Adding across rows does not produce valid estimates. Adding the disease categories (asthma, COPD, etc.) will double-count people who fall into more than one category.

Table 2b People at Risk in 25 U.S. Cities Most Polluted by Year-Round Particle Pollution (Annual $PM_{2.5}$)

2022 Rank	Metropolitan Statistical Areas	Total Population	Under 18	65 and Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	People of Color	Poverty
1	Bakersfield, CA	901,362	258,380	104,230	17,630	60,364	31,826	337	40,622	9,077	611,843	159,609
2	Visalia, CA	468,680	141,778	55,595	9,674	30,688	16,485	175	21,064	4,807	341,854	79,348
2	Fresno-Madera-Hanford, CA	1,311,371	365,101	168,092	24,912	88,818	48,526	491	62,048	13,508	933,115	209,238
4	San Jose-San Francisco-Oakland, CA	9,608,006	2,033,942	1,517,721	138,782	712,280	415,252	3,588	537,189	101,110	6,022,743	826,883
5	Los Angeles-Long Beach, CA	18,629,661	4,149,249	2,728,079	283,114	1,361,923	773,668	6,951	999,687	199,345	13,040,678	2,227,753
6	Medford-Grants Pass, OR	309,897	61,999	74,925	4,309	26,047	17,166	148	21,307	2,477	57,246	39,758
7	Fairbanks, AK	95,651	22,646	11,227	1,687	6,590	3,143	46	4,605	1,259	29,538	6,565
8	Phoenix-Mesa, AZ	5,114,212	1,173,151	849,985	94,573	383,476	230,864	2,110	303,432	54,016	2,334,152	580,518
9	Chico, CA	212,744	42,938	39,082	2,930	15,926	9,726	79	12,496	2,241	63,972	35,963
10	El Centro, CA	180,267	51,396	24,546	3,507	12,094	6,800	67	8,707	1,688	162,934	31,134
11	Sacramento-Roseville, CA	2,650,900	597,440	441,110	40,765	193,091	116,063	988	150,362	27,195	1,279,967	298,099
12	Cincinnati-Wilmington-Maysville, OH-KY-IN	2,291,863	529,189	370,689	37,461	183,043	155,352	1,583	185,483	25,689	481,836	233,571
13	Indianapolis-Carmel-Muncie, IN	2,473,639	590,241	369,249	33,909	183,779	155,080	1,506	175,353	29,521	657,938	254,114
14	Pittsburgh-New Castle-Weirton, PA-OH-WV	2,593,177	487,318	548,492	55,269	213,963	160,478	1,588	228,249	25,364	372,912	267,874
15	Bend-Prineville, OR	226,874	44,353	48,404	3,082	19,358	11,894	108	14,743	1,933	30,090	18,885
16	Detroit-Warren-Ann Arbor, MI	5,323,779	1,144,485	925,231	96,669	462,752	347,934	3,186	412,838	55,700	1,728,152	695,508
16	Redding-Red Bluff, CA	243,521	53,827	51,222	3,673	17,848	12,030	91	15,712	2,164	59,800	33,037
18	Eugene-Springfield, OR	382,986	68,706	78,637	4,775	33,375	19,305	182	23,919	3,632	72,400	54,433
18	McAllen-Edinburg, TX	939,466	299,144	108,512	20,601	47,662	31,391	445	44,526	11,421	886,190	223,089
18	Philadelphia-Reading-Camden, PA-NJ-DE-MD	7,214,065	1,550,288	1,237,320	156,196	564,546	359,895	4,215	518,164	77,597	2,818,437	766,649
21	Yakima, WA	251,879	73,890	36,210	5,401	17,214	9,376	124	12,831	2,523	146,837	36,781
22	Houston-The Woodlands, TX	7,340,823	1,913,528	882,117	131,780	405,973	271,066	3,489	381,379	92,074	4,759,663	977,111
22	Chicago-Naperville, IL-IN-WI	9,770,485	2,178,175	1,531,190	148,074	663,501	463,364	5,875	590,691	105,051	4,588,513	1,025,857
24	St. Louis-St. Charles-Farmington, MO-IL	2,909,003	636,983	510,930	53,682	208,373	178,779	1,917	209,406	31,673	756,460	298,040
25	Augusta-Richmond County, GA-SC	614,312	139,547	103,999	12,675	43,363	34,529	356	48,212	6,550	284,559	94,628
25	Shreveport-Bossier City-Minden, LA	430,347	101,565	75,829	8,887	25,843	28,538	264	35,926	5,148	203,233	83,045

Notes:

Cities are ranked using the highest design value for any county within that Combined Metropolitan Statistical Area or Metropolitan Statistical Area.

Adding across rows does not produce valid estimates. Adding the disease categories (asthma, COPD, etc.) will double-count people who have been diagnosed with more than one disease.

Table 2c People at Risk in 25 Most Ozone-Polluted Cities

2022 Rank	Metropolitan Statistical Areas	Total Population	Under 18	65 and Over	Pediatric Asthma	Adult Asthma	COPD	CV Disease	Pregnancies	People of Color	Poverty
1	Los Angeles-Long Beach, CA	18,629,661	4,149,249	2,728,079	283,114	1,361,923	773,668	999,687	199,345	13,040,678	2,227,753
2	Bakersfield, CA	901,362	258,380	104,230	17,630	60,364	31,826	40,622	9,077	611,843	159,609
3	Visalia, CA	468,680	141,778	55,595	9,674	30,688	16,485	21,064	4,807	341,854	79,348
4	Fresno-Madera-Hanford, CA	1,311,371	365,101	168,092	24,912	88,818	48,526	62,048	13,508	933,115	209,238
5	Phoenix-Mesa, AZ	5,114,212	1,173,151	849,985	94,573	383,476	230,864	303,432	54,016	2,334,152	580,518
6	San Diego-Chula Vista-Carlsbad, CA	3,332,427	707,614	496,393	48,282	246,524	138,923	178,459	35,587	1,852,772	306,807
7	Denver-Aurora, CO	3,652,385	793,260	503,881	59,113	274,959	125,939	162,350	39,619	1,285,122	295,637
8	Houston-The Woodlands, TX	7,340,823	1,913,528	882,117	131,780	405,973	271,066	381,379	92,074	4,759,663	977,111
9	Sacramento-Roseville, CA	2,650,900	597,440	441,110	40,765	193,091	116,063	150,362	27,195	1,279,967	298,099
10	Salt Lake City-Provo-Orem, UT	2,672,368	770,573	285,283	47,473	206,440	77,200	111,241	37,614	631,570	179,524
11	Las Vegas-Henderson, NV	2,364,017	533,319	374,501	38,152	172,888	130,205	166,635	25,581	1,382,153	308,069
12	El Paso-Las Cruces, TX-NM	1,067,454	277,128	145,623	19,251	63,190	38,977	56,256	12,848	910,233	190,638
13	San Jose-San Francisco-Oakland, CA	9,608,006	2,033,942	1,517,721	138,782	712,280	415,252	537,189	101,110	6,022,743	826,883
14	New York-Newark, NY-NJ-CT-PA	22,491,979	4,769,615	3,778,550	401,191	1,675,005	882,073	1,320,965	242,730	11,747,218	2,526,144
15	El Centro, CA	180,267	51,396	24,546	3,507	12,094	6,800	8,707	1,688	162,934	31,134
16	Chicago-Naperville, IL-IN-WI	9,770,485	2,178,175	1,531,190	148,074	663,501	463,364	590,691	105,051	4,588,513	1,025,857
16	Dallas-Fort Worth, TX-OK	8,186,093	2,068,544	1,011,669	142,789	459,236	310,276	436,524	103,566	4,409,852	851,167
18	Fort Collins, CO	360,428	68,325	60,330	5,091	27,972	13,385	17,499	3,960	65,512	34,579
19	San Luis Obispo-Paso Robles, CA	282,249	49,195	60,460	3,357	21,870	14,227	18,390	2,736	90,044	28,338
20	Chico, CA	212,744	42,938	39,082	2,930	15,926	9,726	12,496	2,241	63,972	35,963
21	Reno-Carson City-Fernley, NV	644,730	132,772	123,579	9,498	48,994	39,083	50,916	6,363	227,711	64,613
22	Albuquerque-Santa Fe-L as Vegas, NM	1,165,181	242,811	224,127	17,483	93,049	47,511	73,307	12,060	722,982	165,607
23	Redding-Red Bluff, CA	243,521	53,827	51,222	3,673	17,848	12,030	15,712	2,164	59,800	33,037
24	Detroit-Warren-Ann Arbor, MI	5,323,779	1,144,485	925,231	96,669	462,752	347,934	412,838	55,700	1,728,152	695,508
25	San Antonio-New Braunfels-Pearsall, TX	2,611,111	644,211	356,480	44,366	146,716	100,473	143,237	32,355	1,756,278	351,397

Notes:

Cities are ranked using the highest weighted average for any county within that Combined Metropolitan Statistical Area or Metropolitan Statistical Area.

Adding across rows does not produce valid estimates. Adding the disease categories (asthma, COPD, etc.) will double-count people who have been diagnosed with more than one disease.

Table 3a Cleanest U.S. Cities for Short-Term Particle Pollution (Daily $PM_{2.5}$)

Metropolitan Statistical Area	Population
Asheville-Marion-Brevard, NC	546,914
Bangor, ME	151,655
Bloomington-Bedford, IN	214,548
Bloomington-Pontiac, IL	206,670
Boston-Worcester-Providence, MA-RI-NH-CT	8,293,925
Bowling Green-Glasgow, KY	235,109
Brunswick, GA	119,157
Burlington-Fort Madison-Keokuk, IA-IL-MO	102,975
Burlington-South Burlington-Barre, VT	279,488
Cedar Rapids-Iowa City, IA	449,617
Champaign-Urbana, IL	225,547
Charleston-Huntington-Ashland, WV-OH-KY	770,402
Charlottesville, VA	219,910
Cleveland-Indianola, MS	54,882
Columbus-Auburn-Opelika, GA-AL	489,489
Dayton-Springfield-Kettering, OH	1,081,343
Decatur, IL	103,015
Eau Claire-Menomonie, WI	215,449
Elmira-Corning, NY	177,279
Erie-Meadville, PA	352,123
Fayetteville-Sanford-Lumberton, NC	859,593
Fayetteville-Springdale-Rogers, AR	548,634
Florence, SC	204,097
Fort Smith, AR-OK	250,434
Gadsden, AL	102,371
Grand Island, NE	75,325
Grand Junction, CO	155,603
Green Bay-Shawano, WI	368,711
Greensboro-Winston-Salem-High Point, NC	1,699,123
Greenville-Kinston-Washington, NC	285,717
Harrisonburg-Staunton, VA	260,025
Hartford-East Hartford, CT	1,466,482
Hickory-Lenoir-Morganton, NC	370,266
Hot Springs-Malvern, AR	133,576
Houma-Thibodaux, LA	207,455
Huntsville-Decatur, AL	634,421
Johnson City-Kingsport-Bristol, TN-VA	512,723
Johnstown-Somerset, PA	201,588
Knoxville-Morristown-Sevierville, TN	1,157,575
Kokomo-Peru, IN	118,060
La Crosse-Onalaska, WI-MN	137,134
Lafayette-West Lafayette-Frankfort, IN	265,484
Lansing-East Lansing, MI	548,248
Lexington-Fayette-Richmond-Frankfort, KY	749,885
Lima-Van Wert-Celina, OH	217,093
Lincoln-Beatrice, NE	359,267
Lynchburg, VA	264,386
Midland-Odessa, TX	351,380
Milwaukee-Racine-Waukesha, WI	2,049,805
Mobile-Daphne-Fairhope, AL	657,979
Montgomery-Selma-Alexander City, AL	459,464
Morgantown-Fairmont, WV	196,161
New Orleans-Metairie-Hammond, LA-MS	1,510,672
North Port-Sarasota, FL	1,087,915
Orlando-Lakeland-Deltona, FL	4,229,714
Owensboro, KY	119,795
Palm Bay-Melbourne-Titusville, FL	608,459
Parkersburg-Marietta-Vienna, WV-OH	148,295
Pensacola-Ferry Pass, FL-AL	547,784
Portland-Lewiston-South Portland, ME	651,768
Pueblo-Cañon City, CO	217,690
Richmond, VA	1,303,469
Roanoke, VA	313,784
Rochester-Batavia-Seneca Falls, NY	1,158,471
Saginaw-Midland-Bay City, MI	375,696
Salisbury-Cambridge, MD-DE	455,334
Scottsboro-Fort Payne, AL	123,240
Scranton--Wilkes-Barre, PA	552,528
Sioux Falls, SD	273,566
Springfield, MA	695,654
Springfield-Jacksonville-Lincoln, IL	304,758
St. George, UT	184,913
Syracuse-Auburn, NY	722,067
Tuscaloosa, AL	253,211
Urban Honolulu, HI	963,826
Virginia Beach-Norfolk, VA-NC	1,871,410
Waterloo-Cedar Falls, IA	168,314
Wheeling, WV-OH	137,217
Wilmington, NC	301,284
Yuma, AZ	217,824

Note:
Monitors in these cities reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2012 NAAQS.

Table 3b Top 25 Cleanest U.S. Cities for Year-Round Particle Pollution (Annual $PM_{2.5}$)

2022 Rank	Design Value	Metropolitan Statistical Area	Population
1	3.4	Cheyenne, WY	100,595
2	3.7	Wilmington, NC	301,284
3	3.8	Urban Honolulu, HI	963,826
4	3.9	Kahului-Wailuku-Lahaina, HI	167,902
5	4.6	Bangor, ME	151,655
6	4.7	Casper, WY	80,815
7	5.1	Bellingham, WA	231,016
8	5.2	Bismarck, ND	129,641
8	5.2	Elmira-Corning, NY	177,279
8	5.2	Sioux Falls, SD	273,566
8	5.2	St. George, UT	184,913
12	5.6	Duluth, MN-WI	288,648
13	5.7	Asheville-Marion-Brevard, NC	546,914
13	5.7	Colorado Springs, CO	753,839
13	5.7	Grand Junction, CO	155,603
13	5.7	Syracuse-Auburn, NY	722,067
17	5.8	Pittsfield, MA	124,571
18	6.0	Lynchburg, VA	264,386
19	6.2	Greenville-Kinston-Washington, NC	285,717
19	6.2	Saginaw-Midland-Bay City, MI	375,696
21	6.3	Charlottesville, VA	219,910
22	6.5	Anchorage, AK	397,308
22	6.5	Palm Bay-Melbourne-Titusville, FL	608,459
22	6.5	Rapid City-Spearfish, SD	170,735
25	6.6	Burlington-South Burlington-Barre, VT	279,488
25	6.6	Fargo-Wahpeton, ND-MN	270,911
25	6.6	Harrisonburg-Staunton, VA	260,025
25	6.6	Lincoln-Beatrice, NE	359,267
25	6.6	Roanoke, VA	313,784
25	6.6	Rochester-Batavia-Seneca Falls, NY	1,158,471
25	6.6	Virginia Beach-Norfolk, VA-NC	1,871,410

Notes:
Cities are ranked by using the highest design value for any county within that metropolitan area.

Table 3c Cleanest U.S. Cities for Ozone Air Pollution

Metropolitan Statistical Area	Population
Altoona-Huntingdon, PA	165,597
Bangor, ME	151,655
Bismarck, ND	129,641
Blacksburg-Christiansburg, VA	167,244
Bowling Green-Glasgow, KY	235,109
Brownsville-Harlingen-Raymondville, TX	445,341
Brunswick, GA	119,157
Burlington-South Burlington-Barre, VT	279,488
Charlottesville, VA	219,910
Cheyenne, WY	100,595
Clarksville, TN-KY	314,364
Columbus-Auburn-Opelika, GA-AL	489,489
Corpus Christi-Kingsville-Alice, TX	536,258
Crestview-Fort Walton Beach-Destin, FL	289,468
Duluth, MN-WI	288,648
Elmira-Corning, NY	177,279
Erie-Meadville, PA	352,123
Eugene-Springfield, OR	382,986
Fairbanks, AK	95,651
Fargo-Wahpeton, ND-MN	270,911
Fayetteville-Sanford-Lumberton, NC	859,593
Fayetteville-Springdale-Rogers, AR	548,634
Florence, SC	204,097
Fort Smith, AR-OK	250,434
Gadsden, AL	102,371
Gainesville-Lake City, FL	404,971
Harrisonburg-Staunton, VA	260,025
Hickory-Lenoir-Morganton, NC	370,266
Jackson-Vicksburg-Brookhaven, MS	667,859
Jacksonville-St. Marys-Palatka, FL-GA	1,718,095
Jefferson City, MO	150,198
Johnstown-Somerset, PA	201,588
La Crosse-Onalaska, WI-MN	137,134
Lafayette-Opelousas-Morgan City, LA	619,529
Laredo, TX	277,681
Lexington-Fayette-Richmond-Frankfort, KY	749,885
Lincoln-Beatrice, NE	359,267
McAllen-Edinburg, TX	939,466
Monroe-Ruston, LA	245,388
Morgantown-Fairmont, WV	196,161
Myrtle Beach-Conway, SC-NC	577,841
New Bern-Morehead City, NC	192,756
Ocala, FL	373,513
Panama City, FL	171,322
Pittsfield, MA	124,571
Quincy-Hannibal, IL-MO	113,315
Raleigh-Durham-Cary, NC	2,117,636
Rapid City-Spearfish, SD	170,735
Roanoke, VA	313,784
Rochester-Austin, MN	263,212
Rocky Mount-Wilson-Roanoke Rapids, NC	296,234
Salinas, CA	430,906
San Juan-Bayamón, PR	2,275,309
Savannah-Hinesville-Statesboro, GA	590,020
Scottsboro-Fort Payne, AL	123,240
Shreveport-Bossier City-Minden, LA	430,347
Springfield, MO	475,220
Tupelo-Corinth, MS	203,090
Urban Honolulu, HI	963,826
Virginia Beach-Norfolk, VA-NC	1,871,410
Waco, TX	277,005
Wausau-Stevens Point-Wisconsin Rapids, WI	306,751
Williamsport-Lock Haven, PA	151,166
Wilmington, NC	301,284

Notes:
Monitors in these cities reported no days when ozone air pollution reached the unhealthful range using the Air Quality Index based on 2015 NAAQS.

Table 4a Cleanest Counties for Short-Term Particle Pollution (Daily $PM_{2.5}$)

County	State	Metropolitan Statistical Area
Baldwin	AL	Mobile-Daphne-Fairhope, AL
Clay	AL	
DeKalb	AL	Scottsboro-Fort Payne, AL
Etowah	AL	Gadsden, AL
Madison	AL	Huntsville-Decatur, AL
Mobile	AL	Mobile-Daphne-Fairhope, AL
Montgomery	AL	Montgomery-Selma-Alexander City, AL
Morgan	AL	Huntsville-Decatur, AL
Russell	AL	Columbus-Auburn-Opelika, GA-AL
Tuscaloosa	AL	Tuscaloosa, AL
La Paz	AZ	
Yuma	AZ	Yuma, AZ
Arkansas	AR	
Crittenden	AR	Memphis-Forrest City, TN-MS-AR
Polk	AR	
Washington	AR	Fayetteville-Springdale-Rogers, AR
Arapahoe	CO	Denver-Aurora, CO
Delta	CO	
Mesa	CO	Grand Junction, CO
Hartford	CT	Hartford-East Hartford, CT
Litchfield	CT	New York-Newark, NY-NJ-CT-PA
New London	CT	Hartford-East Hartford, CT
Kent	DE	Philadelphia-Reading-Camden, PA-NJ-DE-MD
New Castle	DE	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Sussex	DE	Salisbury-Cambridge, MD-DE
Brevard	FL	Palm Bay-Melbourne-Titusville, FL
Escambia	FL	Pensacola-Ferry Pass, FL-AL
Miami-Dade	FL	Miami-Port St. Lucie-Fort Lauderdale, FL
Orange	FL	Orlando-Lakeland-Deltona, FL
Palm Beach	FL	Miami-Port St. Lucie-Fort Lauderdale, FL
Pinellas	FL	Tampa-St. Petersburg-Clearwater, FL
Polk	FL	Orlando-Lakeland-Deltona, FL
Sarasota	FL	North Port-Sarasota, FL
Seminole	FL	Orlando-Lakeland-Deltona, FL
Volusia	FL	Orlando-Lakeland-Deltona, FL
Clarke	GA	Atlanta-Athens-Clarke County-Sandy Springs, GA-AL
Clayton	GA	Atlanta-Athens-Clarke County-Sandy Springs, GA-AL
Cobb	GA	Atlanta-Athens-Clarke County-Sandy Springs, GA-AL
Fulton	GA	Atlanta-Athens-Clarke County-Sandy Springs, GA-AL
Glynn	GA	Brunswick, GA
Hall	GA	Atlanta-Athens-Clarke County-Sandy Springs, GA-AL
Muscogee	GA	Columbus-Auburn-Opelika, GA-AL
Honolulu	HI	Urban Honolulu, HI
Kauai	HI	
Champaign	IL	Champaign-Urbana, IL
DuPage	IL	Chicago-Naperville, IL-IN-WI
Jersey	IL	St. Louis-St. Charles-Farmington, MO-IL
Kane	IL	Chicago-Naperville, IL-IN-WI
McHenry	IL	Chicago-Naperville, IL-IN-WI
McLean	IL	Bloomington-Pontiac, IL
Macon	IL	Decatur, IL
St. Clair	IL	St. Louis-St. Charles-Farmington, MO-IL
Sangamon	IL	Springfield-Jacksonville-Lincoln, IL
Clark	IN	Louisville-Jefferson County-Elizabethtown-Bardstown, KY-IN
Dubois	IN	
Greene	IN	
Howard	IN	Kokomo-Peru, IN
Monroe	IN	Bloomington-Bedford, IN
Spencer	IN	
Tippecanoe	IN	Lafayette-West Lafayette-Frankfort, IN
Whitley	IN	Fort Wayne-Huntington-Auburn, IN
Black Hawk	IA	Waterloo-Cedar Falls, IA
Clinton	IA	Davenport-Moline, IA-IL
Johnson	IA	Cedar Rapids-Iowa City, IA
Lee	IA	Burlington-Fort Madison-Keokuk, IA-IL-MO
Linn	IA	Cedar Rapids-Iowa City, IA
Montgomery	IA	
Palo Alto	IA	
Van Buren	IA	
Woodbury	IA	Sioux City, IA-NE-SD
Trego	KS	
Bell	KY	
Boyd	KY	Charleston-Huntington-Ashland, WV-OH-KY
Campbell	KY	Cincinnati-Wilmington-Maysville, OH-KY-IN
Carter	KY	Charleston-Huntington-Ashland, WV-OH-KY
Christian	KY	Clarksville, TN-KY
Daviess	KY	Owensboro, KY
Fayette	KY	Lexington-Fayette-Richmond-Frankfort, KY
Hardin	KY	Louisville-Jefferson County-Elizabethtown-Bardstown, KY-IN
Perry	KY	
Pike	KY	
Pulaski	KY	
Warren	KY	Bowling Green-Glasgow, KY
Jefferson Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Orleans Parish	LA	New Orleans-Metairie-Hammond, LA-MS
St. Bernard Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Tangipahoa Parish	LA	New Orleans-Metairie-Hammond, LA-MS
Terrebonne Parish	LA	Houma-Thibodaux, LA
West Baton Rouge Parish	LA	Baton Rouge, LA

Notes:

Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2012 NAAQS.

Table 4a Cleanest Counties for Short-Term Particle Pollution (24-hour $PM_{2.5}$) (cont.)

County	State	Metropolitan Statistical Area
Androscoggin	ME	Portland-Lewiston-South Portland, ME
Cumberland	ME	Portland-Lewiston-South Portland, ME
Hancock	ME	
Kennebec	ME	
Oxford	ME	
Penobscot	ME	Bangor, ME
Cecil	MD	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Dorchester	MD	Salisbury-Cambridge, MD-DE
Garrett	MD	
Harford	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Howard	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Kent	MD	
Montgomery	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Prince George's	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Washington	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Bristol	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Essex	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Franklin	MA	Springfield, MA
Hampden	MA	Springfield, MA
Hampshire	MA	Springfield, MA
Middlesex	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Plymouth	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Suffolk	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Worcester	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Allegan	MI	Grand Rapids-Kentwood-Muskegon, MI
Bay	MI	Saginaw-Midland-Bay City, MI
Genesee	MI	Detroit-Warren-Ann Arbor, MI
Ingham	MI	Lansing-East Lansing, MI
Lenawee	MI	Detroit-Warren-Ann Arbor, MI
Macomb	MI	Detroit-Warren-Ann Arbor, MI
Manistee	MI	
Missaukee	MI	
Oakland	MI	Detroit-Warren-Ann Arbor, MI
Ottawa	MI	Grand Rapids-Kentwood-Muskegon, MI
St. Clair	MI	Detroit-Warren-Ann Arbor, MI
Schoolcraft	MI	
Anoka	MN	Minneapolis-St. Paul, MN-WI
Becker	MN	
Carlton	MN	Duluth, MN-WI
Cook	MN	
Lake	MN	Duluth, MN-WI
Lyon	MN	
Stearns	MN	Minneapolis-St. Paul, MN-WI
Wright	MN	Minneapolis-St. Paul, MN-WI
Bolivar	MS	Cleveland-Indianola, MS
DeSoto	MS	Memphis-Forrest City, TN-MS-AR
Harrison	MS	Gulfport-Biloxi, MS
Jackson	MS	Gulfport-Biloxi, MS
Cedar	MO	
Clay	MO	Kansas City-Overland Park-Kansas City, MO-KS
Lancaster	NE	Lincoln-Beatrice, NE
Washington	NE	Omaha-Council Bluffs-Fremont, NE-IA
Belknap	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Cheshire	NH	
Grafton	NH	
Hillsborough	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Rockingham	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Atlantic	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Bergen	NJ	New York-Newark, NY-NJ-CT-PA
Camden	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Cumberland	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Gloucester	NJ	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Hudson	NJ	New York-Newark, NY-NJ-CT-PA
Hunterdon	NJ	New York-Newark, NY-NJ-CT-PA
Mercer	NJ	New York-Newark, NY-NJ-CT-PA
Middlesex	NJ	New York-Newark, NY-NJ-CT-PA
Morris	NJ	New York-Newark, NY-NJ-CT-PA
Ocean	NJ	New York-Newark, NY-NJ-CT-PA
Passaic	NJ	New York-Newark, NY-NJ-CT-PA
Santa Fe	NM	Albuquerque-Santa Fe-Las Vegas, NM
Taos	NM	
Bronx	NY	New York-Newark, NY-NJ-CT-PA
Chautauqua	NY	
Essex	NY	
Monroe	NY	Rochester-Batavia-Seneca Falls, NY
Onondaga	NY	Syracuse-Auburn, NY
Orange	NY	New York-Newark, NY-NJ-CT-PA
Queens	NY	New York-Newark, NY-NJ-CT-PA
Richmond	NY	New York-Newark, NY-NJ-CT-PA
Steuben	NY	Elmira-Corning, NY
Suffolk	NY	New York-Newark, NY-NJ-CT-PA
Buncombe	NC	Asheville-Marion-Brevard, NC
Catawba	NC	Hickory-Lenoir-Morganton, NC
Cumberland	NC	Fayetteville-Sanford-Lumberton, NC
Davidson	NC	Greensboro-Winston-Salem-High Point, NC
Durham	NC	Raleigh-Durham-Cary, NC
Forsyth	NC	Greensboro-Winston-Salem-High Point, NC
Guilford	NC	Greensboro-Winston-Salem-High Point, NC
Jackson	NC	
Johnston	NC	Raleigh-Durham-Cary, NC
Montgomery	NC	
New Hanover	NC	Wilmington, NC
Pitt	NC	Greenville-Kinston-Washington, NC
Billings	ND	

Notes:
Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2012 NAAQS.

Table 4a Cleanest Counties for Short-Term Particle Pollution (24-hour $PM_{2.5}$) (cont.)

County	State	Metropolitan Statistical Area
Dunn	ND	
McKenzie	ND	
Allen	OH	Lima-Van Wert-Celina, OH
Athens	OH	
Butler	OH	Cincinnati-Wilmington-Maysville, OH-KY-IN
Clark	OH	Dayton-Springfield-Kettering, OH
Jefferson	OH	Pittsburgh-New Castle-Weirton, PA-OH-WV
Lake	OH	Cleveland-Akron-Canton, OH
Lawrence	OH	Charleston-Huntington-Ashland, WV-OH-KY
Medina	OH	Cleveland-Akron-Canton, OH
Montgomery	OH	Dayton-Springfield-Kettering, OH
Portage	OH	Cleveland-Akron-Canton, OH
Dewey	OK	
Sequoyah	OK	Fort Smith, AR-OK
Adams	PA	Harrisburg-York-Lebanon, PA
Armstrong	PA	Pittsburgh-New Castle-Weirton, PA-OH-WV
Bradford	PA	
Cambria	PA	Johnstown-Somerset, PA
Erie	PA	Erie-Meadville, PA
Fayette	PA	Pittsburgh-New Castle-Weirton, PA-OH-WV
Greene	PA	
Lackawanna	PA	Scranton-Wilkes-Barre, PA
Mercer	PA	Youngstown-Warren, OH-PA
Montgomery	PA	Philadelphia-Reading-Camden, PA-NJ-DE-MD
Tioga	PA	
Washington	PA	Pittsburgh-New Castle-Weirton, PA-OH-WV
Westmoreland	PA	Pittsburgh-New Castle-Weirton, PA-OH-WV
York	PA	Harrisburg-York-Lebanon, PA
Kent	RI	Boston-Worcester-Providence, MA-RI-NH-CT
Providence	RI	Boston-Worcester-Providence, MA-RI-NH-CT
Washington	RI	Boston-Worcester-Providence, MA-RI-NH-CT
Chesterfield	SC	
Edgefield	SC	Augusta-Richmond County, GA-SC
Florence	SC	Florence, SC
Richland	SC	Columbia-Orangeburg-Newberry, SC
Spartanburg	SC	Greenville-Spartanburg-Anderson, SC
York	SC	Charlotte-Concord, NC-SC
Brookings	SD	
Custer	SD	
Minnehaha	SD	Sioux Falls, SD
Blount	TN	Knoxville-Morristown-Sevierville, TN
Knox	TN	Knoxville-Morristown-Sevierville, TN
Loudon	TN	Knoxville-Morristown-Sevierville, TN
McMinn	TN	Chattanooga-Cleveland-Dalton, TN-GA
Maury	TN	Nashville-Davidson-Murfreesboro, TN
Roane	TN	Knoxville-Morristown-Sevierville, TN
Sullivan	TN	Johnson City-Kingsport-Bristol, TN-VA
Brewster	TX	
El Paso	TX	El Paso-Las Cruces, TX-NM
Iron	UT	
Washington	UT	St. George, UT
Bennington	VT	
Chittenden	VT	Burlington-South Burlington-Barre, VT
Rutland	VT	
Albemarle	VA	Charlottesville, VA
Arlington	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Charles City	VA	Richmond, VA
Chesterfield	VA	Richmond, VA
Fairfax	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Frederick	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Henrico	VA	Richmond, VA
Loudoun	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Roanoke	VA	Roanoke, VA
Rockingham	VA	Harrisonburg-Staunton, VA
Bristol City	VA	Johnson City-Kingsport-Bristol, TN-VA
Hampton City	VA	Virginia Beach-Norfolk, VA-NC
Lynchburg City	VA	Lynchburg, VA
Norfolk City	VA	Virginia Beach-Norfolk, VA-NC
Richmond City	VA	Richmond, VA
Salem City	VA	Roanoke, VA
Virginia Beach City	VA	Virginia Beach-Norfolk, VA-NC
Cabell	WV	Charleston-Huntington-Ashland, WV-OH-KY
Hancock	WV	Pittsburgh-New Castle-Weirton, PA-OH-WV
Harrison	WV	
Kanawha	WV	Charleston-Huntington-Ashland, WV-OH-KY
Marshall	WV	Wheeling, WV-OH
Monongalia	WV	Morgantown-Fairmont, WV
Ohio	WV	Wheeling, WV-OH
Wood	WV	Parkersburg-Marietta-Vienna, WV-OH
Ashland	WI	
Brown	WI	Green Bay-Shawano, WI
Dodge	WI	Milwaukee-Racine-Waukesha, WI
Eau Claire	WI	Eau Claire-Menomonie, WI
Forest	WI	
Kenosha	WI	Chicago-Naperville, IL-IN-WI
La Crosse	WI	La Crosse-Onalaska, WI-MN
Milwaukee	WI	Milwaukee-Racine-Waukesha, WI
Ozaukee	WI	Milwaukee-Racine-Waukesha, WI
Taylor	WI	
Vilas	WI	
Waukesha	WI	Milwaukee-Racine-Waukesha, WI
Converse	WY	
Sweetwater	WY	

Notes:
Monitors in these counties reported no days when $PM_{2.5}$ levels reached the unhealthful range using the Air Quality Index based on the 2012 NAAQS.

Table 4b Top 25 Cleanest Counties for Year-Round Particle Pollution (Annual $PM_{2.5}$)

2022 Rank	County	State	Design Value	Metropolitan Statistical Area
1	Gallatin	MT	2.2	
2	Kauai	HI	2.9	
3	Hancock	ME	3.0	
3	Carlton	MN	3.0	Duluth, MN-WI
5	Hillsborough	NH	3.1	Boston-Worcester-Providence, MA-RI-NH-CT
5	Essex	NY	3.1	
7	Custer	SD	3.2	
8	Laramie	WY	3.4	Cheyenne, WY
9	Santa Fe	NM	3.7	Albuquerque-Santa Fe-Las Vegas, NM
9	New Hanover	NC	3.7	Wilmington, NC
9	Burke	ND	3.7	
12	Honolulu	HI	3.8	Urban Honolulu, HI
12	Billings	ND	3.8	
12	Hughes	SD	3.8	
12	Park	WY	3.8	
12	Sublette	WY	3.8	
17	Maui	HI	3.9	Kahului-Wailuku-Lahaina, HI
17	Cook	MN	3.9	
19	Belknap	NH	4.1	Boston-Worcester-Providence, MA-RI-NH-CT
19	McKenzie	ND	4.1	
21	La Paz	AZ	4.2	
22	Lake	MN	4.3	Duluth, MN-WI
22	Jackson	SD	4.3	
24	Brookings	SD	4.4	
25	Pima	AZ	4.5	Tucson-Nogales, AZ
25	Washington	RI	4.5	Boston-Worcester-Providence, MA-RI-NH-CT
25	Teton	WY	4.5	

Notes:
Counties are ranked by Design Value.

Table 4c Cleanest Counties for Ozone Air Pollution

County	State	Metropolitan Statistical Area
Baldwin	AL	Mobile-Daphne-Fairhope, AL
DeKalb	AL	Scottsboro-Fort Payne, AL
Elmore	AL	Montgomery-Selma-Alexander City, AL
Etowah	AL	Gadsden, AL
Morgan	AL	Huntsville-Decatur, AL
Russell	AL	Columbus-Auburn-Opelika, GA-AL
Sumter	AL	
Denali Borough	AK	
Fairbanks North Star Borough	AK	Fairbanks, AK
Clark	AR	
Newton	AR	
Washington	AR	Fayetteville-Springdale-Rogers, AR
Colusa	CA	
Glenn	CA	
Humboldt	CA	
Lake	CA	
Mendocino	CA	
Monterey	CA	Salinas, CA
Santa Cruz	CA	San Jose-San Francisco-Oakland, CA
Sonoma	CA	San Jose-San Francisco-Oakland, CA
Archuleta	CO	
Delta	CO	
Alachua	FL	Gainesville-Lake City, FL
Baker	FL	Jacksonville-St. Marys-Palatka, FL-GA
Bay	FL	Panama City, FL
Broward	FL	Miami-Port St. Lucie-Fort Lauderdale, FL
Collier	FL	Cape Coral-Fort Myers-Naples, FL
Columbia	FL	Gainesville-Lake City, FL
Duval	FL	Jacksonville-St. Marys-Palatka, FL-GA
Flagler	FL	Orlando-Lakeland-Deltona, FL
Holmes	FL	
Liberty	FL	
Marion	FL	Ocala, FL
Okaloosa	FL	Crestview-Fort Walton Beach-Destin, FL
Palm Beach	FL	Miami-Port St. Lucie-Fort Lauderdale, FL
Pinellas	FL	Tampa-St. Petersburg-Clearwater, FL
St. Lucie	FL	Miami-Port St. Lucie-Fort Lauderdale, FL
Santa Rosa	FL	Pensacola-Ferry Pass, FL-AL
Sarasota	FL	North Port-Sarasota, FL
Volusia	FL	Orlando-Lakeland-Deltona, FL
Wakulla	FL	Tallahassee, FL
Chatham	GA	Savannah-Hinesville-Statesboro, GA
Chattooga	GA	Chattanooga-Cleveland-Dalton, TN-GA
Columbia	GA	Augusta-Richmond County, GA-SC
Glynn	GA	Brunswick, GA
Murray	GA	Chattanooga-Cleveland-Dalton, TN-GA
Muscogee	GA	Columbus-Auburn-Opelika, GA-AL
Sumter	GA	
Honolulu	HI	Urban Honolulu, HI
Adams	IL	Quincy-Hannibal, IL-MO
Brown	IN	Indianapolis-Carmel-Muncie, IN
Clinton	IA	Davenport-Moline, IA-IL
Montgomery	IA	
Van Buren	IA	
Johnson	KS	Kansas City-Overland Park-Kansas City, MO-KS
Leavenworth	KS	Kansas City-Overland Park-Kansas City, MO-KS
Sumner	KS	Wichita-Winfield, KS
Trego	KS	
Bell	KY	
Carter	KY	Charleston-Huntington-Ashland, WV-OH-KY
Christian	KY	Clarksville, TN-KY
Edmonson	KY	Bowling Green-Glasgow, KY
Fayette	KY	Lexington-Fayette-Richmond-Frankfort, KY
Hancock	KY	Owensboro, KY
Hardin	KY	Louisville-Jefferson County-Elizabethtown-Bardstown, KY-IN
Jessamine	KY	Lexington-Fayette-Richmond-Frankfort, KY
McCracken	KY	Paducah-Mayfield, KY-IL
Morgan	KY	
Perry	KY	
Pike	KY	
Pulaski	KY	
Simpson	KY	
Trigg	KY	Clarksville, TN-KY
Warren	KY	Bowling Green-Glasgow, KY
Washington	KY	
Bossier Parish	LA	Shreveport-Bossier City-Minden, LA
Caddo Parish	LA	Shreveport-Bossier City-Minden, LA
Lafayette Parish	LA	Lafayette-Opelousas-Morgan City, LA
Livingston Parish	LA	Baton Rouge, LA
Ouachita Parish	LA	Monroe-Ruston, LA
St. James Parish	LA	New Orleans-Metairie-Hammond, LA-MS
St. Martin Parish	LA	Lafayette-Opelousas-Morgan City, LA
Androscoggin	ME	Portland-Lewiston-South Portland, ME
Aroostook	ME	
Cumberland	ME	Portland-Lewiston-South Portland, ME
Kennebec	ME	
Oxford	ME	
Penobscot	ME	Bangor, ME
Garrett	MD	
Washington	MD	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA

Note:
Monitors in these counties reported no days when ozone air pollution reached the unhealthful range using the Air Quality Index based on 2015 NAAQS.

Table 4c Cleanest Counties for Ozone Air Pollution (cont.)

County	State	Metropolitan Statistical Area
Berkshire	MA	Pittsfield, MA
Franklin	MA	Springfield, MA
Middlesex	MA	Boston-Worcester-Providence, MA-RI-NH-CT
Carlton	MN	Duluth, MN-WI
Hennepin	MN	Minneapolis-St. Paul, MN-WI
Lake	MN	Duluth, MN-WI
Lyon	MN	
Mille Lacs	MN	Minneapolis-St. Paul, MN-WI
Olmsted	MN	Rochester-Austin, MN
St. Louis	MN	Duluth, MN-WI
Washington	MN	Minneapolis-St. Paul, MN-WI
Hancock	MS	Gulfport-Biloxi, MS
Hinds	MS	Jackson-Vicksburg-Brookhaven, MS
Lauderdale	MS	
Lee	MS	Tupelo-Corinth, MS
Yalobusha	MS	
Callaway	MO	Jefferson City, MO
Cedar	MO	
Greene	MO	Springfield, MO
Ste. Genevieve	MO	
Flathead	MT	
Lewis and Clark	MT	
Phillips	MT	
Richland	MT	
Rosebud	MT	
Knox	NE	
Lancaster	NE	Lincoln-Beatrice, NE
Belknap	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Cheshire	NH	
Grafton	NH	
Hillsborough	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Merrimack	NH	Boston-Worcester-Providence, MA-RI-NH-CT
Monmouth	NJ	New York-Newark, NY-NJ-CT-PA
Hamilton	NY	
Steuben	NY	Elmira-Corning, NY
Alexander	NC	Hickory-Lenoir-Morganton, NC
Avery	NC	
Buncombe	NC	Asheville-Marion-Brevard, NC
Caldwell	NC	Hickory-Lenoir-Morganton, NC
Carteret	NC	New Bern-Morehead City, NC
Caswell	NC	
Cumberland	NC	Fayetteville-Sanford-Lumberton, NC
Durham	NC	Raleigh-Durham-Cary, NC
Edgecombe	NC	Rocky Mount-Wilson-Roanoke Rapids, NC
Graham	NC	
Granville	NC	Raleigh-Durham-Cary, NC
Johnston	NC	Raleigh-Durham-Cary, NC
Lincoln	NC	Charlotte-Concord, NC-SC
Macon	NC	
Martin	NC	
Montgomery	NC	
New Hanover	NC	Wilmington, NC
Person	NC	Raleigh-Durham-Cary, NC
Pitt	NC	Greenville-Kinston-Washington, NC
Rockingham	NC	Greensboro-Winston-Salem-High Point, NC
Rowan	NC	Charlotte-Concord, NC-SC
Swain	NC	
Wake	NC	Raleigh-Durham-Cary, NC
Yancey	NC	
Billings	ND	
Burke	ND	
Burleigh	ND	Bismarck, ND
Cass	ND	Fargo-Wahpeton, ND-MN
Dunn	ND	
McKenzie	ND	
Mercer	ND	
Oliver	ND	Bismarck, ND
Ward	ND	
Fayette	OH	Columbus-Marion-Zanesville, OH
Licking	OH	Columbus-Marion-Zanesville, OH
Mahoning	OH	Youngstown-Warren, OH-PA
Medina	OH	Cleveland-Akron-Canton, OH
Noble	OH	
Adair	OK	
Kay	OK	
Ottawa	OK	Joplin-Miami, MO-OK
Sequoyah	OK	Fort Smith, AR-OK
Columbia	OR	Portland-Vancouver-Salem, OR-WA
Lane	OR	Eugene-Springfield, OR
Marion	OR	Portland-Vancouver-Salem, OR-WA
Umatilla	OR	
Blair	PA	Altoona-Huntingdon, PA
Bradford	PA	
Cambria	PA	Johnstown-Somerset, PA
Centre	PA	State College-DuBois, PA
Elk	PA	
Erie	PA	Erie-Meadville, PA
Franklin	PA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Lackawanna	PA	Scranton-Wilkes-Barre, PA
Lawrence	PA	Pittsburgh-New Castle-Weirton, PA-OH-WV
Lycoming	PA	Williamsport-Lock Haven, PA
Somerset	PA	Johnstown-Somerset, PA

Note:
Monitors in these counties reported no days when ozone air pollution reached the unhealthful range using the Air Quality Index based on 2015 NAAQS.

Table 4c Cleanest Counties for Ozone Air Pollution (cont.)

County	State	Metropolitan Statistical Area
Tioga	PA	
Aiken	SC	Augusta-Richmond County, GA-SC
Berkeley	SC	Charleston-North Charleston, SC
Chesterfield	SC	
Darlington	SC	Florence, SC
Edgefield	SC	Augusta-Richmond County, GA-SC
Horry	SC	Myrtle Beach-Conway, SC-NC
Jackson	SD	
Meade	SD	Rapid City-Spearfish, SD
Claiborne	TN	
DeKalb	TN	
Jefferson	TN	Knoxville-Morristown-Sevierville, TN
Brewster	TX	
Cameron	TX	Brownsville-Harlingen-Raymondville, TX
Harrison	TX	Longview, TX
Hidalgo	TX	McAllen-Edinburg, TX
McLennan	TX	Waco, TX
Nueces	TX	Corpus Christi-Kingsville-Alice, TX
Polk	TX	
Webb	TX	Laredo, TX
Iron	UT	
Chittenden	VT	Burlington-South Burlington-Barre, VT
Rutland	VT	
Albemarle	VA	Charlottesville, VA
Caroline	VA	
Chesterfield	VA	Richmond, VA
Fauquier	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Frederick	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Giles	VA	Blacksburg-Christiansburg, VA
Hanover	VA	Richmond, VA
Madison	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Prince Edward	VA	
Prince William	VA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Roanoke	VA	Roanoke, VA
Rockbridge	VA	
Rockingham	VA	Harrisonburg-Staunton, VA
Wythe	VA	
Hampton City	VA	Virginia Beach-Norfolk, VA-NC
Suffolk City	VA	Virginia Beach-Norfolk, VA-NC
Clallam	WA	
Clark	WA	Portland-Vancouver-Salem, OR-WA
Skagit	WA	Seattle-Tacoma, WA
Berkeley	WV	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA
Cabell	WV	Charleston-Huntington-Ashland, WV-OH-KY
Gilmer	WV	
Greenbrier	WV	
Monongalia	WV	Morgantown-Fairmont, WV
Tucker	WV	
Wood	WV	Parkersburg-Marietta-Vienna, WV-OH
Ashland	WI	
Forest	WI	
La Crosse	WI	La Crosse-Onalaska, WI-MN
Marathon	WI	Wausau-Stevens Point-Wisconsin Rapids, WI
Taylor	WI	
Vilas	WI	
Johnson	WY	
Laramie	WY	Cheyenne, WY
Cataño	PR	San Juan-Bayamón, PR

Note:
Monitors in these counties reported no days when ozone air pollution reached the unhealthful range using the Air Quality Index based on 2015 NAAQS.

ALABAMA

American Lung Association in Alabama

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Baldwin	0	0	0	0.0	A	0	0	0	0	0.0	A	7.5	Pass
Clay	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.0	Pass
Colbert	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
DeKalb	0	0	0	0.0	A	0	0	0	0	0.0	A	7.2	Pass
Elmore	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Etowah	0	0	0	0.0	A	0	0	0	0	0.0	A	8.0	Pass
Houston	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Jefferson	15	1	0	5.5	F	1	0	0	0	0.3	B	10.0	Pass
Madison	1	0	0	0.3	B	0	0	0	0	0.0	A	7.3	Pass
Mobile	1	0	0	0.3	B	0	0	0	0	0.0	A	8.1	Pass
Montgomery	1	0	0	0.3	B	0	0	0	0	0.0	A	8.4	Pass
Morgan	0	0	0	0.0	A	0	0	0	0	0.0	A	7.3	Pass
Russell	0	0	0	0.0	A	0	0	0	0	0.0	A	9.1	Pass
Shelby	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sumter	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tuscaloosa	1	0	0	0.3	B	0	0	0	0	0.0	A	7.7	Pass

ALABAMA

American Lung Association in Alabama

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Baldwin	229,287	48,445	49,485	6,393	16,246	19,461	143	21,977	2,362	20,189	38,272
Clay	13,112	2,665	2,805	352	939	1,126	8	1,269	137	1,818	2,547
Colbert	55,411	11,601	11,387	1,531	3,942	4,600	34	5,151	598	7,864	12,434
DeKalb	71,658	17,170	12,839	2,266	4,919	5,579	45	6,159	756	10,778	14,639
Elmore	82,158	18,049	13,411	2,382	5,808	6,329	51	6,866	982	8,972	22,075
Etowah	102,371	21,858	20,061	2,885	7,256	8,379	64	9,327	1,125	15,650	23,418
Houston	106,580	24,312	19,910	3,208	7,420	8,422	66	9,327	1,203	15,534	36,710
Jefferson	655,342	148,938	109,511	19,656	45,818	49,372	406	53,674	7,998	92,310	332,780
Madison	379,453	81,893	59,238	10,808	26,992	28,973	237	31,205	4,447	39,100	134,961
Mobile	412,716	95,867	70,526	12,652	28,647	31,356	256	34,261	4,857	71,398	180,441
Montgomery	224,639	52,655	35,947	6,949	15,575	16,579	139	17,930	2,769	44,058	152,969
Morgan	119,883	27,402	21,897	3,616	8,349	9,516	75	10,517	1,265	16,995	30,059
Russell	58,237	13,957	8,779	1,842	4,017	4,271	36	4,592	704	11,702	31,825
Shelby	221,428	50,700	36,343	6,691	15,461	17,029	138	18,530	2,587	15,227	51,670
Sumter	12,225	2,361	2,426	312	889	977	8	1,080	155	3,338	9,119
Tuscaloosa	210,758	43,973	29,766	5,803	15,158	14,913	131	15,684	2,929	28,776	83,670

ALASKA

American Lung Association in Alaska

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Anchorage Municipality	DNC	DNC	DNC	DNC	DNC	4	4	0	0	3.3	F	6.5	Pass
Denali Borough	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fairbanks North Star Borough	0	0	0	0.0	A	52	34	1	3	37.5	F	13.0	Fail
Juneau City and Borough	DNC	DNC	DNC	DNC	DNC	4	0	0	0	1.3	C	6.1	Pass
Matanuska-Susitna Borough	INC	INC	INC	INC	INC	3	0	0	0	1.0	C	5.2	Pass

ALASKA

American Lung Association in Alaska

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Anchorage Municipality	287,095	68,438	35,114	5,100	19,598	9,808	138	14,690	3,944	23,200	125,275
Denali Borough	2,081	352	264	26	153	80	1	121	28	127	457
Fairbanks North Star Borough	95,651	22,646	11,227	1,687	6,590	3,143	46	4,605	1,259	6,565	29,538
Juneau City and Borough	31,849	6,595	4,720	491	2,257	1,214	15	1,887	421	2,510	11,547
Matanuska-Susitna Borough	110,213	431	169	32	94	49	1	74	18	9,365	24,229

ARIZONA

American Lung Association in Arizona

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Apache	DNC	DNC	DNC	DNC	DNC
Cochise	2	0	0	0.7	B
Coconino	2	0	0	0.7	B
Gila	42	3	0	15.5	F
La Paz	4	0	0	1.3	C
Maricopa	109	6	0	39.3	F
Navajo	4	0	0	1.3	C
Pima	16	0	0	5.3	F
Pinal	49	1	0	16.8	F
Santa Cruz	DNC	DNC	DNC	DNC	DNC
Yavapai	2	0	0	0.7	B
Yuma	6	0	0	2.0	C

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Apache	0	0	0	0	0.0	A	INC	INC
Cochise	INC	INC	INC	INC	INC	INC	INC	INC
Coconino	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Gila	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Paz	0	0	0	0	0.0	A	4.2	Pass
Maricopa	17	3	1	0	7.8	F	9.7	Pass
Navajo	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pima	1	0	0	0	0.3	B	4.5	Pass
Pinal	36	3	0	0	13.5	F	12.8	Fail
Santa Cruz	7	2	0	0	3.3	F	9.2	Pass
Yavapai	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Yuma	0	0	0	0	0.0	A	8.6	Pass

ARIZONA

American Lung Association in Arizona

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Apache	71,875	19,055	11,834	1,536	5,140	3,174	30	4,193	679	22,939	58,861
Cochise	127,450	26,725	30,285	2,154	9,755	6,666	53	9,186	1,083	17,815	57,628
Coconino	142,481	28,386	19,744	2,288	11,108	5,950	59	7,586	1,825	22,540	65,515
Gila	54,303	10,483	16,358	845	4,232	3,262	22	4,628	395	8,911	20,775
La Paz	21,480	3,351	8,956	270	1,736	1,504	9	2,228	137	4,405	9,268
Maricopa	4,579,081	1,057,472	729,812	85,248	342,822	203,645	1,889	266,182	49,346	520,797	2,100,910
Navajo	112,112	28,787	21,896	2,321	8,092	5,307	46	7,168	975	25,532	65,128
Pima	1,061,175	214,766	221,336	17,313	82,112	52,480	438	70,916	10,911	154,790	521,192
Pinal	480,828	105,196	103,815	8,480	36,422	23,957	199	32,622	4,275	50,810	212,467
Santa Cruz	46,808	12,345	8,955	995	3,347	2,177	19	2,936	451	7,810	39,590
Yavapai	240,226	37,447	80,939	3,019	19,558	15,620	99	22,367	1,687	25,610	48,459
Yuma	217,824	53,985	43,682	4,352	15,876	10,019	90	13,590	2,013	31,745	152,526

ARKANSAS

American Lung Association in Arkansas

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Arkansas	DNC	DNC	DNC	DNC	DNC
Ashley	DNC	DNC	DNC	DNC	DNC
Benton	DNC	DNC	DNC	DNC	DNC
Clark	0	0	0	0.0	A
Craighead	DNC	DNC	DNC	DNC	DNC
Crittenden	6	0	0	2.0	C
Garland	DNC	DNC	DNC	DNC	DNC
Jackson	DNC	DNC	DNC	DNC	DNC
Newton	0	0	0	0.0	A
Polk	1	0	0	0.3	B
Pulaski	3	0	0	1.0	C
Union	DNC	DNC	DNC	DNC	DNC
Washington	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Arkansas	0	0	0	0	0.0	A	7.8	Pass
Ashley	1	0	0	0	0.3	B	INC	INC
Benton	INC	INC	INC	INC	INC	INC	INC	INC
Clark	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Craighead	INC	INC	INC	INC	INC	INC	INC	INC
Crittenden	0	0	0	0	0.0	A	8.2	Pass
Garland	0	0	0	0	0.0	A	INC	INC
Jackson	0	0	0	0	0.0	A	INC	INC
Newton	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Polk	0	0	0	0	0.0	A	8.2	Pass
Pulaski	1	0	0	0	0.3	B	9.0	Pass
Union	1	0	0	0	0.3	B	INC	INC
Washington	0	0	0	0	0.0	A	7.8	Pass

ARKANSAS

American Lung Association in Arkansas

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Arkansas	17,383	4,017	3,562	299	1,231	1,295	13	1,768	184	2,940	5,510
Ashley	19,339	4,361	4,181	325	1,383	1,489	15	2,036	198	3,279	6,154
Benton	288,774	74,410	39,776	5,545	19,409	17,665	221	23,531	3,515	25,970	81,222
Clark	22,103	4,181	3,783	312	1,617	1,466	17	1,993	309	3,830	7,040
Craighead	112,245	27,886	15,883	2,078	7,623	6,864	86	9,183	1,444	18,130	28,896
Crittenden	47,616	12,816	6,944	955	3,171	3,028	36	4,035	567	10,671	28,522
Garland	99,789	19,753	24,664	1,472	7,396	8,111	76	11,244	1,009	15,359	18,552
Jackson	16,636	3,375	3,108	251	1,212	1,201	13	1,626	187	3,344	3,868
Newton	7,602	1,462	2,110	109	571	660	6	921	66	1,406	533
Polk	19,707	4,402	4,677	328	1,417	1,568	15	2,165	187	3,538	2,360
Pulaski	392,980	90,601	64,898	6,751	27,540	26,453	299	35,589	4,836	59,031	192,557
Union	38,219	9,101	7,190	678	2,674	2,742	29	3,716	410	6,381	15,095
Washington	243,216	58,194	30,165	4,336	16,606	14,059	187	18,674	3,255	30,994	72,899

CALIFORNIA

American Lung Association in California

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Alameda	15	1	0	5.5	F	9	20	3	0	15.0	F	11.0	Pass
Amador	10	1	0	3.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Butte	25	5	0	10.8	F	25	19	4	3	23.0	F	12.2	Fail
Calaveras	14	2	0	5.7	F	21	18	0	0	16.0	F	10.9	Pass
Colusa	0	0	0	0.0	A	18	35	0	0	23.5	F	10.2	Pass
Contra Costa	10	0	0	3.3	F	11	20	2	0	15.0	F	10.5	Pass
Del Norte	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
El Dorado	49	13	1	23.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fresno	156	15	1	60.2	F	77	45	5	0	51.5	F	15.7	Fail
Glenn	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Humboldt	0	0	0	0.0	A	4	0	0	0	1.3	C	7.7	Pass
Imperial	51	3	0	18.5	F	15	1	0	0	5.5	F	12.1	Fail
Inyo	35	0	0	11.7	F	17	28	8	5	29.2	F	8.0	Pass
Kern	225	39	1	95.2	F	79	28	1	0	41.0	F	17.6	Fail
Kings	69	1	0	23.5	F	86	24	0	0	40.7	F	16.6	Fail
Lake	0	0	0	0.0	A	2	4	1	0	3.3	F	7.2	Pass
Los Angeles	190	79	17	114.2	F	42	12	1	0	20.7	F	13.0	Fail
Madera	57	3	0	20.5	F	36	22	1	0	23.7	F	13.5	Fail
Marin	1	0	0	0.3	B	7	13	2	0	10.2	F	8.7	Pass
Mariposa	52	8	0	21.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mendocino	0	0	0	0.0	A	22	16	2	3	19.2	F	9.2	Pass
Merced	45	2	0	16.0	F	27	23	0	0	20.5	F	13.1	Fail
Mono	DNC	DNC	DNC	DNC	DNC	25	26	12	18	44.3	F	20.7	Fail
Monterey	0	0	0	0.0	A	10	11	2	0	10.2	F	7.2	Pass
Napa	3	0	0	1.0	C	10	16	0	0	11.3	F	INC	INC
Nevada	35	7	1	15.8	F	18	18	3	0	17.0	F	8.8	Pass
Orange	43	10	2	20.7	F	20	4	0	0	8.7	F	11.0	Pass
Placer	43	3	0	15.8	F	23	18	1	0	17.3	F	10.6	Pass
Plumas	DNC	DNC	DNC	DNC	DNC	21	18	0	1	16.8	F	15.9	Fail
Riverside	252	84	11	133.3	F	29	6	0	0	12.7	F	13.8	Fail
Sacramento	36	2	0	13.0	F	22	21	5	0	21.2	F	11.9	Pass
San Benito	4	0	0	1.3	C	16	8	0	0	9.3	F	7.0	Pass
San Bernardino	220	169	33	179.8	F	32	6	0	0	13.7	F	14.2	Fail
San Diego	79	6	0	29.3	F	21	10	0	0	12.0	F	9.6	Pass
San Francisco	1	0	0	0.3	B	5	16	1	0	10.3	F	9.9	Pass
San Joaquin	16	0	0	5.3	F	34	24	3	0	25.3	F	13.8	Fail
San Luis Obispo	31	0	1	11.0	F	7	8	2	0	7.7	F	8.0	Pass
San Mateo	3	0	0	1.0	C	7	15	0	0	9.8	F	9.1	Pass
Santa Barbara	6	1	0	2.5	D	9	3	0	0	4.5	F	8.2	Pass
Santa Clara	9	1	0	3.5	F	16	19	0	0	14.8	F	11.1	Pass

CALIFORNIA (cont.)

American Lung Association in California

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Santa Cruz	0	0	0	0.0	A	11	15	2	2	14.2	F	7.7	Pass
Shasta	18	1	0	6.5	F	2	6	0	0	3.7	F	10.9	Pass
Siskiyou	4	0	0	1.3	C	27	34	2	1	28.2	F	10.4	Pass
Solano	5	0	0	1.7	C	8	15	2	0	11.5	F	11.3	Pass
Sonoma	0	0	0	0.0	A	4	14	2	0	9.7	F	7.4	Pass
Stanislaus	51	4	0	19.0	F	40	26	1	0	27.0	F	14.5	Fail
Sutter	25	2	0	9.3	F	25	14	1	1	16.8	F	11.7	Pass
Tehama	19	3	0	7.8	F	21	34	0	0	24.0	F	9.7	Pass
Tulare	231	27	2	91.8	F	32	6	0	0	13.7	F	16.6	Fail
Tuolumne	27	1	0	9.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ventura	39	4	0	15.0	F	7	2	0	0	3.3	F	8.0	Pass
Yolo	4	0	0	1.3	C	3	2	1	0	2.7	D	INC	INC

CALIFORNIA

American Lung Association in California

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Alameda	1,662,323	334,971	245,136	22,856	124,778	70,046	620	90,268	18,797	139,636	1,163,564
Amador	40,083	6,040	11,232	412	3,207	2,421	15	3,191	259	3,678	9,303
Butte	212,744	42,938	39,082	2,930	15,926	9,726	79	12,496	2,241	35,963	63,972
Calaveras	46,308	7,822	13,402	534	3,629	2,838	17	3,754	331	5,310	9,493
Colusa	21,558	5,817	3,313	397	1,480	879	8	1,136	207	2,200	14,267
Contra Costa	1,152,333	256,001	192,734	17,468	84,451	51,425	430	67,134	11,521	82,136	670,745
Del Norte	27,968	5,792	5,323	395	2,086	1,322	11	1,719	213	4,604	10,719
El Dorado	192,925	37,833	43,941	2,581	14,636	10,277	72	13,570	1,589	15,992	44,987
Fresno	1,000,918	281,011	128,421	19,174	67,574	36,996	374	47,320	10,378	168,153	721,213
Glenn	28,283	7,543	4,694	515	1,950	1,199	11	1,554	260	3,470	14,143
Humboldt	134,977	25,426	25,762	1,735	10,281	6,368	50	8,208	1,433	20,847	36,157
Imperial	180,267	51,396	24,546	3,507	12,094	6,800	67	8,707	1,688	31,134	162,934
Inyo	18,046	3,712	4,385	253	1,349	973	7	1,277	147	1,940	7,134
Kern	901,362	258,380	104,230	17,630	60,364	31,826	337	40,622	9,077	159,609	611,843
Kings	152,692	41,006	16,579	2,798	10,470	5,278	58	6,672	1,442	19,874	105,553
Lake	64,479	13,821	15,131	943	4,772	3,412	24	4,485	516	10,131	20,728
Los Angeles	9,943,046	2,099,477	1,444,480	143,253	737,556	414,388	3,709	534,658	109,495	1,289,368	7,372,841
Madera	157,761	43,084	23,092	2,940	10,774	6,252	59	8,056	1,688	21,211	106,349
Marin	257,332	50,067	60,655	3,416	19,576	14,042	96	18,604	2,076	15,119	75,458
Mariposa	17,160	2,799	4,935	191	1,352	1,044	6	1,375	127	2,258	3,673
Mendocino	86,061	18,165	20,420	1,239	6,387	4,551	32	5,958	735	12,099	31,154
Merced	279,252	80,994	32,779	5,526	18,609	9,874	104	12,598	2,894	44,302	207,335
Mono	14,534	2,517	2,496	172	1,132	677	5	882	143	1,285	5,019
Monterey	430,906	111,407	62,634	7,602	30,015	17,209	161	22,152	4,259	47,870	305,910
Napa	135,965	27,002	27,606	1,842	10,258	6,719	51	8,780	1,282	10,356	66,033
Nevada	99,606	16,777	28,765	1,145	7,800	6,055	37	7,982	766	9,040	15,312
Orange	3,166,857	682,093	497,745	46,541	233,982	137,580	1,181	178,926	32,806	280,128	1,924,519
Placer	402,950	88,446	82,115	6,035	29,623	19,749	150	25,871	3,690	25,815	118,520
Plumas	18,967	3,308	5,772	226	1,475	1,184	7	1,563	136	2,509	3,312
Riverside	2,489,188	611,654	377,582	41,735	176,509	102,838	930	132,868	25,397	275,176	1,663,704
Sacramento	1,559,146	362,640	230,866	24,744	112,481	64,346	581	83,031	16,617	192,386	889,492
San Benito	64,055	16,309	8,659	1,113	4,492	2,518	24	3,255	640	5,025	43,663
San Bernardino	2,189,183	568,470	267,911	38,788	152,317	81,573	817	104,690	23,333	308,021	1,611,307
San Diego	3,332,427	707,614	496,393	48,282	246,524	138,923	1,246	178,459	35,587	306,807	1,852,772
San Francisco	866,606	116,585	144,152	7,955	70,332	39,484	324	50,403	10,530	85,356	523,767
San Joaquin	767,967	204,755	102,362	13,971	52,942	29,509	287	38,004	7,872	104,295	542,155
San Luis Obispo	282,249	49,195	60,460	3,357	21,870	14,227	106	18,390	2,736	28,338	90,044
San Mateo	758,308	151,086	129,480	10,309	57,148	34,426	283	44,743	7,784	41,158	469,896
Santa Barbara	444,766	98,377	71,442	6,713	32,475	18,788	166	24,015	4,770	44,777	251,968
Santa Clara	1,907,105	406,243	271,911	27,719	141,158	78,874	713	101,807	20,206	123,516	1,340,420

CALIFORNIA (cont.)

American Lung Association in California

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Santa Cruz	269,925	50,533	48,696	3,448	20,614	12,516	101	16,179	2,885	27,524	116,814
Shasta	179,027	38,519	38,146	2,628	13,218	8,925	67	11,652	1,607	24,570	38,200
Siskiyou	43,245	8,737	11,611	596	3,248	2,472	16	3,252	327	6,086	10,934
Solano	446,935	97,645	75,173	6,663	32,858	19,819	167	25,718	4,396	40,283	284,884
Sonoma	489,819	93,925	103,462	6,409	37,262	24,750	183	32,341	4,618	37,609	184,480
Stanislaus	550,081	147,826	74,916	10,087	37,802	21,250	205	27,355	5,609	70,568	333,529
Sutter	96,385	24,577	15,597	1,677	6,750	4,069	36	5,266	940	10,984	53,851
Tehama	64,494	15,308	13,076	1,045	4,630	3,105	24	4,060	557	8,467	21,600
Tulare	468,680	141,778	55,595	9,674	30,688	16,485	175	21,064	4,807	79,348	341,854
Tuolumne	54,515	9,172	14,909	626	4,264	3,187	20	4,178	395	6,158	11,430
Ventura	841,387	187,555	140,361	12,797	61,559	37,289	314	48,545	8,314	75,060	468,307
Yolo	219,728	45,195	29,180	3,084	16,340	8,546	82	10,777	2,780	31,066	119,985

COLORADO

American Lung Association in Colorado

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Adams	10	1	0	3.8	F	4	0	0	0	1.3	C	INC	INC
Arapahoe	29	3	0	11.2	F	0	0	0	0	0.0	A	6.1	Pass
Archuleta	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boulder	40	1	0	13.8	F	16	2	0	0	6.3	F	8.1	Pass
Chaffee	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clear Creek	30	3	0	11.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Delta	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
Denver	18	0	0	6.0	F	13	1	0	0	4.8	F	9.9	Pass
Douglas	41	7	0	17.2	F	9	0	0	0	3.0	D	6.9	Pass
El Paso	13	1	0	4.8	F	1	0	0	0	0.3	B	5.7	Pass
Garfield	17	1	0	6.2	F	1	0	0	0	0.3	B	INC	INC
Gilpin	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Grand	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Gunnison	6	1	0	2.5	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	74	6	0	27.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Plata	6	0	0	2.0	C	INC	INC	INC	INC	INC	INC	INC	INC
Larimer	39	3	0	14.5	F	13	1	0	0	4.8	F	7.2	Pass
Mesa	7	0	0	2.3	D	0	0	0	0	0.0	A	5.7	Pass
Moffat	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montezuma	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montrose	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Park	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Pueblo	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Rio Blanco	4	0	0	1.3	C	1	0	0	0	0.3	B	8.3	Pass
San Miguel	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Teller	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Weld	13	0	0	4.3	F	14	0	0	0	4.7	F	9.5	Pass

COLORADO

American Lung Association in Colorado

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Adams	519,883	133,141	57,362	9,921	37,408	16,014	196	20,298	5,617	48,180	267,852
Arapahoe	657,452	150,660	91,972	11,227	48,661	22,707	248	29,372	6,953	45,760	270,418
Archuleta	14,196	2,503	3,910	187	1,086	702	5	965	102	1,319	3,292
Boulder	327,171	59,914	51,081	4,465	25,632	12,094	124	15,711	3,567	30,205	73,470
Chaffee	20,661	3,078	5,453	229	1,644	997	8	1,360	153	1,844	3,050
Clear Creek	9,586	1,393	2,079	104	772	440	4	590	78	695	1,163
Delta	31,067	6,064	8,545	452	2,322	1,493	12	2,057	225	3,690	5,858
Denver	735,538	137,511	89,428	10,247	58,011	23,813	278	30,060	9,341	89,598	329,197
Douglas	360,750	88,474	47,154	6,593	26,098	12,494	136	16,151	3,592	10,942	69,507
El Paso	728,310	171,062	98,703	12,747	53,623	24,352	275	31,378	7,563	64,656	231,494
Garfield	60,366	15,090	8,616	1,124	4,336	2,088	23	2,716	578	3,965	19,754
Gilpin	6,235	887	1,171	66	506	279	2	370	54	408	834
Grand	15,794	2,543	3,044	189	1,256	673	6	893	138	1,071	2,126
Gunnison	17,593	2,848	2,502	212	1,422	630	7	807	194	1,595	2,348
Jefferson	583,283	111,382	101,112	8,300	44,992	22,668	220	29,819	5,838	34,963	131,377
La Plata	56,564	10,303	11,042	768	4,388	2,331	21	3,100	549	5,447	12,192
Larimer	360,428	68,325	60,330	5,091	27,972	13,385	136	17,499	3,960	34,579	65,512
Mesa	155,603	32,525	31,773	2,424	11,643	6,334	59	8,483	1,459	16,752	29,907
Moffat	13,144	3,283	2,180	245	938	483	5	638	118	1,290	2,717
Montezuma	26,408	5,575	6,352	415	1,949	1,177	10	1,604	214	3,374	7,322
Montrose	43,322	9,005	10,818	671	3,205	1,966	16	2,688	347	4,477	10,481
Park	18,955	2,843	4,312	212	1,510	906	7	1,223	135	1,476	2,137
Pueblo	169,823	37,631	32,929	2,804	12,523	6,720	64	8,970	1,594	23,367	82,505
Rio Blanco	6,342	1,532	1,081	114	458	235	2	311	58	597	1,009
San Miguel	8,105	1,357	1,337	101	644	324	3	424	80	611	1,236
Teller	25,529	4,258	6,188	317	1,987	1,223	10	1,661	188	1,856	3,328
Weld	333,983	85,801	42,529	6,394	23,893	10,807	126	13,892	3,462	29,123	118,271

CONNECTICUT

American Lung Association in Connecticut

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Fairfield	40	11	0	18.8	F
Hartford	6	0	0	2.0	C
Litchfield	4	0	0	1.3	C
Middlesex	16	1	0	5.8	F
New Haven	34	6	0	14.3	F
New London	16	1	0	5.8	F
Tolland	9	0	0	3.0	D
Windham	7	0	0	2.3	D

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Fairfield	4	0	0	0	1.3	C	7.9	Pass
Hartford	0	0	0	0	0.0	A	7.6	Pass
Litchfield	0	0	0	0	0.0	A	4.7	Pass
Middlesex	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
New Haven	1	0	0	0	0.3	B	8.0	Pass
New London	0	0	0	0	0.0	A	INC	INC
Tolland	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Windham	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

CONNECTICUT

American Lung Association in Connecticut

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Fairfield	942,426	207,093	157,961	24,385	78,978	38,413	503	49,793	8,616	81,309	374,058
Hartford	889,226	184,271	158,944	21,698	75,661	36,703	474	47,857	8,326	92,518	362,356
Litchfield	179,610	31,595	40,910	3,720	15,646	8,701	96	11,569	1,409	13,160	23,596
Middlesex	161,657	27,325	35,121	3,217	14,266	7,620	86	10,079	1,387	12,020	27,686
New Haven	851,948	169,759	155,504	19,989	73,179	35,649	454	46,539	8,192	92,869	333,501
New London	264,999	50,700	51,381	5,970	22,918	11,468	142	15,049	2,317	20,478	67,666
Tolland	150,600	25,520	25,401	3,005	13,522	6,093	81	7,864	1,552	9,362	25,208
Windham	116,540	22,689	20,774	2,672	10,071	4,918	62	6,397	1,067	11,719	21,333

DELAWARE

American Lung Association in Delaware

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Kent	2	0	0	0.7	B
New Castle	11	0	0	3.7	F
Sussex	4	0	0	1.3	C

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Kent	0	0	0	0	0.0	A	INC	INC
New Castle	0	0	0	0	0.0	A	7.6	Pass
Sussex	0	0	0	0	0.0	A	7.0	Pass

DELAWARE

American Lung Association in Delaware

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Kent	183,643	41,789	32,951	3,114	15,542	8,552	106	13,394	2,018	23,168	74,193
New Castle	561,531	119,200	92,855	8,882	48,620	25,956	325	40,073	6,289	55,026	250,437
Sussex	241,635	43,667	71,788	3,254	21,242	14,917	140	24,380	1,921	26,206	59,650

DISTRICT OF COLUMBIA

American Lung Association in the District of Columbia

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
District of Columbia	9	1	0	3.5	F

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
District of Columbia	0	2	0	0	1.0	C	8.7	Pass

DISTRICT OF COLUMBIA

American Lung Association in the District of Columbia

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
District of Columbia	712,816	129,588	89,833	12,128	60,216	24,821	321	34,259	8,724	101,959	443,805

FLORIDA

American Lung Association in Florida

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Alachua	0	0	0	0.0	A	1	0	0	0	0.3	B	6.9	Pass
Baker	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bay	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Brevard	1	0	0	0.3	B	0	0	0	0	0.0	A	6.5	Pass
Broward	0	0	0	0.0	A	2	0	0	0	0.7	B	9.1	Pass
Collier	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Columbia	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Duval	0	0	0	0.0	A	2	0	0	0	0.7	B	8.5	Pass
Escambia	1	0	0	0.3	B	0	0	0	0	0.0	A	8.6	Pass
Flagler	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Highlands	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hillsborough	11	0	0	3.7	F	1	0	0	0	0.3	B	7.8	Pass
Holmes	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Indian River	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lake	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lee	1	0	0	0.3	B	1	0	0	0	0.3	B	7.4	Pass
Leon	1	0	0	0.3	B	1	0	0	0	0.3	B	7.5	Pass
Liberty	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Manatee	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Marion	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Martin	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Miami-Dade	3	0	0	1.0	C	0	0	0	0	0.0	A	7.9	Pass
Okaloosa	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Orange	1	1	0	0.8	B	0	0	0	0	0.0	A	6.7	Pass
Osceola	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Palm Beach	0	0	0	0.0	A	0	0	0	0	0.0	A	6.2	Pass
Pasco	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pinellas	0	0	0	0.0	A	0	0	0	0	0.0	A	7.6	Pass
Polk	2	0	0	0.7	B	0	0	0	0	0.0	A	7.8	Pass
St. Lucie	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Santa Rosa	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sarasota	0	0	0	0.0	A	0	0	0	0	0.0	A	7.1	Pass
Seminole	2	0	0	0.7	B	0	0	0	0	0.0	A	6.9	Pass
Volusia	0	0	0	0.0	A	0	0	0	0	0.0	A	7.5	Pass
Wakulla	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

FLORIDA

American Lung Association in Florida

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Alachua	271,218	48,613	41,101	2,878	16,261	13,238	146	17,241	3,490	44,315	107,254
Baker	29,566	6,986	4,327	414	1,665	1,492	16	1,918	270	3,416	5,896
Bay	171,322	34,958	32,343	2,069	10,055	9,909	93	12,963	1,590	20,719	40,590
Brevard	608,459	109,939	148,845	6,508	36,665	39,980	329	53,448	5,075	59,282	161,745
Broward	1,958,105	408,571	343,446	24,185	114,278	109,191	1,059	142,043	19,710	214,119	1,286,266
Collier	392,973	65,137	131,353	3,856	23,891	29,477	213	40,794	2,833	39,254	148,906
Columbia	72,654	15,589	14,379	923	4,194	4,158	40	5,493	610	10,444	20,489
Duval	966,728	217,109	143,432	12,852	55,185	48,683	523	62,776	10,447	143,438	470,213
Escambia	322,364	67,108	56,280	3,972	18,752	17,361	175	22,711	3,239	41,047	116,497
Flagler	118,451	19,422	37,557	1,150	7,248	8,839	64	12,110	881	11,058	30,322
Highlands	106,639	17,689	38,933	1,047	6,456	8,275	58	11,585	735	16,905	36,507
Hillsborough	1,497,957	328,286	223,205	19,433	86,168	76,357	811	98,332	16,389	175,650	793,024
Holmes	19,594	3,998	3,995	237	1,148	1,160	11	1,531	155	3,651	2,702
Indian River	162,518	24,843	56,213	1,471	10,044	12,623	88	17,462	1,134	13,959	40,816
Lake	375,492	70,790	102,111	4,190	22,300	25,207	203	34,238	3,183	34,282	120,889
Lee	790,767	135,483	233,231	8,020	47,888	55,664	428	76,097	6,411	81,863	271,491
Leon	295,460	54,766	42,552	3,242	17,604	14,203	159	18,398	3,920	49,598	131,517
Liberty	8,364	1,415	1,313	84	512	449	5	579	58	1,342	2,399
Manatee	411,219	72,560	118,217	4,295	24,798	28,816	222	39,223	3,290	44,512	120,917
Marion	373,513	69,134	109,439	4,092	22,229	25,901	202	35,470	3,037	55,608	115,902
Martin	162,088	25,863	52,569	1,531	9,963	12,238	88	16,805	1,101	17,627	35,999
Miami-Dade	2,707,303	546,130	459,870	32,328	159,380	149,414	1,464	193,757	27,885	399,797	2,341,820
Okaloosa	212,820	47,397	35,134	2,806	12,155	11,076	116	14,442	2,048	19,813	58,416
Orange	1,404,396	303,887	177,333	17,988	81,053	66,864	760	85,015	16,525	174,206	855,563
Osceola	385,315	92,259	52,332	5,461	21,587	18,587	209	23,815	4,224	45,150	271,147
Palm Beach	1,507,600	283,688	374,600	16,793	89,713	97,114	815	130,725	13,370	178,480	703,807
Pasco	570,412	114,864	129,888	6,799	33,469	35,354	308	47,171	5,207	64,340	161,846
Pinellas	976,802	153,289	253,295	9,074	60,519	66,759	527	89,551	8,536	106,309	259,292
Polk	744,552	162,387	152,545	9,612	42,692	42,566	403	56,591	7,228	104,836	329,538
St. Lucie	337,186	65,616	84,505	3,884	19,913	21,810	182	29,379	2,904	45,996	151,145
Santa Rosa	189,139	41,307	31,199	2,445	10,909	10,239	103	13,257	1,765	17,152	34,693
Sarasota	443,465	61,556	168,215	3,644	27,807	36,392	239	50,732	2,947	37,949	77,557
Seminole	474,171	98,271	77,457	5,817	27,696	25,417	256	32,922	5,048	37,499	198,625
Volusia	561,497	97,565	142,378	5,775	34,047	37,190	304	49,981	4,824	63,322	168,046
Wakulla	34,319	7,024	5,554	416	2,018	1,886	19	2,429	295	3,204	7,195

GEORGIA

American Lung Association in Georgia

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Bibb	1	0	0	0.3	B	3	0	0	0	1.0	C	8.6	Pass
Chatham	0	0	0	0.0	A	1	0	0	0	0.3	B	8.7	Pass
Chattooga	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clarke	2	0	0	0.7	B	0	0	0	0	0.0	A	8.8	Pass
Clayton	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.4	Pass
Cobb	1	0	0	0.3	B	0	0	0	0	0.0	A	8.3	Pass
Coffee	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	6.6	Pass
Columbia	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dawson	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
DeKalb	3	1	0	1.5	C	1	0	0	0	0.3	B	8.2	Pass
Dougherty	DNC	DNC	DNC	DNC	DNC	5	0	0	0	1.7	C	8.9	Pass
Douglas	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fulton	10	1	0	3.8	F	0	0	0	0	0.0	A	9.4	Pass
Glynn	0	0	0	0.0	A	0	0	0	0	0.0	A	7.2	Pass
Gwinnett	2	0	0	0.7	B	1	0	0	0	0.3	B	9.5	Pass
Hall	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.5	Pass
Henry	10	0	0	3.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Houston	DNC	DNC	DNC	DNC	DNC	4	1	0	0	1.8	C	9.1	Pass
Lowndes	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	7.5	Pass
Murray	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Muscogee	0	0	0	0.0	A	0	0	0	0	0.0	A	8.6	Pass
Pike	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Richmond	3	0	0	1.0	C	4	0	0	0	1.3	C	10.3	Pass
Rockdale	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sumter	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Walker	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Washington	DNC	DNC	DNC	DNC	DNC	3	0	0	0	1.0	C	8.0	Pass

GEORGIA

American Lung Association in Georgia

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Bibb	152,737	36,643	25,054	3,580	10,432	7,904	87	11,259	1,730	40,946	96,705
Chatham	289,463	59,966	47,728	5,859	20,582	15,237	166	21,605	3,411	43,011	152,065
Chattooga	24,843	5,517	4,572	539	1,745	1,389	14	2,001	228	4,431	4,444
Clarke	127,795	21,626	15,370	2,113	9,392	5,870	73	7,932	1,982	28,845	56,993
Clayton	292,646	79,946	29,689	7,811	18,907	12,893	167	17,385	3,653	48,136	267,428
Cobb	762,944	174,344	100,677	17,034	52,602	38,007	439	52,525	8,922	69,097	375,820
Coffee	43,218	10,446	6,243	1,021	2,935	2,153	25	3,016	439	9,184	18,583
Columbia	160,377	40,199	23,109	3,928	10,769	7,973	92	11,183	1,769	10,629	53,843
Dawson	27,113	5,417	5,601	529	1,966	1,619	16	2,359	257	2,332	2,527
DeKalb	762,009	173,235	101,784	16,926	52,572	37,441	437	51,811	9,392	118,345	537,993
Dougherty	86,477	20,166	14,727	1,970	5,962	4,530	49	6,480	1,011	22,686	65,930
Douglas	147,988	37,520	18,142	3,666	9,872	7,168	85	9,857	1,728	16,770	94,993
Fulton	1,077,402	226,285	132,710	22,109	75,794	52,478	620	71,690	13,767	136,220	654,109
Glynn	85,568	18,094	18,310	1,768	6,121	5,073	49	7,449	863	13,107	31,210
Gwinnett	942,627	248,849	102,525	24,313	61,831	43,624	543	59,242	10,826	97,747	619,317
Hall	206,591	50,373	33,031	4,922	14,044	10,743	119	15,254	2,146	25,886	82,841
Henry	239,139	60,104	29,384	5,872	16,003	11,658	137	16,030	2,797	20,755	148,976
Houston	160,110	40,807	21,389	3,987	10,668	7,725	92	10,739	1,820	17,041	73,186
Lowndes	118,268	28,556	15,400	2,790	7,989	5,456	68	7,544	1,482	22,695	56,142
Murray	40,032	9,645	6,217	942	2,732	2,100	23	2,968	418	6,319	7,380
Muscogee	196,442	48,430	27,773	4,732	13,232	9,490	113	13,274	2,237	40,029	118,884
Pike	19,121	4,420	3,150	432	1,324	1,038	11	1,476	203	1,902	2,458
Richmond	202,079	45,486	30,123	4,444	14,010	10,132	116	14,218	2,314	48,382	135,129
Rockdale	90,939	21,903	13,897	2,140	6,206	4,783	52	6,745	991	11,464	66,237
Sumter	29,282	6,596	5,159	644	2,041	1,563	17	2,242	327	6,726	17,955
Walker	70,116	14,932	13,552	1,459	4,989	4,020	40	5,821	696	9,650	6,776
Washington	20,150	4,339	3,664	424	1,426	1,127	12	1,620	177	3,887	11,673

HAWAII

American Lung Association in Hawaii

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Hawaii	DNC	DNC	DNC	DNC	DNC
Honolulu	0	0	0	0.0	A
Kauai	DNC	DNC	DNC	DNC	DNC
Maui	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Hawaii	11	2	0	0	4.7	F	5.3	Pass
Honolulu	0	0	0	0	0.0	A	3.8	Pass
Kauai	0	0	0	0	0.0	A	2.9	Pass
Maui	2	1	0	0	1.2	C	3.9	Pass

HAWAII

American Lung Association in Hawaii

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Hawaii	203,340	43,054	45,787	3,325	14,213	6,530	84	10,973	2,092	24,301	142,734
Honolulu	963,826	201,296	181,138	15,544	66,765	27,954	400	46,223	10,899	74,186	794,325
Kauai	71,851	15,474	15,308	1,195	4,999	2,247	30	3,764	748	7,005	50,936
Maui	167,902	35,994	32,803	2,779	11,703	5,079	70	8,461	1,821	15,690	117,940

IDAHO

American Lung Association in Idaho

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Ada	2	0	0	0.7	B	4	0	0	0	1.3	C	6.9	Pass
Bannock	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Benewah	DNC	DNC	DNC	DNC	DNC	10	6	0	1	7.2	F	INC	INC
Butte	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Canyon	DNC	DNC	DNC	DNC	DNC	12	5	0	0	6.5	F	9.0	Pass
Franklin	DNC	DNC	DNC	DNC	DNC	8	1	0	0	3.2	D	6.3	Pass
Idaho	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jerome	DNC	DNC	DNC	DNC	DNC	5	0	0	0	1.7	C	INC	INC
Lemhi	DNC	DNC	DNC	DNC	DNC	6	0	0	0	2.0	C	9.5	Pass
Shoshone	DNC	DNC	DNC	DNC	DNC	14	4	3	1	9.5	F	10.9	Pass

IDAHO

American Lung Association in Idaho

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Ada	494,399	112,243	76,757	8,364	36,262	21,907	224	29,937	6,079	37,356	78,871
Bannock	88,795	22,673	13,447	1,689	6,256	3,658	40	5,085	1,100	10,592	15,118
Benewah	9,430	2,061	2,204	154	707	520	4	719	87	1,167	1,483
Butte	2,646	614	671	46	194	144	1	204	23	373	231
Canyon	237,053	64,616	34,261	4,815	16,338	9,674	107	13,304	2,868	24,648	71,095
Franklin	14,215	4,398	2,079	328	932	570	6	784	154	1,078	1,315
Idaho	16,823	3,254	4,895	242	1,302	1,013	8	1,439	131	2,138	1,626
Jerome	24,578	7,366	3,321	549	1,632	967	11	1,320	268	2,990	9,865
Lemhi	8,054	1,461	2,565	109	633	507	4	727	67	1,222	539
Shoshone	12,911	2,607	3,137	194	987	722	6	1,005	120	1,832	1,141

ILLINOIS

American Lung Association in Illinois

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Adams	0	0	0	0.0	A
Champaign	6	0	0	2.0	C
Clark	1	0	0	0.3	B
Cook	36	8	0	16.0	F
DuPage	9	2	0	4.0	F
Effingham	1	0	0	0.3	B
Hamilton	4	0	0	1.3	C
Jersey	6	0	0	2.0	C
Jo Daviess	2	0	0	0.7	B
Kane	15	1	0	5.5	F
Lake	18	3	0	7.5	F
McHenry	18	0	0	6.0	F
McLean	4	0	0	1.3	C
Macon	3	0	0	1.0	C
Macoupin	3	0	0	1.0	C
Madison	11	4	0	5.7	F
Peoria	6	0	0	2.0	C
Randolph	1	0	0	0.3	B
Rock Island	3	0	0	1.0	C
St. Clair	5	1	0	2.2	D
Sangamon	1	0	0	0.3	B
Will	6	0	0	2.0	C
Winnebago	3	1	0	1.5	C

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Adams	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Champaign	0	0	0	0	0.0	A	7.7	Pass
Clark	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cook	2	0	0	0	0.7	B	10.6	Pass
DuPage	0	0	0	0	0.0	A	INC	INC
Effingham	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hamilton	1	0	0	0	0.3	B	8.6	Pass
Jersey	0	0	0	0	0.0	A	7.9	Pass
Jo Daviess	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kane	0	0	0	0	0.0	A	8.7	Pass
Lake	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
McHenry	0	0	0	0	0.0	A	8.1	Pass
McLean	0	0	0	0	0.0	A	9.2	Pass
Macon	0	0	0	0	0.0	A	9.5	Pass
Macoupin	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Madison	1	0	0	0	0.3	B	10.5	Pass
Peoria	1	0	0	0	0.3	B	8.6	Pass
Randolph	2	0	0	0	0.7	B	INC	INC
Rock Island	1	0	0	0	0.3	B	INC	INC
St. Clair	0	0	0	0	0.0	A	9.6	Pass
Sangamon	0	0	0	0	0.0	A	8.4	Pass
Will	1	1	0	0	0.8	B	INC	INC
Winnebago	1	0	0	0	0.3	B	INC	INC

ILLINOIS

American Lung Association in Illinois

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Adams	64,783	14,558	13,616	1,006	4,266	3,292	39	4,445	590	6,735	5,741
Champaign	209,192	39,463	28,658	2,728	14,825	8,925	126	10,940	2,689	29,150	70,812
Clark	15,268	3,397	3,155	235	1,007	784	9	1,060	135	1,563	528
Cook	5,108,284	1,095,041	792,111	75,700	346,474	232,759	3,068	298,709	57,320	646,192	2,976,526
DuPage	917,481	205,415	153,269	14,200	61,076	43,435	552	56,943	9,167	53,259	316,906
Effingham	34,065	8,110	6,326	561	2,215	1,644	21	2,189	308	3,128	1,506
Hamilton	8,084	1,749	1,818	121	536	427	5	582	72	1,040	380
Jersey	21,616	4,366	4,372	302	1,467	1,119	13	1,504	202	1,775	983
Jo Daviess	21,239	3,937	6,247	272	1,441	1,287	13	1,817	154	1,906	1,204
Kane	531,010	130,652	78,758	9,032	34,454	23,803	320	30,855	5,334	38,218	231,458
Lake	693,593	163,684	106,676	11,315	45,543	31,825	418	41,432	6,773	46,919	278,221
McHenry	305,888	69,971	48,368	4,837	20,225	14,439	184	18,940	2,931	18,998	62,002
McLean	171,256	36,219	24,364	2,504	11,726	7,468	103	9,378	2,083	17,168	35,842
Macon	103,015	22,865	21,528	1,581	6,815	5,216	62	7,026	1,008	12,674	25,628
Macoupin	44,567	9,303	9,454	643	2,991	2,334	27	3,161	403	4,707	1,870
Madison	262,635	56,710	47,802	3,920	17,611	12,844	158	17,000	2,629	28,469	41,275
Peoria	177,652	42,053	32,116	2,907	11,612	8,375	107	11,047	1,804	24,583	55,292
Randolph	31,351	5,950	6,176	411	2,169	1,602	19	2,130	240	3,251	4,964
Rock Island	140,907	31,370	28,522	2,169	9,332	7,026	85	9,411	1,328	18,365	41,930
St. Clair	258,046	59,779	43,662	4,133	16,997	12,142	155	15,947	2,627	35,007	101,005
Sangamon	193,882	42,644	36,699	2,948	12,910	9,565	116	12,733	1,927	24,310	39,682
Will	688,726	166,069	96,632	11,480	45,045	30,705	414	39,578	7,091	48,881	263,345
Winnebago	281,295	65,366	51,855	4,519	18,443	13,596	169	18,067	2,746	40,305	92,993

INDIANA

American Lung Association in Indiana

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Allen	7	0	0	2.3	D	2	0	0	0	0.7	B	8.8	Pass
Bartholomew	3	0	0	1.0	C	1	0	0	0	0.3	B	7.0	Pass
Boone	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Brown	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carroll	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	5	0	0	1.7	C	0	0	0	0	0.0	A	7.4	Pass
Delaware	3	0	0	1.0	C	1	0	0	0	0.3	B	8.2	Pass
Dubois	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.6	Pass
Elkhart	3	0	0	1.0	C	0	2	0	0	1.0	C	8.1	Pass
Floyd	6	0	0	2.0	C	INC	INC	INC	INC	INC	INC	INC	INC
Greene	3	0	0	1.0	C	0	0	0	0	0.0	A	7.8	Pass
Hamilton	7	0	0	2.3	D	1	0	0	0	0.3	B	7.8	Pass
Hendricks	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Henry	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	7.6	Pass
Howard	7	0	0	2.3	D	0	0	0	0	0.0	A	7.3	Pass
Huntington	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jackson	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Knox	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lake	10	1	0	3.8	F	2	0	0	0	0.7	B	9.8	Pass
LaPorte	15	2	0	6.0	F	1	0	0	0	0.3	B	INC	INC
Madison	7	0	0	2.3	D	1	0	0	0	0.3	B	8.4	Pass
Marion	12	0	0	4.0	F	8	1	0	0	3.2	D	11.5	Pass
Monroe	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.7	Pass
Morgan	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Porter	13	1	0	4.8	F	0	1	0	0	0.5	B	8.0	Pass
Posey	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Joseph	10	0	0	3.3	F	1	1	0	0	0.8	B	8.9	Pass
Shelby	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Spencer	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.1	Pass
Sullivan	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Tippecanoe	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.8	Pass
Vanderburgh	4	0	0	1.3	C	1	0	0	0	0.3	B	9.0	Pass
Vigo	3	0	0	1.0	C	2	0	0	0	0.7	B	8.7	Pass
Wabash	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Warrick	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Whitley	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.8	Pass

INDIANA

American Lung Association in Indiana

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Allen	382,187	97,062	58,532	5,576	27,731	23,563	233	26,897	4,460	42,833	105,154
Bartholomew	84,447	20,136	14,254	1,157	6,237	5,458	52	6,308	923	7,566	16,945
Boone	69,347	17,910	9,864	1,029	5,043	4,323	42	4,849	784	3,547	7,591
Brown	15,112	2,589	3,878	149	1,202	1,253	9	1,520	133	1,473	754
Carroll	20,228	4,402	4,112	253	1,529	1,455	12	1,720	201	1,567	1,370
Clark	119,266	26,425	19,548	1,518	9,051	7,916	73	9,036	1,388	10,131	21,407
Delaware	113,454	20,349	20,080	1,169	8,989	7,529	69	8,726	1,515	20,399	15,399
Dubois	42,542	10,273	7,887	590	3,129	2,915	26	3,406	417	2,799	4,628
Elkhart	206,161	56,303	31,819	3,234	14,564	12,572	126	14,421	2,264	19,761	54,273
Floyd	78,936	17,827	13,454	1,024	5,949	5,303	48	6,095	893	8,922	10,210
Greene	32,203	6,969	6,539	400	2,442	2,337	20	2,756	321	3,569	1,280
Hamilton	344,238	89,883	45,716	5,163	25,005	21,061	210	23,367	4,089	14,489	61,469
Hendricks	173,251	42,211	25,455	2,425	12,818	10,921	106	12,299	1,978	8,692	31,155
Henry	48,033	9,739	9,460	559	3,707	3,442	29	4,037	454	4,811	3,287
Howard	82,732	18,770	16,640	1,078	6,164	5,785	50	6,861	875	9,390	13,200
Huntington	36,395	7,877	6,567	452	2,770	2,508	22	2,905	393	3,187	2,054
Jackson	44,222	10,803	7,531	621	3,251	2,924	27	3,373	466	4,489	5,972
Knox	36,522	7,800	6,878	448	2,771	2,476	22	2,906	385	5,506	2,948
Lake	487,536	113,159	84,881	6,500	36,351	32,499	297	37,601	5,495	75,936	227,659
LaPorte	109,663	23,353	20,647	1,342	8,357	7,609	67	8,888	1,071	12,524	23,845
Madison	129,681	27,585	24,594	1,585	9,881	9,017	79	10,547	1,378	14,937	20,254
Marion	966,183	237,144	126,594	13,623	71,244	56,746	588	63,123	12,498	135,820	450,864
Monroe	148,219	23,056	20,804	1,324	12,115	8,824	90	9,880	2,263	24,316	25,197
Morgan	70,707	15,681	12,596	901	5,368	4,955	43	5,706	741	5,939	3,190
Perry	19,154	4,077	3,663	234	1,458	1,333	12	1,562	172	2,160	1,242
Porter	170,980	36,927	29,904	2,121	13,031	11,610	104	13,388	1,935	14,436	30,780
Posey	25,275	5,541	5,077	318	1,910	1,819	15	2,143	251	2,327	1,099
St. Joseph	271,484	63,290	45,106	3,636	20,175	17,330	165	19,999	3,228	33,070	77,597
Shelby	44,871	10,092	8,104	580	3,385	3,119	27	3,609	465	4,149	3,790
Spencer	20,225	4,316	4,158	248	1,540	1,483	12	1,750	197	1,574	1,124
Sullivan	20,578	3,910	3,811	225	1,616	1,442	13	1,673	192	2,823	1,761
Tippecanoe	196,115	39,707	23,936	2,281	15,200	10,895	120	12,012	2,718	28,815	49,462
Vanderburgh	182,447	39,167	32,517	2,250	13,868	12,184	111	14,155	2,128	25,669	31,801
Vigo	106,608	21,497	18,203	1,235	8,230	6,922	65	7,999	1,252	20,134	15,909
Wabash	30,784	6,307	6,711	362	2,349	2,240	19	2,686	323	3,075	1,854
Warrick	63,269	14,693	11,473	844	4,715	4,320	39	5,023	678	3,990	5,310
Whitley	34,378	7,814	6,488	449	2,576	2,399	21	2,803	350	2,426	1,715

IOWA

American Lung Association in Iowa

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Black Hawk	DNC	DNC	DNC	DNC	DNC
Bremer	2	0	0	0.7	B
Clinton	0	0	0	0.0	A
Harrison	2	0	0	0.7	B
Johnson	DNC	DNC	DNC	DNC	DNC
Lee	DNC	DNC	DNC	DNC	DNC
Linn	5	0	0	1.7	C
Montgomery	0	0	0	0.0	A
Muscatine	DNC	DNC	DNC	DNC	DNC
Palo Alto	2	0	0	0.7	B
Polk	2	0	0	0.7	B
Pottawattamie	DNC	DNC	DNC	DNC	DNC
Scott	5	0	0	1.7	C
Van Buren	0	0	0	0.0	A
Woodbury	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Black Hawk	0	0	0	0	0.0	A	7.9	Pass
Bremer	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clinton	0	0	0	0	0.0	A	8.8	Pass
Harrison	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Johnson	0	0	0	0	0.0	A	7.8	Pass
Lee	0	0	0	0	0.0	A	8.3	Pass
Linn	0	0	0	0	0.0	A	8.2	Pass
Montgomery	0	0	0	0	0.0	A	6.7	Pass
Muscatine	1	0	0	0	0.3	B	8.3	Pass
Palo Alto	0	0	0	0	0.0	A	6.9	Pass
Polk	0	2	0	0	1.0	C	7.5	Pass
Pottawattamie	1	0	0	0	0.3	B	8.2	Pass
Scott	1	1	0	0	0.8	B	8.5	Pass
Van Buren	0	0	0	0	0.0	A	7.1	Pass
Woodbury	0	0	0	0	0.0	A	7.8	Pass

IOWA

American Lung Association in Iowa

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Black Hawk	130,786	28,408	22,876	1,635	9,393	6,098	78	8,342	1,623	15,410	25,977
Bremer	25,311	5,734	5,084	330	1,771	1,259	15	1,752	283	1,323	1,396
Clinton	46,392	10,479	9,480	603	3,223	2,422	28	3,359	473	5,717	4,319
Harrison	13,928	3,205	2,794	184	961	732	8	1,012	134	1,129	610
Johnson	153,740	30,223	19,658	1,740	11,617	6,293	92	8,273	2,300	20,522	35,047
Lee	33,480	7,111	7,150	409	2,363	1,789	20	2,492	326	3,689	3,220
Linn	227,854	51,825	38,001	2,983	16,094	10,779	136	14,605	2,686	18,011	35,081
Montgomery	9,935	2,246	2,208	129	685	538	6	754	96	1,125	703
Muscatine	42,394	10,384	7,490	598	2,906	2,039	25	2,789	452	4,258	10,105
Palo Alto	8,845	2,039	1,992	117	608	467	5	659	84	817	665
Polk	494,281	121,471	68,181	6,992	34,465	21,470	295	28,499	6,123	55,560	116,535
Pottawattamie	93,328	21,758	17,172	1,252	6,480	4,622	56	6,337	1,007	8,407	12,488
Scott	173,216	40,588	29,825	2,336	12,082	8,289	103	11,282	1,981	20,606	36,429
Van Buren	7,069	1,647	1,581	95	482	381	4	535	65	1,013	268
Woodbury	103,138	26,801	16,012	1,543	7,000	4,597	62	6,210	1,173	11,311	31,046

KANSAS

American Lung Association in Kansas

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Johnson	0	0	0	0.0	A	1	0	0	0	0.3	B	INC	INC
Leavenworth	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Neosho	1	0	0	0.3	B	2	0	0	0	0.7	B	INC	INC
Sedgwick	1	0	0	0.3	B	2	0	0	0	0.7	B	INC	INC
Shawnee	0	1	0	0.5	B	3	2	0	0	2.0	C	9.6	Pass
Sumner	0	0	0	0.0	A	2	0	0	0	0.7	B	8.0	Pass
Trego	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
Wyandotte	2	1	0	1.2	C	6	0	0	0	2.0	C	INC	INC

KANSAS

American Lung Association in Kansas

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Johnson	607,220	144,321	94,102	10,770	45,776	28,756	322	38,404	7,367	27,345	127,455
Leavenworth	82,246	19,300	12,727	1,440	6,227	3,901	44	5,205	861	6,425	17,715
Neosho	15,929	3,891	3,249	290	1,167	820	8	1,151	161	2,125	1,798
Sedgwick	519,907	131,426	80,071	9,808	38,443	23,858	276	31,961	6,221	68,637	170,812
Shawnee	175,999	40,932	33,963	3,055	13,168	8,946	93	12,409	1,986	18,039	47,255
Sumner	22,578	5,421	4,481	405	1,664	1,175	12	1,639	226	2,502	2,517
Trego	2,758	516	723	39	213	168	1	243	25	279	166
Wyandotte	165,265	45,546	21,558	3,399	11,937	7,091	88	9,279	1,997	27,673	99,374

KENTUCKY

American Lung Association in Kentucky

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Bell	0	0	0	0.0	A	0	0	0	0	0.0	A	7.4	Pass
Boone	1	1	0	0.8	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boyd	1	0	0	0.3	B	0	0	0	0	0.0	A	7.5	Pass
Bullitt	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Campbell	2	0	0	0.7	B	0	0	0	0	0.0	A	7.8	Pass
Carter	0	0	0	0.0	A	0	0	0	0	0.0	A	5.9	Pass
Christian	0	0	0	0.0	A	0	0	0	0	0.0	A	8.1	Pass
Daviess	3	0	0	1.0	C	0	0	0	0	0.0	A	8.3	Pass
Edmonson	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fayette	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
Greenup	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hancock	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hardin	0	0	0	0.0	A	0	0	0	0	0.0	A	7.5	Pass
Henderson	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Jefferson	12	2	0	5.0	F	3	0	0	0	1.0	C	10.1	Pass
Jessamine	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Livingston	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
McCracken	0	0	0	0.0	A	1	0	0	0	0.3	B	8.8	Pass
Morgan	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Oldham	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	0	0	0	0.0	A	0	0	0	0	0.0	A	6.7	Pass
Pike	0	0	0	0.0	A	0	0	0	0	0.0	A	6.4	Pass
Pulaski	0	0	0	0.0	A	0	0	0	0	0.0	A	7.3	Pass
Simpson	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Trigg	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Warren	0	0	0	0.0	A	0	0	0	0	0.0	A	7.9	Pass
Washington	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

KENTUCKY

American Lung Association in Kentucky

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Bell	25,482	5,330	5,188	364	2,338	2,629	21	2,665	266	7,293	1,567
Boone	135,396	34,844	19,428	2,380	11,715	12,081	114	11,777	1,535	8,752	18,078
Boyd	46,516	9,995	9,598	683	4,234	4,791	39	4,870	466	7,047	3,260
Bullitt	82,182	17,506	13,830	1,196	7,550	8,059	69	7,962	930	7,053	5,299
Campbell	94,020	19,396	15,853	1,325	8,612	8,981	79	8,867	1,120	9,613	7,518
Carter	26,542	5,916	5,226	404	2,393	2,674	22	2,704	279	4,780	935
Christian	71,478	19,341	9,188	1,321	5,824	5,345	61	5,137	788	10,996	24,935
Daviess	101,978	24,842	17,954	1,697	8,913	9,603	86	9,601	1,116	13,239	12,912
Edmonson	12,235	2,191	2,619	150	1,167	1,320	10	1,340	130	1,914	700
Fayette	324,735	67,276	46,761	4,595	29,341	28,402	273	27,444	4,373	45,575	96,376
Greenup	34,865	7,481	7,586	511	3,177	3,670	29	3,758	355	4,451	1,379
Hancock	8,742	2,158	1,590	147	766	845	7	848	91	1,248	439
Hardin	111,309	26,975	16,636	1,842	9,761	9,999	94	9,774	1,257	12,066	26,891
Henderson	44,740	10,114	8,441	691	4,020	4,437	38	4,463	482	5,862	6,251
Jefferson	767,452	167,854	130,786	11,465	69,065	72,377	644	71,721	9,149	85,737	262,393
Jessamine	54,057	12,762	8,750	872	4,788	5,032	45	4,966	633	5,489	6,435
Livingston	9,041	1,799	2,113	123	846	1,007	8	1,038	86	1,251	470
McCracken	65,644	14,511	13,726	991	5,903	6,684	55	6,817	704	9,974	11,289
Morgan	13,142	2,355	2,280	161	1,252	1,318	11	1,300	120	2,764	1,045
Oldham	66,999	16,826	9,481	1,149	5,890	6,124	57	5,954	686	3,143	7,945
Perry	25,456	5,868	4,568	401	2,285	2,507	21	2,505	271	5,448	1,360
Pike	57,057	11,741	11,326	802	5,280	5,918	48	5,971	602	13,151	1,799
Pulaski	65,530	14,411	12,899	984	5,947	6,668	55	6,738	694	12,308	3,996
Simpson	18,635	4,401	3,175	301	1,655	1,778	16	1,767	205	2,194	2,763
Trigg	14,776	3,167	3,513	216	1,354	1,631	12	1,690	133	2,455	1,800
Warren	134,510	30,994	18,257	2,117	11,797	11,320	113	10,895	1,781	23,887	30,892
Washington	12,147	2,800	2,293	191	1,090	1,215	10	1,223	125	1,705	1,467

LOUISIANA

American Lung Association in Louisiana

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Ascension Parish	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bossier Parish	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Caddo Parish	0	0	0	0.0	A	3	0	0	0	1.0	C	10.3	Pass
Calcasieu Parish	3	0	0	1.0	C	1	0	0	0	0.3	B	7.4	Pass
East Baton Rouge Parish	14	0	0	4.7	F	2	0	0	0	0.7	B	9.0	Pass
Iberville Parish	13	0	0	4.3	F	0	1	0	0	0.5	B	8.3	Pass
Jefferson Parish	1	0	0	0.3	B	0	0	0	0	0.0	A	7.9	Pass
Lafayette Parish	0	0	0	0.0	A	1	0	0	0	0.3	B	8.2	Pass
Lafourche Parish	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Livingston Parish	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Orleans Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.0	Pass
Ouachita Parish	0	0	0	0.0	A	1	0	0	0	0.3	B	7.5	Pass
Pointe Coupee Parish	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rapides Parish	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	7.7	Pass
St. Bernard Parish	3	0	0	1.0	C	0	0	0	0	0.0	A	8.1	Pass
St. James Parish	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. John the Baptist Parish	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Martin Parish	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Tammany Parish	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tangipahoa Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.3	Pass
Terrebonne Parish	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.4	Pass
West Baton Rouge Parish	6	0	0	2.0	C	0	0	0	0	0.0	A	8.9	Pass

LOUISIANA

American Lung Association in Louisiana

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Ascension Parish	128,665	34,100	16,360	2,984	7,512	7,767	79	9,250	1,614	12,284	42,381
Bossier Parish	127,275	31,226	19,526	2,732	7,551	8,010	79	9,769	1,569	22,118	44,059
Caddo Parish	237,479	55,258	43,395	4,835	14,316	15,968	145	20,255	2,858	48,267	133,330
Calcasieu Parish	203,310	50,813	31,809	4,446	12,014	12,895	125	15,872	2,453	33,070	68,769
East Baton Rouge Parish	439,729	99,278	66,885	8,687	26,671	27,799	269	33,445	5,984	70,357	247,669
Iberville Parish	32,070	6,431	5,408	563	2,027	2,198	20	2,725	376	6,695	16,832
Jefferson Parish	432,346	95,490	78,689	8,356	26,549	29,588	266	37,485	5,108	68,914	210,326
Lafayette Parish	246,518	58,087	35,142	5,083	14,869	15,484	152	18,583	3,184	39,122	86,661
Lafourche Parish	97,596	22,420	16,012	1,962	5,948	6,480	60	8,062	1,154	13,907	22,763
Livingston Parish	143,737	36,430	19,928	3,188	8,502	8,916	89	10,753	1,801	16,672	20,235
Orleans Parish	389,476	76,561	63,157	6,699	24,615	26,082	238	31,777	5,425	79,419	268,575
Ouachita Parish	152,439	37,290	24,012	3,263	9,069	9,728	94	11,968	1,918	34,803	64,975
Pointe Coupee Parish	21,529	4,612	4,712	404	1,329	1,570	13	2,074	226	3,704	8,508
Rapides Parish	128,567	31,572	22,005	2,763	7,643	8,433	79	10,603	1,489	23,284	50,632
St. Bernard Parish	47,647	12,384	6,028	1,084	2,795	2,867	29	3,393	618	10,053	18,659
St. James Parish	20,727	4,622	3,848	404	1,271	1,430	13	1,824	232	2,668	10,637
St. John the Baptist Parish	42,516	10,315	6,476	903	2,557	2,757	26	3,400	511	7,089	28,865
St. Martin Parish	52,954	12,516	8,639	1,095	3,204	3,502	33	4,368	606	8,847	18,744
St. Tammany Parish	263,446	62,152	47,710	5,439	15,926	17,959	162	22,933	2,957	26,239	59,421
Tangipahoa Parish	136,765	33,249	20,836	2,909	8,151	8,647	84	10,543	1,726	26,792	50,911
Terrebonne Parish	109,859	27,401	16,898	2,398	6,526	7,030	68	8,667	1,291	16,981	37,058
West Baton Rouge Parish	26,792	6,479	3,972	567	1,606	1,703	17	2,074	322	3,823	12,227

MAINE

American Lung Association in Maine

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Androscoggin	0	0	0	0.0	A	0	0	0	0	0.0	A	5.1	Pass
Aroostook	0	0	0	0.0	A	1	4	0	0	2.3	D	6.4	Pass
Cumberland	0	0	0	0.0	A	0	0	0	0	0.0	A	7.6	Pass
Hancock	3	0	0	1.0	C	0	0	0	0	0.0	A	3.0	Pass
Kennebec	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
Knox	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Oxford	0	0	0	0.0	A	0	0	0	0	0.0	A	5.3	Pass
Penobscot	0	0	0	0.0	A	0	0	0	0	0.0	A	4.6	Pass
Washington	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
York	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

MAINE

American Lung Association in Maine

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Androscoggin	108,547	23,217	19,975	1,852	9,077	6,707	76	7,615	957	12,326	11,098
Aroostook	66,804	12,213	16,937	974	5,692	4,794	47	5,738	490	9,934	4,292
Cumberland	298,111	54,314	58,292	4,333	25,883	19,093	208	21,771	2,761	24,812	30,414
Hancock	55,088	9,190	14,501	733	4,777	4,051	38	4,866	417	5,586	3,108
Kennebec	122,955	23,318	25,621	1,860	10,537	8,139	86	9,403	1,042	13,341	7,145
Knox	39,951	6,962	10,791	555	3,422	2,931	28	3,546	288	3,927	1,964
Oxford	58,132	10,490	13,375	837	5,012	4,094	41	4,803	448	7,439	2,993
Penobscot	151,655	27,017	29,606	2,155	13,241	9,782	106	11,139	1,367	17,558	10,083
Washington	31,473	6,041	8,058	482	2,647	2,250	22	2,703	230	3,738	3,432
York	209,066	38,070	45,405	3,037	18,044	14,142	146	16,435	1,740	16,691	13,205

MARYLAND

American Lung Association in Maryland

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Anne Arundel	18	0	0	6.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Baltimore	15	0	0	5.0	F	1	0	0	0	0.3	B	7.7	Pass
Calvert	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carroll	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cecil	10	0	0	3.3	F	0	0	0	0	0.0	A	6.6	Pass
Charles	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dorchester	4	1	0	1.8	C	0	0	0	0	0.0	A	5.4	Pass
Frederick	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Garrett	0	0	0	0.0	A	0	0	0	0	0.0	A	5.3	Pass
Harford	20	0	0	6.7	F	0	0	0	0	0.0	A	6.6	Pass
Howard	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.8	Pass
Kent	4	0	0	1.3	C	0	0	0	0	0.0	A	5.7	Pass
Montgomery	1	0	0	0.3	B	0	0	0	0	0.0	A	6.8	Pass
Prince George's	14	1	0	5.2	F	0	0	0	0	0.0	A	6.3	Pass
Washington	0	0	0	0.0	A	0	0	0	0	0.0	A	7.0	Pass
Baltimore City	13	0	0	4.3	F	1	0	0	0	0.3	B	7.9	Pass

MARYLAND

American Lung Association in Maryland

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Anne Arundel	582,777	129,428	90,331	9,787	40,613	21,629	298	32,448	6,404	29,711	199,301
Baltimore	826,017	178,962	148,700	13,533	57,710	32,379	421	49,543	9,271	71,471	373,274
Calvert	93,072	21,332	14,909	1,613	6,384	3,548	48	5,407	942	4,911	21,502
Carroll	169,092	36,578	30,053	2,766	11,763	6,737	86	10,381	1,675	8,614	20,661
Cecil	103,419	22,996	17,186	1,739	7,155	4,002	53	6,114	1,068	8,994	16,459
Charles	164,436	39,196	21,861	2,964	11,209	5,851	84	8,703	1,853	11,956	105,673
Dorchester	31,853	6,619	7,188	501	2,224	1,389	16	2,203	312	4,657	12,096
Frederick	265,161	61,173	40,522	4,626	18,237	9,809	135	14,768	2,879	16,024	77,971
Garrett	28,852	5,220	6,789	395	2,078	1,313	15	2,091	267	3,633	1,098
Harford	256,805	56,851	43,705	4,299	17,806	9,962	131	15,222	2,685	15,611	65,614
Howard	328,200	79,158	48,178	5,986	22,276	11,891	168	17,849	3,657	17,817	166,298
Kent	19,192	2,922	5,254	221	1,431	931	10	1,496	184	2,134	4,252
Montgomery	1,051,816	241,475	173,612	18,260	72,299	39,896	537	60,658	11,553	70,020	605,221
Prince George's	909,612	200,956	129,868	15,196	63,629	32,948	464	48,874	10,620	84,663	800,721
Washington	151,146	32,679	26,999	2,471	10,546	5,961	77	9,144	1,473	17,632	35,296
Baltimore City	586,131	117,753	87,793	8,904	42,265	21,402	298	31,473	7,591	112,678	424,739

MASSACHUSETTS

American Lung Association in Massachusetts

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Barnstable	6	0	0	2.0	C
Berkshire	0	0	0	0.0	A
Bristol	13	0	0	4.3	F
Dukes	8	0	0	2.7	D
Essex	5	0	0	1.7	C
Franklin	0	0	0	0.0	A
Hampden	2	0	0	0.7	B
Hampshire	2	0	0	0.7	B
Middlesex	0	0	0	0.0	A
Norfolk	1	0	0	0.3	B
Plymouth	3	0	0	1.0	C
Suffolk	1	0	0	0.3	B
Worcester	4	0	0	1.3	C

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Barnstable	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berkshire	1	0	0	0	0.3	B	5.8	Pass
Bristol	0	0	0	0	0.0	A	6.5	Pass
Dukes	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Essex	0	0	0	0	0.0	A	6.1	Pass
Franklin	0	0	0	0	0.0	A	6.8	Pass
Hampden	0	0	0	0	0.0	A	5.4	Pass
Hampshire	0	0	0	0	0.0	A	6.0	Pass
Middlesex	0	0	0	0	0.0	A	INC	INC
Norfolk	INC	INC	INC	INC	INC	INC	INC	INC
Plymouth	0	0	0	0	0.0	A	6.8	Pass
Suffolk	0	0	0	0	0.0	A	8.2	Pass
Worcester	0	0	0	0	0.0	A	7.4	Pass

MASSACHUSETTS

American Lung Association in Massachusetts

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Barnstable	213,164	30,988	68,379	2,424	19,978	11,259	118	18,666	1,344	16,203	22,806
Berkshire	124,571	20,552	30,743	1,608	11,285	5,596	69	9,191	982	11,917	15,718
Bristol	566,765	115,833	100,125	9,060	48,469	21,026	313	34,150	5,107	55,797	107,759
Dukes	17,461	3,095	4,512	242	1,564	804	10	1,325	126	1,299	2,295
Essex	791,263	165,705	142,375	12,961	67,272	29,470	437	47,909	7,026	69,830	250,072
Franklin	70,267	11,877	16,792	929	6,333	3,109	39	5,102	560	7,423	7,007
Hampden	463,986	97,861	82,861	7,655	39,292	17,007	256	27,627	4,251	64,583	181,112
Hampshire	161,401	23,059	30,075	1,804	14,745	6,086	89	9,850	1,848	12,910	27,554
Middlesex	1,609,379	313,718	257,247	24,539	138,418	56,319	889	90,970	15,753	110,410	473,755
Norfolk	709,409	145,739	124,312	11,400	60,546	26,124	392	42,413	6,505	40,721	192,855
Plymouth	523,738	109,505	100,676	8,565	44,723	20,370	289	33,220	4,341	36,890	101,392
Suffolk	801,582	129,528	101,227	10,132	70,781	24,570	443	39,087	9,936	124,289	438,708
Worcester	829,212	171,695	137,277	13,430	70,570	29,847	458	48,363	7,480	76,029	205,897

MICHIGAN

American Lung Association in Michigan

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Allegan	18	0	0	6.0	F	0	0	0	0	0.0	A	6.9	Pass
Bay	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.2	Pass
Benzie	2	2	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berrien	17	0	0	5.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cass	12	0	0	4.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Chippewa	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Clinton	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Genesee	4	0	0	1.3	C	0	0	0	0	0.0	A	6.9	Pass
Huron	10	0	0	3.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ingham	2	0	0	0.7	B	0	0	0	0	0.0	A	INC	INC
Kalamazoo	9	0	0	3.0	D	1	0	0	0	0.3	B	7.8	Pass
Kent	10	0	0	3.3	F	1	0	0	0	0.3	B	8.0	Pass
Lenawee	6	0	0	2.0	C	0	0	0	0	0.0	A	8.3	Pass
Macomb	23	0	0	7.7	F	0	0	0	0	0.0	A	7.0	Pass
Manistee	2	0	0	0.7	B	0	0	0	0	0.0	A	INC	INC
Mason	2	1	0	1.2	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Missaukee	1	0	0	0.3	B	0	0	0	0	0.0	A	6.4	Pass
Muskegon	10	3	0	4.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Oakland	16	1	0	5.8	F	0	0	0	0	0.0	A	7.8	Pass
Ottawa	10	0	0	3.3	F	0	0	0	0	0.0	A	8.0	Pass
St. Clair	10	1	0	3.8	F	0	0	0	0	0.0	A	7.5	Pass
Schoolcraft	5	0	0	1.7	C	0	0	0	0	0.0	A	INC	INC
Tuscola	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washtenaw	11	0	0	3.7	F	0	1	0	0	0.5	B	8.3	Pass
Wayne	15	0	0	5.0	F	10	1	0	0	3.8	F	10.9	Pass
Wexford	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

MICHIGAN

American Lung Association in Michigan

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Allegan	118,927	28,245	20,857	2,386	10,044	7,716	71	9,224	1,131	8,552	14,289
Bay	102,387	20,215	22,031	1,707	9,049	7,305	61	8,925	966	12,891	10,676
Benzie	17,852	3,121	4,895	264	1,610	1,424	11	1,800	145	1,673	1,145
Berrien	153,025	32,868	31,798	2,776	13,233	10,608	92	12,931	1,450	22,678	38,854
Cass	51,584	10,511	11,457	888	4,526	3,753	31	4,623	454	5,677	7,056
Chippewa	36,958	6,657	7,105	562	3,339	2,511	22	2,993	324	4,486	11,465
Clinton	79,753	17,421	14,480	1,471	6,898	5,298	48	6,339	794	6,220	8,460
Genesee	404,794	89,929	74,353	7,596	34,818	26,851	242	32,190	4,123	73,344	113,478
Huron	30,653	5,809	8,197	491	2,718	2,405	18	3,038	238	3,500	1,582
Ingham	290,609	56,692	42,064	4,789	25,823	17,202	174	19,502	3,737	37,873	89,658
Kalamazoo	265,988	56,844	42,073	4,801	23,065	16,102	159	18,636	3,163	30,871	62,013
Kent	658,708	156,190	95,704	13,193	55,655	38,946	395	44,932	7,380	71,769	178,861
Lenawee	97,808	20,366	19,425	1,720	8,544	6,717	59	8,122	917	8,860	13,471
Macomb	870,791	180,465	155,985	15,243	76,470	58,254	521	69,427	8,974	79,269	198,237
Manistee	24,738	4,223	6,727	357	2,243	1,970	15	2,483	182	2,898	2,846
Mason	29,164	5,844	7,424	494	2,552	2,209	17	2,772	242	3,531	2,589
Missaukee	15,152	3,399	3,254	287	1,294	1,063	9	1,306	130	1,892	959
Muskegon	173,883	39,445	31,433	3,332	14,853	11,334	104	13,547	1,713	20,887	41,565
Oakland	1,253,459	255,956	224,038	21,619	110,492	83,890	750	99,861	12,848	97,171	361,362
Ottawa	294,635	69,105	47,097	5,837	24,907	17,887	176	20,906	3,250	19,048	49,300
St. Clair	159,293	32,557	31,676	2,750	14,029	11,219	95	13,608	1,475	19,531	14,510
Schoolcraft	8,104	1,406	2,274	119	734	668	5	849	60	950	1,194
Tuscola	52,289	10,554	11,250	891	4,605	3,769	31	4,619	462	5,862	3,726
Washtenaw	366,473	67,404	55,087	5,693	33,031	22,326	220	25,458	4,597	41,374	109,788
Wayne	1,740,623	409,018	282,744	34,548	147,484	108,791	1,041	128,134	18,764	344,282	884,507
Wexford	33,743	7,754	6,800	655	2,866	2,299	20	2,800	306	3,809	2,023

MINNESOTA

American Lung Association in Minnesota

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Anoka	2	0	0	0.7	B	0	0	0	0	0.0	A	6.9	Pass
Becker	2	0	0	0.7	B	0	0	0	0	0.0	A	5.0	Pass
Beltrami	DNC	DNC	DNC	DNC	DNC	2	1	0	0	1.2	C	6.0	Pass
Carlton	0	0	0	0.0	A	0	0	0	0	0.0	A	3.0	Pass
Cass	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	5.0	Pass
Cook	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	3.9	Pass
Crow Wing	1	0	0	0.3	B	1	0	0	0	0.3	B	4.7	Pass
Dakota	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	7.3	Pass
Goodhue	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hennepin	0	0	0	0.0	A	1	1	0	0	0.8	B	8.3	Pass
Lake	0	0	0	0.0	A	0	0	0	0	0.0	A	4.3	Pass
Lyon	0	0	0	0.0	A	0	0	0	0	0.0	A	5.8	Pass
Mille Lacs	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Olmsted	0	0	0	0.0	A	1	0	0	0	0.3	B	7.1	Pass
Ramsey	DNC	DNC	DNC	DNC	DNC	1	1	0	0	0.8	B	7.7	Pass
St. Louis	0	0	0	0.0	A	3	0	0	0	1.0	C	5.6	Pass
Scott	2	0	0	0.7	B	1	0	0	0	0.3	B	INC	INC
Stearns	1	0	0	0.3	B	0	0	0	0	0.0	A	6.0	Pass
Washington	0	0	0	0.0	A	INC	INC	INC	INC	INC	INC	INC	INC
Wright	4	0	0	1.3	C	0	0	0	0	0.0	A	6.2	Pass

MINNESOTA

American Lung Association in Minnesota

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Anoka	359,921	85,218	53,744	3,622	23,466	12,479	188	20,140	3,923	25,261	77,776
Becker	34,456	8,234	7,542	350	2,189	1,344	18	2,354	315	3,857	4,794
Beltrami	47,442	11,896	7,987	506	3,018	1,596	25	2,662	527	5,488	13,352
Carlton	35,769	7,943	6,489	338	2,355	1,335	19	2,234	335	2,962	4,274
Cass	29,928	6,161	8,015	262	1,958	1,313	16	2,376	239	3,740	5,135
Cook	5,417	815	1,617	35	378	258	3	472	46	464	859
Crow Wing	65,644	13,811	15,508	587	4,314	2,698	34	4,767	599	5,549	3,542
Dakota	431,807	104,210	65,605	4,429	27,956	14,864	225	24,115	4,777	20,759	102,275
Goodhue	46,318	10,164	9,631	432	3,034	1,815	24	3,125	446	3,277	3,941
Hennepin	1,268,408	274,984	189,574	11,687	85,036	42,915	661	69,046	15,420	115,824	405,012
Lake	10,639	2,028	2,913	86	709	474	6	859	88	841	518
Lyon	25,271	6,501	4,326	276	1,590	869	13	1,455	269	2,152	4,404
Mille Lacs	26,146	6,122	4,955	260	1,688	981	14	1,663	253	2,361	3,043
Olmsted	159,298	38,722	25,798	1,646	10,260	5,432	83	8,952	1,826	10,052	34,454
Ramsey	547,903	127,110	83,399	5,402	35,962	18,162	285	29,475	6,672	66,975	217,214
St. Louis	198,538	37,314	41,131	1,586	13,577	7,708	104	13,195	2,150	19,339	18,244
Scott	150,689	40,008	17,784	1,700	9,535	4,821	79	7,481	1,716	6,383	31,538
Stearns	162,038	37,721	25,798	1,603	10,599	5,468	85	8,961	1,844	16,574	26,845
Washington	265,476	64,112	42,477	2,725	17,134	9,393	138	15,393	2,807	11,461	51,404
Wright	140,249	38,567	18,740	1,639	8,711	4,543	73	7,243	1,503	6,393	12,291

MISSISSIPPI

American Lung Association in Mississippi

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Bolivar	2	0	0	0.7	B	0	0	0	0	0.0	A	INC	INC
DeSoto	3	1	0	1.5	C	0	0	0	0	0.0	A	8.0	Pass
Forrest	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	9.1	Pass
Grenada	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
Hancock	0	0	0	0.0	A	1	0	0	0	0.3	B	8.0	Pass
Harrison	4	0	0	1.3	C	0	0	0	0	0.0	A	8.9	Pass
Hinds	0	0	0	0.0	A	2	0	0	0	0.7	B	9.6	Pass
Jackson	3	0	0	1.0	C	0	0	0	0	0.0	A	8.4	Pass
Lauderdale	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lee	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Yalobusha	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

MISSISSIPPI

American Lung Association in Mississippi

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Bolivar	30,142	7,412	5,138	708	2,021	1,987	22	2,714	360	8,059	20,478
DeSoto	188,275	47,306	25,627	4,520	12,600	11,915	137	15,780	2,385	17,653	74,370
Forrest	75,009	17,418	10,698	1,664	5,101	4,681	54	6,139	1,038	17,991	32,311
Grenada	20,610	4,931	3,810	471	1,398	1,420	15	1,971	232	4,351	9,526
Hancock	48,000	9,391	10,234	897	3,454	3,640	35	5,148	502	7,428	7,495
Harrison	208,801	49,348	33,415	4,715	14,204	13,759	152	18,581	2,485	34,186	77,616
Hinds	227,966	53,920	35,295	5,151	15,482	14,783	165	19,812	2,933	56,977	174,070
Jackson	143,802	32,971	24,064	3,150	9,900	9,781	105	13,335	1,674	19,105	46,908
Lauderdale	73,751	17,071	13,517	1,631	5,045	5,055	54	6,979	821	15,725	35,849
Lee	85,466	21,316	13,193	2,037	5,728	5,568	62	7,517	1,019	11,194	30,787
Yalobusha	11,982	2,604	2,606	249	836	885	9	1,258	127	2,495	5,066

MISSOURI

American Lung Association in Missouri

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Andrew	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Boone	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Buchanan	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	8.4	Pass
Callaway	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cass	1	0	0	0.3	B	1	0	0	0	0.3	B	6.3	Pass
Cedar	0	0	0	0.0	A	0	0	0	0	0.0	A	7.1	Pass
Clay	12	0	0	4.0	F	0	0	0	0	0.0	A	6.1	Pass
Clinton	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	0	0	0	0.0	A	1	0	0	0	0.3	B	7.5	Pass
Jackson	DNC	DNC	DNC	DNC	DNC	2	1	0	0	1.2	C	7.8	Pass
Jasper	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	8	0	0	2.7	D	2	0	0	0	0.7	B	7.1	Pass
Lincoln	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Monroe	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Perry	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Charles	15	1	0	5.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ste. Genevieve	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
St. Louis	13	0	0	4.3	F	2	0	0	0	0.7	B	8.6	Pass
St. Louis City	13	1	0	4.8	F	5	1	0	0	2.2	D	8.9	Pass

MISSOURI

American Lung Association in Missouri

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Andrew	17,586	4,036	3,490	360	1,255	1,212	12	1,407	174	1,586	1,108
Boone	182,991	37,426	24,281	3,342	13,930	10,485	124	11,339	2,616	22,178	40,002
Buchanan	86,530	19,314	14,884	1,724	6,305	5,597	59	6,343	912	10,789	15,060
Callaway	44,887	9,301	7,729	830	3,341	2,966	31	3,351	483	4,693	4,622
Cass	106,806	25,207	18,889	2,251	7,620	7,048	72	8,044	1,128	7,182	14,090
Cedar	14,322	3,458	3,343	309	992	1,030	10	1,231	124	2,603	822
Clay	253,463	60,214	37,716	5,376	18,267	15,520	172	17,245	2,983	19,299	51,629
Clinton	20,553	4,726	3,833	422	1,472	1,397	14	1,605	204	1,902	1,404
Greene	294,997	60,747	50,489	5,424	22,063	18,688	200	21,081	3,645	40,491	38,789
Jackson	705,925	164,090	111,086	14,651	51,097	43,797	478	49,031	8,333	86,479	268,834
Jasper	121,648	29,808	19,735	2,661	8,638	7,499	82	8,458	1,382	18,117	20,265
Jefferson	226,543	51,470	36,484	4,595	16,452	14,759	154	16,575	2,437	19,991	13,656
Lincoln	60,119	15,164	8,577	1,354	4,249	3,661	41	4,056	659	5,604	4,320
Monroe	8,672	1,895	2,113	169	618	649	6	777	73	1,115	639
Perry	19,194	4,381	3,795	391	1,373	1,317	13	1,528	192	2,212	1,009
St. Charles	406,204	92,500	66,009	8,259	29,495	26,094	275	29,341	4,515	20,179	56,141
Ste. Genevieve	17,924	3,929	3,748	351	1,292	1,280	12	1,495	165	1,582	793
St. Louis	994,020	218,138	188,004	19,476	72,303	66,895	672	76,912	10,991	88,893	349,476
St. Louis City	297,645	55,302	43,829	4,938	23,052	18,441	202	20,229	4,003	59,993	163,743

MONTANA

American Lung Association in Montana

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Fergus	1	0	0	0.3	B
Flathead	0	0	0	0.0	A
Gallatin	DNC	DNC	DNC	DNC	DNC
Lewis and Clark	0	0	0	0.0	A
Lincoln	DNC	DNC	DNC	DNC	DNC
Missoula	INC	INC	INC	INC	INC
Phillips	0	0	0	0.0	A
Powder River	3	0	0	1.0	C
Ravalli	DNC	DNC	DNC	DNC	DNC
Richland	0	0	0	0.0	A
Rosebud	0	0	0	0.0	A
Silver Bow	DNC	DNC	DNC	DNC	DNC
Yellowstone	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Fergus	6	3	0	0	3.5	F	4.6	Pass
Flathead	15	9	0	0	9.5	F	7.9	Pass
Gallatin	10	0	0	0	3.3	F	2.2	Pass
Lewis and Clark	10	7	0	0	6.8	F	8.3	Pass
Lincoln	11	16	2	1	13.8	F	13.3	Fail
Missoula	6	6	0	0	5.0	F	8.8	Pass
Phillips	4	1	0	0	1.8	C	5.3	Pass
Powder River	5	1	0	0	2.2	D	6.7	Pass
Ravalli	3	5	0	0	3.5	F	5.5	Pass
Richland	1	0	0	0	0.3	B	4.8	Pass
Rosebud	5	2	0	0	2.7	D	5.6	Pass
Silver Bow	6	3	0	0	3.5	F	5.6	Pass
Yellowstone	4	3	0	0	2.8	D	INC	INC

MONTANA

American Lung Association in Montana

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Fergus	11,104	2,310	2,793	135	922	643	5	786	93	1,469	721
Flathead	105,851	22,811	21,971	1,335	8,826	5,652	48	6,774	997	11,014	8,017
Gallatin	116,806	22,660	15,560	1,327	10,180	5,074	53	5,744	1,424	9,972	10,554
Lewis and Clark	70,229	15,021	13,862	879	5,885	3,671	32	4,374	681	6,994	6,405
Lincoln	20,343	3,678	6,173	215	1,729	1,337	9	1,663	148	3,598	1,579
Missoula	121,630	22,239	20,436	1,302	10,654	5,835	55	6,776	1,468	14,029	13,856
Phillips	3,919	890	936	52	319	222	2	271	29	576	679
Powder River	1,681	270	502	16	147	110	1	137	13	206	130
Ravalli	45,002	8,282	12,270	485	3,840	2,788	20	3,428	360	5,075	3,350
Richland	11,043	2,823	1,712	165	886	511	5	597	105	882	1,287
Rosebud	8,836	2,540	1,474	149	674	409	4	484	79	1,535	4,069
Silver Bow	35,180	7,195	6,891	421	2,982	1,820	16	2,162	345	4,528	3,560
Yellowstone	162,990	37,729	29,006	2,209	13,396	7,963	74	9,397	1,676	16,988	23,661

NEBRASKA

American Lung Association in Nebraska

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Douglas	4	0	0	1.3	C
Hall	DNC	DNC	DNC	DNC	DNC
Knox	0	0	0	0.0	A
Lancaster	0	0	0	0.0	A
Sarpy	DNC	DNC	DNC	DNC	DNC
Scotts Bluff	DNC	DNC	DNC	DNC	DNC
Washington	DNC	DNC	DNC	DNC	DNC

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Douglas	1	1	0	0	0.8	B	7.4	Pass
Hall	0	0	0	0	0.0	A	INC	INC
Knox	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lancaster	0	0	0	0	0.0	A	6.6	Pass
Sarpy	2	0	0	0	0.7	B	8.2	Pass
Scotts Bluff	1	0	0	0	0.3	B	INC	INC
Washington	0	0	0	0	0.0	A	6.8	Pass

NEBRASKA

American Lung Association in Nebraska

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Douglas	574,332	145,434	79,092	6,828	33,853	21,021	316	28,017	7,656	55,209	181,716
Hall	61,028	16,812	9,296	789	3,467	2,311	34	3,156	709	7,093	21,838
Knox	8,304	2,018	2,162	95	478	396	5	603	73	1,100	1,290
Lancaster	320,650	72,159	47,527	3,388	19,602	11,918	177	16,099	4,425	28,584	63,010
Sarpy	188,856	50,820	23,558	2,386	10,924	6,715	104	8,784	2,461	9,104	38,412
Scotts Bluff	35,299	8,771	7,004	412	2,055	1,491	19	2,144	400	4,287	10,218
Washington	20,901	4,999	3,933	235	1,235	906	12	1,274	227	1,104	1,189

NEVADA

American Lung Association in Nevada

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Churchill	7	0	0	2.3	D
Clark	65	0	0	21.7	F
Douglas	DNC	DNC	DNC	DNC	DNC
Elko	INC	INC	INC	INC	INC
Lyon	10	0	0	3.3	F
Washoe	29	0	0	9.7	F
White Pine	8	0	0	2.7	D
Carson City	11	0	0	3.7	F

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Churchill	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	9	3	0	0	4.5	F	9.7	Pass
Douglas	12	12	3	0	12.0	F	6.8	Pass
Elko	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lyon	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washoe	16	11	2	0	12.2	F	8.3	Pass
White Pine	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carson City	16	11	0	0	10.8	F	6.7	Pass

NEVADA

American Lung Association in Nevada

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Churchill	25,363	5,799	4,924	415	1,873	1,514	12	1,979	235	2,581	7,174
Clark	2,315,963	525,404	359,536	37,586	168,840	126,357	1,136	161,380	25,242	301,418	1,369,838
Douglas	49,088	7,653	15,268	547	4,186	3,965	24	5,411	357	3,893	9,723
Elko	53,006	14,228	6,664	1,018	3,626	2,588	26	3,254	539	5,815	17,927
Lyon	58,319	12,221	12,718	874	4,480	3,765	29	4,979	520	5,814	15,627
Washoe	477,082	100,997	82,298	7,225	35,621	27,397	234	35,293	4,967	47,922	182,634
White Pine	9,466	1,885	1,860	135	725	581	5	757	72	1,021	2,688
Carson City	56,034	11,388	11,893	815	4,329	3,591	27	4,733	491	6,656	19,036

NEW HAMPSHIRE

American Lung Association in New Hampshire

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Belknap	0	0	0	0.0	A
Cheshire	0	0	0	0.0	A
Coos	2	0	0	0.7	B
Grafton	0	0	0	0.0	A
Hillsborough	0	0	0	0.0	A
Merrimack	0	0	0	0.0	A
Rockingham	4	0	0	1.3	C

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Belknap	0	0	0	0	0.0	A	4.1	Pass
Cheshire	0	0	0	0	0.0	A	5.5	Pass
Coos	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Grafton	0	0	0	0	0.0	A	5.2	Pass
Hillsborough	0	0	0	0	0.0	A	3.1	Pass
Merrimack	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rockingham	0	0	0	0	0.0	A	5.2	Pass

NEW HAMPSHIRE

American Lung Association in New Hampshire

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Belknap	61,551	11,019	14,465	794	5,742	3,551	36	4,410	459	4,472	3,202
Cheshire	76,228	13,495	16,326	973	7,238	4,167	45	5,089	653	6,379	4,773
Coos	31,174	5,045	7,826	364	2,954	1,861	18	2,334	208	3,828	1,684
Grafton	90,691	14,263	19,996	1,028	8,829	5,035	53	6,162	803	7,217	8,868
Hillsborough	418,735	83,293	69,907	6,004	39,462	21,016	247	24,515	3,698	29,194	70,440
Merrimack	152,622	28,410	29,474	2,048	14,442	8,087	90	9,681	1,292	9,764	12,330
Rockingham	311,307	58,757	59,581	4,236	29,280	16,730	183	19,970	2,516	14,099	25,255

NEW JERSEY

American Lung Association in New Jersey

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Atlantic	2	0	0	0.7	B
Bergen	18	2	0	7.0	F
Camden	10	0	0	3.3	F
Cumberland	3	0	0	1.0	C
Essex	3	1	0	1.5	C
Gloucester	9	0	0	3.0	D
Hudson	7	2	0	3.3	F
Hunterdon	4	2	0	2.3	D
Mercer	11	1	0	4.2	F
Middlesex	10	0	0	3.3	F
Monmouth	0	0	0	0.0	A
Morris	5	0	0	1.7	C
Ocean	10	0	0	3.3	F
Passaic	4	0	0	1.3	C
Union	DNC	DNC	DNC	DNC	DNC
Warren	1	0	0	0.3	B

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Atlantic	0	0	0	0	0.0	A	6.5	Pass
Bergen	0	0	0	0	0.0	A	INC	INC
Camden	0	0	0	0	0.0	A	9.4	Pass
Cumberland	0	0	0	0	0.0	A	8.3	Pass
Essex	1	0	0	0	0.3	B	8.5	Pass
Gloucester	0	0	0	0	0.0	A	INC	INC
Hudson	0	0	0	0	0.0	A	INC	INC
Hunterdon	0	0	0	0	0.0	A	7.7	Pass
Mercer	0	0	0	0	0.0	A	7.5	Pass
Middlesex	0	0	0	0	0.0	A	7.8	Pass
Monmouth	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Morris	0	0	0	0	0.0	A	INC	INC
Ocean	0	0	0	0	0.0	A	6.2	Pass
Passaic	0	0	0	0	0.0	A	INC	INC
Union	1	0	0	0	0.3	B	8.7	Pass
Warren	1	0	0	0	0.3	B	7.3	Pass

NEW JERSEY

American Lung Association in New Jersey

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Atlantic	262,945	55,021	50,404	4,266	18,238	10,721	140	17,507	2,719	35,571	116,795
Bergen	930,394	195,299	167,551	15,142	64,378	37,155	495	60,231	9,937	59,225	425,060
Camden	506,809	114,399	82,806	8,870	34,309	19,075	270	30,587	5,687	61,747	227,527
Cumberland	147,008	35,582	23,419	2,759	9,742	5,385	79	8,626	1,487	18,073	81,271
Essex	800,501	189,657	114,057	14,705	53,269	28,561	426	45,132	9,425	111,465	561,379
Gloucester	293,245	62,834	49,177	4,872	20,148	11,371	156	18,284	3,198	20,136	66,899
Hudson	671,666	136,182	83,755	10,559	46,563	22,885	358	35,199	8,845	86,854	477,308
Hunterdon	124,797	23,467	25,099	1,819	8,891	5,390	67	8,847	1,168	4,932	20,052
Mercer	367,239	77,966	58,961	6,045	25,272	13,904	196	22,202	4,202	33,028	193,641
Middlesex	822,736	177,643	130,598	13,773	56,350	30,933	439	49,353	9,301	59,132	487,102
Monmouth	618,381	128,608	116,045	9,971	42,929	25,361	329	41,354	6,155	35,894	154,643
Morris	491,087	101,111	88,146	7,839	34,144	19,790	262	32,074	5,077	22,653	148,221
Ocean	614,237	149,924	140,718	11,624	40,994	25,722	327	43,137	5,465	63,592	98,065
Passaic	500,382	118,440	76,786	9,183	33,359	18,232	267	29,055	5,620	83,071	300,551
Union	555,394	129,820	83,347	10,065	37,146	20,363	296	32,397	6,151	50,517	340,830
Warren	105,624	20,289	20,323	1,573	7,481	4,428	56	7,225	1,050	7,539	21,820

NEW MEXICO

American Lung Association in New Mexico

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Bernalillo	24	0	0	8.0	F
Doña Ana	53	3	0	19.2	F
Eddy	45	5	0	17.5	F
Lea	9	0	0	3.0	D
Rio Arriba	3	0	0	1.0	C
Sandoval	17	0	0	5.7	F
San Juan	20	0	0	6.7	F
Santa Fe	5	0	0	1.7	C
Taos	DNC	DNC	DNC	DNC	DNC
Valencia	7	0	0	2.3	D

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Bernalillo	1	0	0	0	0.3	B	8.4	Pass
Doña Ana	5	1	0	0	2.2	D	7.9	Pass
Eddy	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lea	1	0	0	0	0.3	B	7.0	Pass
Rio Arriba	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sandoval	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
San Juan	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Santa Fe	0	0	0	0	0.0	A	3.7	Pass
Taos	0	0	0	0	0.0	A	5.7	Pass
Valencia	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

NEW MEXICO

American Lung Association in New Mexico

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Bernalillo	681,666	143,532	118,406	10,335	54,323	26,234	217	40,353	7,479	102,304	424,189
Doña Ana	221,262	52,954	36,983	3,813	16,858	7,975	71	12,171	2,491	44,372	162,418
Eddy	58,418	15,500	8,548	1,116	4,337	1,988	19	3,050	599	7,379	32,667
Lea	71,830	21,583	8,141	1,554	5,090	2,114	23	3,227	753	8,713	48,173
Rio Arriba	38,521	8,769	8,021	631	3,005	1,637	12	2,538	357	7,510	33,607
Sandoval	148,904	33,620	28,511	2,421	11,653	6,039	48	9,340	1,491	15,305	86,374
San Juan	123,312	31,546	19,912	2,271	9,278	4,462	39	6,870	1,268	26,171	78,111
Santa Fe	151,946	26,066	39,993	1,877	12,626	7,537	48	11,692	1,373	18,645	86,080
Taos	32,593	5,517	9,340	397	2,708	1,701	10	2,642	269	6,094	20,867
Valencia	77,574	17,934	14,491	1,291	6,028	3,092	25	4,779	752	11,697	53,210

NEW YORK

American Lung Association in New York

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Albany	2	0	0	0.7	B	3	0	0	0	1.0	C	7.4	Pass
Bronx	13	0	0	4.3	F	0	0	0	0	0.0	A	8.1	Pass
Chautauqua	5	0	0	1.7	C	0	0	0	0	0.0	A	5.9	Pass
Dutchess	1	1	0	0.8	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Erie	2	0	0	0.7	B	0	1	0	0	0.5	B	7.2	Pass
Essex	2	0	0	0.7	B	0	0	0	0	0.0	A	3.1	Pass
Hamilton	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Herkimer	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kings	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Monroe	4	0	0	1.3	C	0	0	0	0	0.0	A	6.6	Pass
New York	12	1	0	4.5	F	1	0	0	0	0.3	B	INC	INC
Niagara	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Onondaga	2	0	0	0.7	B	0	0	0	0	0.0	A	5.7	Pass
Orange	1	0	0	0.3	B	0	0	0	0	0.0	A	INC	INC
Oswego	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Putnam	2	1	0	1.2	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Queens	15	0	0	5.0	F	0	0	0	0	0.0	A	6.6	Pass
Richmond	8	0	0	2.7	D	0	0	0	0	0.0	A	INC	INC
Rockland	6	0	1	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Saratoga	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Steuben	0	0	0	0.0	A	0	0	0	0	0.0	A	5.2	Pass
Suffolk	25	1	0	8.8	F	0	0	0	0	0.0	A	INC	INC
Tompkins	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wayne	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Westchester	13	1	0	4.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

NEW YORK

American Lung Association in New York

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Albany	303,654	55,217	54,365	4,545	23,860	12,143	172	18,069	3,468	32,736	88,238
Bronx	1,401,142	343,756	192,581	28,298	102,192	48,529	793	70,852	16,024	333,670	1,276,104
Chautauqua	126,032	25,405	26,724	2,091	9,578	5,583	72	8,371	1,167	17,909	16,715
Dutchess	293,293	54,027	54,693	4,448	22,920	12,563	167	18,532	2,917	22,960	87,954
Erie	917,241	184,393	172,524	15,179	70,143	38,099	520	56,653	9,347	117,938	234,297
Essex	36,891	5,784	9,243	476	2,943	1,846	21	2,786	294	3,565	2,940
Hamilton	4,345	558	1,447	46	353	262	2	402	29	378	245
Herkimer	60,945	12,401	13,240	1,021	4,614	2,754	35	4,129	544	7,192	3,714
Jefferson	108,095	25,814	15,874	2,125	7,942	3,712	62	5,498	1,058	13,411	20,138
Kings	2,538,934	573,050	376,413	47,174	189,748	89,828	1,436	132,459	30,402	446,856	1,601,732
Monroe	740,900	151,729	135,770	12,490	56,446	30,182	420	44,853	7,794	100,122	224,766
New York	1,611,989	230,115	281,526	18,943	133,131	63,453	912	94,547	21,400	255,059	854,472
Niagara	208,396	41,205	42,101	3,392	15,949	9,173	118	13,644	1,965	23,934	31,927
Onondaga	459,214	96,850	82,947	7,973	34,723	18,597	260	27,589	4,776	56,835	109,502
Orange	385,234	98,284	56,368	8,091	27,648	14,047	219	20,481	3,764	39,859	147,346
Oswego	116,346	24,200	20,359	1,992	8,839	4,784	66	7,031	1,135	15,935	7,437
Putnam	98,532	19,037	18,327	1,567	7,609	4,312	56	6,323	908	5,516	23,659
Queens	2,225,821	444,017	377,297	36,552	171,253	88,704	1,262	130,602	24,148	226,286	1,678,234
Richmond	475,327	102,965	80,934	8,476	35,743	19,070	269	28,029	4,867	49,625	196,554
Rockland	326,225	93,793	52,501	7,721	22,284	11,882	185	17,599	3,007	46,407	121,958
Saratoga	230,298	44,717	44,681	3,681	17,737	10,016	131	14,826	2,239	14,249	23,146
Steuben	94,657	20,217	19,364	1,664	7,091	4,146	54	6,184	855	11,291	6,424
Suffolk	1,474,273	305,751	261,770	25,170	112,005	61,596	836	90,435	14,279	87,692	501,183
Tompkins	101,058	14,703	15,769	1,210	8,355	3,654	57	5,440	1,371	10,927	23,277
Wayne	89,339	18,876	17,871	1,554	6,718	3,940	51	5,842	791	8,589	9,404
Westchester	965,802	207,948	172,471	17,118	72,609	39,755	547	58,607	9,701	71,781	461,595

NORTH CAROLINA

American Lung Association in North Carolina

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Alexander	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Avery	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Buncombe	0	0	0	0.0	A	0	0	0	0	0.0	A	5.7	Pass
Caldwell	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carteret	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Caswell	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Catawba	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.0	Pass
Cumberland	0	0	0	0.0	A	0	0	0	0	0.0	A	7.2	Pass
Davidson	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.8	Pass
Durham	0	0	0	0.0	A	0	0	0	0	0.0	A	7.7	Pass
Edgecombe	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Forsyth	2	0	0	0.7	B	0	0	0	0	0.0	A	8.9	Pass
Graham	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Granville	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Guilford	1	0	0	0.3	B	0	0	0	0	0.0	A	6.8	Pass
Haywood	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jackson	INC	INC	INC	INC	INC	0	0	0	0	0.0	A	6.4	Pass
Johnston	0	0	0	0.0	A	0	0	0	0	0.0	A	7.6	Pass
Lee	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lenoir	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lincoln	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Macon	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Martin	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mecklenburg	15	0	0	5.0	F	2	0	0	0	0.7	B	8.9	Pass
Mitchell	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	5.5	Pass
Montgomery	0	0	0	0.0	A	0	0	0	0	0.0	A	7.4	Pass
New Hanover	0	0	0	0.0	A	0	0	0	0	0.0	A	3.7	Pass
Northampton	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
Person	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Pitt	0	0	0	0.0	A	0	0	0	0	0.0	A	6.2	Pass
Rockingham	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rowan	0	0	0	0.0	A	INC	INC	INC	INC	INC	INC	INC	INC
Swain	0	0	0	0.0	A	1	0	0	0	0.3	B	7.0	Pass
Union	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wake	0	0	0	0.0	A	1	0	0	0	0.3	B	7.5	Pass
Yancey	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

NORTH CAROLINA

American Lung Association in North Carolina

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Alexander	37,441	7,335	7,809	843	2,333	2,138	24	3,176	334	4,248	5,028
Avery	17,571	2,627	4,036	302	1,157	1,052	11	1,583	148	2,398	2,030
Buncombe	263,477	47,485	55,508	5,457	16,753	14,677	166	22,024	2,853	35,693	44,149
Caldwell	82,100	16,245	17,217	1,867	5,102	4,723	52	7,010	766	10,557	11,114
Carteret	69,558	11,692	18,421	1,344	4,450	4,473	44	6,854	578	6,394	9,350
Caswell	22,443	4,123	5,223	474	1,415	1,349	14	2,033	185	3,287	8,794
Catawba	160,307	34,873	29,884	4,007	9,748	8,608	101	12,630	1,602	18,349	41,057
Cumberland	336,364	83,473	42,529	9,592	19,857	14,079	213	20,090	3,888	58,933	196,610
Davidson	169,234	36,521	31,947	4,197	10,309	9,242	107	13,541	1,670	20,044	35,899
Durham	327,306	65,770	46,245	7,558	20,508	15,084	206	21,574	4,229	36,583	185,709
Edgecombe	50,829	11,344	10,768	1,304	3,056	2,794	32	4,211	511	12,004	32,616
Forsyth	383,843	86,782	64,463	9,973	23,158	19,249	241	28,029	4,274	48,382	169,632
Graham	8,474	1,690	2,145	194	522	509	5	786	74	1,382	1,209
Granville	60,486	12,326	10,941	1,416	3,747	3,305	38	4,792	576	8,601	25,759
Guilford	540,521	119,326	86,182	13,712	32,892	26,529	339	38,373	6,333	69,163	277,385
Haywood	62,972	11,266	16,083	1,295	3,981	3,893	40	5,974	566	8,503	5,153
Jackson	44,033	7,199	9,070	827	2,863	2,363	28	3,564	509	6,603	8,502
Johnston	216,246	54,039	30,341	6,210	12,690	10,331	136	14,596	2,334	24,359	73,315
Lee	62,353	14,893	10,785	1,711	3,694	3,160	39	4,619	629	9,411	26,472
Lenoir	55,720	12,408	11,650	1,426	3,353	3,082	35	4,620	530	9,459	28,627
Lincoln	88,097	18,189	16,668	2,090	5,431	4,946	56	7,199	845	10,351	13,418
Macon	35,994	6,550	10,588	753	2,253	2,331	23	3,676	291	4,600	4,203
Martin	22,178	4,462	5,527	513	1,364	1,346	14	2,061	198	4,424	10,623
Mecklenburg	1,128,945	258,686	133,309	29,727	68,426	49,592	710	68,959	14,279	122,098	612,395
Mitchell	14,881	2,680	3,867	308	939	924	9	1,423	127	2,052	1,277
Montgomery	27,238	5,834	5,875	670	1,656	1,532	17	2,305	260	4,200	10,086
New Hanover	236,613	42,375	44,982	4,870	15,118	12,559	149	18,599	2,767	23,331	53,359
Northampton	19,088	3,355	5,380	386	1,206	1,242	12	1,931	151	4,046	11,673
Person	39,925	8,104	8,231	931	2,466	2,284	25	3,380	378	5,310	13,597
Pitt	182,924	38,434	26,036	4,417	11,327	8,264	115	11,898	2,422	30,096	84,681
Rockingham	91,285	18,277	19,497	2,100	5,651	5,291	57	7,874	860	12,458	25,601
Rowan	142,495	31,350	25,809	3,603	8,645	7,513	90	10,998	1,426	19,964	41,202
Swain	14,179	3,139	2,802	361	856	761	9	1,133	145	1,931	5,647
Union	244,562	63,643	32,536	7,314	14,162	11,704	154	16,333	2,583	16,946	71,990
Wake	1,132,271	263,953	141,073	30,332	68,173	51,491	714	71,803	13,621	82,129	461,088
Yancey	18,099	3,265	4,848	375	1,140	1,137	11	1,760	155	2,677	1,429

NORTH DAKOTA

American Lung Association in North Dakota

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Billings	0	0	0	0.0	A	0	0	0	0	0.0	A	3.8	Pass
Burke	0	0	0	0.0	A	1	0	0	0	0.3	B	3.7	Pass
Burleigh	0	0	0	0.0	A	2	2	0	0	1.7	C	5.2	Pass
Cass	0	0	0	0.0	A	2	1	0	0	1.2	C	6.6	Pass
Dunn	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
McKenzie	0	0	0	0.0	A	0	0	0	0	0.0	A	4.1	Pass
Mercer	0	0	0	0.0	A	2	0	0	0	0.7	B	4.9	Pass
Oliver	0	0	0	0.0	A	3	0	0	0	1.0	C	5.2	Pass
Ward	0	0	0	0.0	A	3	0	0	0	1.0	C	4.9	Pass
Williams	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC

NORTH DAKOTA

American Lung Association in North Dakota

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Billings	890	179	214	12	60	45	1	72	9	89	76
Burke	2,118	534	461	35	134	99	1	158	21	166	173
Burleigh	96,212	22,479	16,636	1,463	6,352	4,189	56	6,169	1,234	7,934	11,347
Cass	183,904	41,210	23,714	2,681	12,572	7,292	107	9,777	2,810	17,324	29,198
Dunn	4,465	1,127	747	73	286	192	3	283	46	442	844
McKenzie	15,242	4,938	1,366	321	908	508	9	648	194	1,130	3,749
Mercer	8,174	1,900	1,713	124	529	388	5	607	80	646	633
Oliver	1,926	473	461	31	121	95	1	154	16	206	120
Ward	68,466	16,267	9,295	1,058	4,591	2,709	40	3,698	932	5,829	12,625
Williams	38,700	11,614	3,527	756	2,393	1,325	23	1,679	497	3,665	9,103

OHIO

American Lung Association in Ohio

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Allen	6	0	0	2.0	C
Ashtabula	4	0	0	1.3	C
Athens	DNC	DNC	DNC	DNC	DNC
Belmont	DNC	DNC	DNC	DNC	DNC
Butler	11	0	0	3.7	F
Clark	7	0	0	2.3	D
Clermont	6	0	0	2.0	C
Clinton	1	0	0	0.3	B
Cuyahoga	21	0	0	7.0	F
Delaware	1	0	0	0.3	B
Fayette	0	0	0	0.0	A
Franklin	4	0	0	1.3	C
Geauga	11	0	0	3.7	F
Greene	1	0	0	0.3	B
Hamilton	18	1	0	6.5	F
Harrison	DNC	DNC	DNC	DNC	DNC
Jefferson	2	0	0	0.7	B
Knox	1	0	0	0.3	B
Lake	20	0	0	6.7	F
Lawrence	2	0	0	0.7	B
Licking	0	0	0	0.0	A
Lorain	1	0	0	0.3	B
Lucas	17	1	0	6.2	F
Madison	1	0	0	0.3	B
Mahoning	0	0	0	0.0	A
Medina	0	0	0	0.0	A
Miami	1	0	0	0.3	B
Montgomery	8	0	0	2.7	D
Noble	0	0	0	0.0	A
Portage	1	0	0	0.3	B
Preble	1	0	0	0.3	B
Scioto	DNC	DNC	DNC	DNC	DNC
Stark	6	0	0	2.0	C
Summit	4	0	0	1.3	C
Trumbull	5	0	0	1.7	C
Warren	12	0	0	4.0	F
Washington	4	0	0	1.3	C
Wood	2	0	0	0.7	B

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Allen	0	0	0	0	0.0	A	7.0	Pass
Ashtabula	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Athens	0	0	0	0	0.0	A	6.4	Pass
Belmont	0	0	0	0	0.0	A	INC	INC
Butler	0	0	0	0	0.0	A	INC	INC
Clark	0	0	0	0	0.0	A	8.9	Pass
Clermont	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clinton	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cuyahoga	3	1	0	0	1.5	C	9.3	Pass
Delaware	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fayette	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Franklin	1	0	0	0	0.3	B	8.8	Pass
Geauga	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	INC	INC	INC	INC	INC	INC	INC	INC
Hamilton	2	0	0	0	0.7	B	11.6	Pass
Harrison	0	0	0	0	0.0	A	INC	INC
Jefferson	0	0	0	0	0.0	A	INC	INC
Knox	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lake	0	0	0	0	0.0	A	6.6	Pass
Lawrence	0	0	0	0	0.0	A	6.9	Pass
Licking	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lorain	0	1	0	0	0.5	B	7.2	Pass
Lucas	1	0	0	0	0.3	B	INC	INC
Madison	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mahoning	1	0	0	0	0.3	B	INC	INC
Medina	0	0	0	0	0.0	A	7.3	Pass
Miami	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Montgomery	0	0	0	0	0.0	A	9.1	Pass
Noble	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Portage	0	0	0	0	0.0	A	INC	INC
Preble	1	0	0	0	0.3	B	8.1	Pass
Scioto	0	0	0	0	0.0	A	INC	INC
Stark	1	0	0	0	0.3	B	9.0	Pass
Summit	3	0	0	0	1.0	C	8.8	Pass
Trumbull	1	1	0	0	0.8	B	7.1	Pass
Warren	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washington	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wood	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

OHIO

American Lung Association in Ohio

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Allen	101,980	23,452	18,881	1,691	7,870	6,458	67	8,443	1,027	12,387	20,294
Ashtabula	96,513	21,112	19,494	1,522	7,541	6,553	63	8,622	911	15,354	10,549
Athens	65,481	9,409	9,292	678	5,684	3,768	43	4,720	963	12,301	6,696
Belmont	65,932	12,452	14,354	898	5,334	4,667	43	6,180	603	7,893	4,938
Butler	385,648	89,341	59,968	6,443	29,941	23,095	253	29,480	4,433	37,769	80,643
Clark	133,593	29,735	26,956	2,144	10,374	8,878	87	11,714	1,379	18,577	21,871
Clermont	207,449	46,510	36,548	3,354	16,202	13,355	136	17,266	2,163	18,827	14,731
Clinton	41,921	9,471	7,565	683	3,261	2,694	27	3,499	442	4,611	2,918
Cuyahoga	1,227,883	251,006	234,376	18,100	97,921	80,383	802	105,038	13,743	183,748	512,984
Delaware	213,554	54,450	31,430	3,926	16,130	12,821	140	16,249	2,337	7,876	36,692
Fayette	28,579	6,665	5,282	481	2,199	1,849	19	2,411	294	3,859	2,313
Franklin	1,324,624	306,055	167,882	22,070	103,561	72,337	867	90,133	17,063	199,428	511,564
Geauga	93,271	20,879	20,157	1,506	7,216	6,559	61	8,702	824	5,752	4,366
Greene	170,122	34,889	30,673	2,516	13,584	10,780	112	13,998	1,924	14,570	28,406
Hamilton	817,985	186,668	132,221	13,461	63,656	49,148	535	63,104	9,478	101,099	290,735
Harrison	15,014	3,044	3,381	220	1,192	1,084	10	1,442	139	2,019	810
Jefferson	64,939	12,551	14,559	905	5,214	4,617	43	6,146	655	9,593	6,593
Knox	62,423	14,217	11,787	1,025	4,828	4,000	41	5,239	659	6,440	3,043
Lake	229,569	44,800	48,384	3,231	18,462	16,066	150	21,186	2,296	17,854	29,595
Lawrence	59,091	12,711	11,606	917	4,646	3,970	39	5,202	613	11,521	3,190
Licking	178,100	40,762	30,647	2,939	13,836	11,308	117	14,588	1,898	17,039	20,905
Lorain	312,172	67,390	60,480	4,860	24,532	20,800	205	27,217	3,183	36,055	70,229
Lucas	428,294	97,929	73,586	7,062	33,247	26,654	280	34,452	4,776	73,336	138,207
Madison	44,559	9,051	7,281	653	3,592	2,858	30	3,644	417	3,795	5,326
Mahoning	226,075	45,001	49,996	3,245	18,018	15,776	148	21,008	2,210	34,336	56,334
Medina	180,912	39,321	34,580	2,836	14,212	12,172	119	15,872	1,813	10,598	12,340
Miami	107,516	24,574	20,806	1,772	8,304	7,067	70	9,269	1,083	8,534	9,166
Montgomery	531,610	116,633	98,808	8,411	41,600	33,877	348	44,249	5,869	75,773	160,400
Noble	14,364	2,694	4,147	194	1,144	1,161	10	1,594	105	1,753	740
Portage	162,583	29,652	28,706	2,138	13,389	10,509	106	13,542	1,958	15,339	18,112
Preble	40,836	9,083	8,232	655	3,176	2,768	27	3,643	398	3,546	1,695
Scioto	74,347	16,061	14,127	1,158	5,843	4,869	49	6,362	765	16,161	5,175
Stark	369,772	78,704	75,310	5,675	29,081	24,900	242	32,832	3,804	47,524	52,123
Summit	538,866	111,547	102,313	8,044	42,873	35,621	352	46,457	5,791	64,333	130,506
Trumbull	196,800	39,925	44,273	2,879	15,599	13,915	129	18,562	1,904	30,489	26,197
Warren	238,412	57,117	36,496	4,119	18,365	14,681	157	18,653	2,492	12,124	36,557
Washington	59,652	11,721	13,190	845	4,773	4,204	39	5,590	593	7,772	3,107
Wood	131,113	26,461	21,164	1,908	10,554	7,856	86	10,065	1,626	12,315	16,350

OKLAHOMA

American Lung Association in Oklahoma

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Adair	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bryan	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Canadian	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Carter	INC	INC	INC	INC	INC	3	0	0	0	1.0	C	8.5	Pass
Choctaw	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cleveland	5	0	0	1.7	C	3	0	0	0	1.0	C	10.0	Pass
Comanche	4	0	0	1.3	C	1	0	0	0	0.3	B	7.6	Pass
Creek	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dewey	7	0	0	2.3	D	0	0	0	0	0.0	A	7.8	Pass
Jefferson	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Johnston	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kay	0	0	0	0.0	A	4	0	0	0	1.3	C	8.5	Pass
Le Flore	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
Love	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
McClain	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mayes	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Nowata	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC
Oklahoma	12	0	0	4.0	F	1	0	0	0	0.3	B	9.7	Pass
Osage	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ottawa	0	0	0	0.0	A	2	0	0	0	0.7	B	INC	INC
Pittsburg	2	0	0	0.7	B	1	0	0	0	0.3	B	8.3	Pass
Sequoyah	0	0	0	0.0	A	0	0	0	0	0.0	A	7.8	Pass
Tulsa	9	1	0	3.5	F	1	0	0	0	0.3	B	9.2	Pass
Washington	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC	INC

OKLAHOMA

American Lung Association in Oklahoma

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Adair	21,955	5,882	3,542	576	1,758	1,443	14	1,831	239	4,858	13,473
Bryan	48,998	11,369	8,751	1,114	4,089	3,294	32	4,238	582	7,577	14,859
Canadian	153,192	39,562	20,967	3,876	12,528	9,337	101	11,609	1,881	11,342	39,608
Carter	48,353	12,038	8,452	1,180	3,952	3,244	32	4,163	541	8,986	15,269
Choctaw	14,646	3,536	3,134	346	1,193	1,074	10	1,415	152	2,807	5,999
Cleveland	287,066	60,152	41,387	5,894	24,983	17,958	190	22,378	3,852	29,765	85,340
Comanche	121,099	28,427	16,182	2,785	10,226	7,240	80	8,967	1,454	17,465	54,030
Creek	71,485	16,569	13,328	1,623	5,965	5,059	47	6,515	769	9,089	17,847
Dewey	4,815	1,272	899	125	383	328	3	426	48	500	946
Jefferson	5,949	1,452	1,272	142	483	437	4	575	56	1,030	1,435
Johnston	10,824	2,569	2,152	252	891	768	7	1,001	115	1,921	3,492
Kay	43,274	10,712	8,599	1,050	3,508	2,997	29	3,927	450	6,451	11,723
Le Flore	49,935	12,004	9,247	1,176	4,115	3,457	33	4,463	526	8,753	14,806
Love	10,230	2,499	1,925	245	837	706	7	915	112	1,188	3,122
McClain	41,348	10,470	6,575	1,026	3,383	2,734	27	3,454	472	4,280	9,084
Mayes	41,152	9,452	7,883	926	3,437	2,937	27	3,797	443	6,873	14,974
Nowata	10,076	2,263	2,011	222	846	742	7	962	101	1,635	3,529
Oklahoma	804,041	203,019	115,530	19,893	66,078	49,483	530	61,947	10,068	119,595	362,140
Osage	46,642	9,889	9,863	969	3,963	3,514	31	4,591	462	5,864	17,354
Ottawa	30,879	7,634	5,787	748	2,516	2,110	20	2,737	337	5,522	11,206
Pittsburg	43,679	9,868	8,927	967	3,644	3,133	29	4,100	437	6,809	13,879
Sequoyah	41,538	9,765	7,897	957	3,446	2,959	27	3,823	446	6,936	16,047
Tulsa	657,589	164,234	99,560	16,092	54,119	41,559	433	52,335	8,041	82,694	259,879
Washington	52,222	12,445	10,403	1,219	4,290	3,675	34	4,802	565	7,596	14,902

OREGON

American Lung Association in Oregon

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
Clackamas	7	0	0	2.3	D
Columbia	0	0	0	0.0	A
Crook	DNC	DNC	DNC	DNC	DNC
Harney	DNC	DNC	DNC	DNC	DNC
Jackson	7	0	0	2.3	D
Josephine	DNC	DNC	DNC	DNC	DNC
Klamath	DNC	DNC	DNC	DNC	DNC
Lake	DNC	DNC	DNC	DNC	DNC
Lane	0	0	0	0.0	A
Marion	0	0	0	0.0	A
Multnomah	3	0	0	1.0	C
Umatilla	0	0	0	0.0	A
Wasco	INC	INC	INC	INC	INC
Washington	1	0	0	0.3	B

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Clackamas	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Columbia	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Crook	1	2	0	2	3.0	D	11.0	Pass
Harney	9	9	0	1	8.3	F	10.7	Pass
Jackson	3	8	3	1	7.8	F	13.9	Fail
Josephine	1	3	0	1	2.7	D	12.2	Fail
Klamath	30	27	3	2	27.2	F	16.3	Fail
Lake	9	4	0	0	5.0	F	9.2	Pass
Lane	8	2	2	6	10.0	F	10.8	Pass
Marion	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Multnomah	2	1	0	1	2.0	C	8.2	Pass
Umatilla	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wasco	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Washington	3	0	1	1	2.5	D	8.6	Pass

OREGON

American Lung Association in Oregon

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Clackamas	421,596	89,039	80,711	6,188	35,473	20,875	201	25,851	3,655	28,451	82,347
Columbia	52,876	10,793	10,613	750	4,483	2,726	25	3,377	429	4,825	6,631
Crook	25,105	4,941	6,449	343	2,113	1,463	12	1,817	184	2,564	3,074
Harney	7,373	1,485	1,841	103	617	417	4	517	54	906	1,044
Jackson	221,844	45,018	51,164	3,129	18,632	11,926	106	14,797	1,840	26,011	44,984
Josephine	88,053	16,981	23,761	1,180	7,415	5,240	42	6,510	637	13,747	12,262
Klamath	68,739	14,883	15,168	1,034	5,687	3,594	33	4,458	548	13,307	15,938
Lake	7,949	1,519	2,085	106	673	470	4	584	53	1,179	1,322
Lane	382,986	68,706	78,637	4,775	33,375	19,305	182	23,919	3,632	54,433	72,400
Marion	349,204	83,836	57,493	5,826	28,427	15,393	166	19,044	3,133	41,191	125,228
Multnomah	815,637	147,168	116,360	10,228	72,257	34,771	389	42,923	9,027	89,646	254,550
Umatilla	77,752	19,394	12,728	1,348	6,249	3,394	37	4,199	639	8,605	27,251
Wasco	26,403	5,744	5,609	399	2,186	1,347	13	1,670	215	3,195	7,175
Washington	603,514	133,558	85,949	9,282	50,749	25,377	288	31,342	6,012	45,009	217,915

PENNSYLVANIA

American Lung Association in Pennsylvania

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Adams	2	0	0	0.7	B	0	0	0	0	0.0	A	INC	INC
Allegheny	12	1	0	4.5	F	17	4	0	0	7.7	F	11.1	Pass
Armstrong	4	0	0	1.3	C	0	0	0	0	0.0	A	7.8	Pass
Beaver	6	0	0	2.0	C	3	0	0	0	1.0	C	8.9	Pass
Berks	6	0	0	2.0	C	5	1	0	0	2.2	D	8.2	Pass
Blair	0	0	0	0.0	A	1	0	0	0	0.3	B	8.2	Pass
Bradford	0	0	0	0.0	A	0	0	0	0	0.0	A	6.9	Pass
Bucks	16	3	0	6.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cambria	0	0	0	0.0	A	0	0	0	0	0.0	A	8.7	Pass
Centre	0	0	0	0.0	A	2	0	0	0	0.7	B	8.6	Pass
Chester	2	0	0	0.7	B	2	0	0	0	0.7	B	8.7	Pass
Clearfield	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Cumberland	DNC	DNC	DNC	DNC	DNC	7	0	0	0	2.3	D	7.9	Pass
Dauphin	1	0	0	0.3	B	6	1	0	0	2.5	D	8.6	Pass
Delaware	8	0	0	2.7	D	7	0	0	0	2.3	D	10.8	Pass
Elk	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Erie	0	0	0	0.0	A	0	0	0	0	0.0	A	7.5	Pass
Fayette	1	0	0	0.3	B	0	0	0	0	0.0	A	INC	INC
Franklin	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greene	1	0	0	0.3	B	0	0	0	0	0.0	A	6.5	Pass
Indiana	2	0	0	0.7	B	INC	INC	INC	INC	INC	INC	INC	INC
Lackawanna	0	0	0	0.0	A	0	0	0	0	0.0	A	7.2	Pass
Lancaster	5	0	0	1.7	C	13	2	0	0	5.3	F	9.3	Pass
Lawrence	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lebanon	INC	INC	INC	INC	INC	5	0	0	0	1.7	C	INC	INC
Lehigh	2	0	0	0.7	B	3	0	0	0	1.0	C	8.4	Pass
Luzerne	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lycoming	0	0	0	0.0	A	INC	INC	INC	INC	INC	INC	INC	INC
Mercer	4	0	0	1.3	C	0	0	0	0	0.0	A	7.8	Pass
Monroe	2	0	0	0.7	B	INC	INC	INC	INC	INC	INC	INC	INC
Montgomery	8	0	0	2.7	D	0	0	0	0	0.0	A	7.5	Pass
Northampton	6	0	0	2.0	C	3	0	0	0	1.0	C	7.8	Pass
Philadelphia	19	1	0	6.8	F	1	0	0	0	0.3	B	8.8	Pass
Somerset	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Susquehanna	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Tioga	0	0	0	0.0	A	0	0	0	0	0.0	A	5.7	Pass
Washington	2	0	0	0.7	B	0	0	0	0	0.0	A	7.9	Pass
Westmoreland	2	0	0	0.7	B	0	0	0	0	0.0	A	7.0	Pass
Wyoming	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
York	1	0	0	0.3	B	0	0	0	0	0.0	A	9.2	Pass

PENNSYLVANIA

American Lung Association in Pennsylvania

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Adams	102,742	20,241	22,136	2,326	8,306	6,314	62	9,160	944	7,867	11,590
Allegheny	1,211,358	225,642	239,803	25,928	100,546	70,844	736	100,456	12,752	123,280	269,034
Armstrong	64,162	12,146	14,924	1,396	5,191	4,119	39	6,074	553	7,391	1,971
Beaver	162,575	31,285	36,521	3,595	13,168	10,138	99	14,856	1,476	14,568	18,172
Berks	421,017	92,872	75,685	10,672	33,582	23,666	256	33,026	4,214	44,744	128,038
Blair	121,007	24,418	26,220	2,806	9,721	7,349	74	10,707	1,128	13,608	6,779
Bradford	60,221	13,158	13,461	1,512	4,703	3,683	37	5,435	517	6,364	2,594
Bucks	627,987	125,771	124,652	14,452	50,921	37,914	382	53,825	5,859	36,950	108,003
Cambria	128,672	24,446	30,539	2,809	10,393	8,165	78	12,137	1,149	15,360	9,885
Centre	161,496	23,904	25,003	2,747	14,438	8,674	99	11,401	1,934	18,339	23,500
Chester	526,759	117,549	91,151	13,507	41,971	29,525	320	40,795	5,234	26,903	113,767
Clearfield	78,612	14,141	16,829	1,625	6,509	4,899	48	7,055	647	10,386	5,758
Cumberland	255,857	52,031	49,184	5,979	20,793	14,720	156	20,813	2,581	18,630	41,527
Dauphin	279,874	62,727	49,769	7,208	22,247	15,540	170	21,661	2,870	31,903	102,011
Delaware	566,753	124,290	97,909	14,282	45,483	31,280	344	43,202	5,990	50,715	199,096
Elk	29,607	5,646	6,843	649	2,390	1,914	18	2,816	243	2,426	832
Erie	268,426	56,188	51,518	6,456	21,631	15,418	163	21,826	2,674	34,469	44,049
Fayette	128,126	24,456	28,587	2,810	10,404	8,011	78	11,706	1,140	23,301	10,950
Franklin	155,637	34,168	31,690	3,926	12,275	9,139	95	13,173	1,482	14,354	20,279
Greene	35,621	6,846	7,144	787	2,923	2,129	22	3,029	320	4,154	2,426
Indiana	83,664	15,012	17,171	1,725	6,985	4,963	51	7,093	864	10,570	5,224
Lackawanna	208,989	42,573	43,142	4,892	16,839	12,412	127	17,873	2,051	24,549	35,503
Lancaster	546,192	126,895	103,569	14,581	42,685	30,437	332	43,316	5,420	40,963	104,219
Lawrence	85,083	16,946	19,528	1,947	6,811	5,312	52	7,847	760	10,676	7,369
Lebanon	141,663	31,959	28,532	3,672	11,099	8,173	86	11,782	1,349	12,360	27,642
Lehigh	370,802	83,731	64,419	9,621	29,480	20,324	225	28,180	3,846	42,385	142,928
Luzerne	316,982	63,247	64,528	7,267	25,719	18,868	193	27,021	3,016	46,287	69,505
Lycoming	113,209	23,138	22,998	2,659	9,130	6,673	69	9,571	1,112	14,273	11,336
Mercer	108,545	20,688	24,802	2,377	8,799	6,798	66	10,005	976	12,677	10,980
Monroe	170,154	32,867	31,513	3,777	14,027	10,111	104	14,067	1,667	17,353	62,132
Montgomery	833,869	178,136	154,709	20,469	66,944	47,772	507	67,047	8,321	45,874	212,670
Northampton	305,892	60,069	61,061	6,902	24,981	18,111	186	25,779	3,018	22,304	77,514
Philadelphia	1,578,487	338,752	226,967	38,924	129,820	79,887	957	105,156	19,510	296,836	1,039,502
Somerset	72,916	13,105	17,093	1,506	5,977	4,682	45	6,906	579	7,952	4,264
Susquehanna	40,006	7,464	9,879	858	3,224	2,635	24	3,943	321	4,580	1,622
Tioga	40,381	7,962	9,302	915	3,241	2,524	25	3,730	366	4,493	1,606
Washington	206,803	40,235	44,460	4,623	16,781	12,704	126	18,410	1,916	17,444	17,127
Westmoreland	347,087	62,876	82,748	7,225	28,328	22,490	211	33,319	3,027	31,545	22,645
Wyoming	26,557	5,087	6,019	585	2,151	1,669	16	2,450	238	2,697	1,283
York	450,448	98,211	83,103	11,285	35,948	25,756	274	36,136	4,415	31,392	80,758

PUERTO RICO

American Lung Association in Puerto Rico

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
Adjuntas	DNC	DNC	DNC	DNC	DNC
Bayamón	INC	INC	INC	INC	INC
Caguas	DNC	DNC	DNC	DNC	DNC
Cataño	0	0	0	0.0	A
Fajardo	DNC	DNC	DNC	DNC	DNC
Guayama	DNC	DNC	DNC	DNC	DNC
Guaynabo	DNC	DNC	DNC	DNC	DNC
Juncos	INC	INC	INC	INC	INC
Mayagüez	INC	INC	INC	INC	INC
Ponce	DNC	DNC	DNC	DNC	DNC

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Adjuntas	0	0	0	0	0.0	A	INC	INC
Bayamón	4	5	0	0	3.8	F	INC	INC
Caguas	0	0	0	0	0.0	A	INC	INC
Cataño	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Fajardo	0	0	0	0	0.0	A	INC	INC
Guayama	INC	INC	INC	INC	INC	INC	INC	INC
Guaynabo	2	1	0	0	1.2	C	INC	INC
Juncos	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Mayagüez	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Ponce	2	0	0	0	0.7	B	INC	INC

PUERTO RICO

American Lung Association in Puerto Rico

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Adjuntas	17,213	3,138	3,684	231	1,471	790	3	1,389	98	11,065	18,020
Bayamón	166,499	27,089	38,666	1,998	14,586	7,687	26	13,683	984	59,828	185,187
Caguas	123,421	21,031	26,601	1,551	10,694	5,675	19	9,940	767	48,401	127,244
Cataño	22,788	4,083	5,086	301	1,956	1,031	4	1,826	135	11,785	23,155
Fajardo	28,879	5,125	6,649	378	2,488	1,327	5	2,371	175	13,535	32,124
Guayama	39,114	6,976	7,757	514	3,346	1,746	6	2,993	232	19,431	36,614
Guaynabo	82,858	12,292	19,955	906	7,396	3,967	13	7,114	469	21,916	89,780
Juncos	38,165	7,289	6,592	538	3,202	1,665	6	2,771	261	18,354	37,012
Mayagüez	70,259	11,344	17,955	837	6,178	3,199	11	5,835	405	39,987	73,077
Ponce	128,858	23,286	30,688	1,717	11,066	5,856	20	10,563	717	70,263	137,491

RHODE ISLAND

American Lung Association in Rhode Island

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Kent	7	0	0	2.3	D	0	0	0	0	0.0	A	4.9	Pass
Providence	10	0	0	3.3	F	0	0	0	0	0.0	A	8.5	Pass
Washington	8	1	0	3.2	D	0	0	0	0	0.0	A	4.5	Pass

RHODE ISLAND

American Lung Association in Rhode Island

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
KKent	164,646	30,311	32,853	2,872	16,302	9,887	102	11,500	1,427	12,295	21,823
Providence	636,547	129,300	102,173	12,253	61,549	33,577	394	37,987	6,319	75,510	257,091
Washington	125,746	19,996	28,055	1,895	12,795	7,920	78	9,299	1,106	9,341	11,750

SOUTH CAROLINA

American Lung Association in South Carolina

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
Aiken	0	0	0	0.0	A
Anderson	1	0	0	0.3	B
Berkeley	0	0	0	0.0	A
Charleston	1	0	0	0.3	B
Chesterfield	0	0	0	0.0	A
Colleton	INC	INC	INC	INC	INC
Darlington	0	0	0	0.0	A
Edgefield	0	0	0	0.0	A
Florence	DNC	DNC	DNC	DNC	DNC
Greenville	1	0	0	0.3	B
Horry	0	0	0	0.0	A
Lexington	DNC	DNC	DNC	DNC	DNC
Oconee	INC	INC	INC	INC	INC
Pickens	INC	INC	INC	INC	INC
Richland	3	0	0	1.0	C
Spartanburg	3	0	0	1.0	C
York	11	0	0	3.7	F

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Aiken	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Anderson	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Berkeley	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Charleston	1	0	0	0	0.3	B	6.9	Pass
Chesterfield	0	0	0	0	0.0	A	INC	INC
Colleton	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Darlington	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Edgefield	0	0	0	0	0.0	A	7.3	Pass
Florence	0	0	0	0	0.0	A	7.4	Pass
Greenville	1	0	0	0	0.3	B	7.4	Pass
Horry	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Lexington	1	0	0	0	0.3	B	7.4	Pass
Oconee	INC	INC	INC	INC	INC	INC	INC	INC
Pickens	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Richland	0	0	0	0	0.0	A	7.1	Pass
Spartanburg	0	0	0	0	0.0	A	7.8	Pass
York	0	0	0	0	0.0	A	INC	INC

SOUTH CAROLINA

American Lung Association in South Carolina

		AT-RISK GROUPS								
				Lung Diseases						
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Aiken	172,895	36,711	35,425	2,736	12,892	11,640	102	16,022	1,728	22,201	59,673
Anderson	204,353	45,947	38,030	3,424	15,043	13,235	121	18,087	2,094	28,177	47,407
Berkeley	235,987	55,842	34,611	4,161	17,038	13,716	140	18,291	2,572	25,655	87,716
Charleston	417,981	80,470	72,734	5,996	31,740	26,293	248	35,388	4,816	48,326	143,742
Chesterfield	45,606	9,956	8,845	742	3,400	3,053	27	4,192	438	8,879	18,333
Colleton	37,481	8,448	7,828	630	2,756	2,537	22	3,508	355	7,437	16,055
Darlington	66,509	14,563	13,360	1,085	4,926	4,440	39	6,108	684	12,327	30,446
Edgefield	27,120	4,695	5,527	350	2,129	1,891	16	2,591	233	4,161	11,456
Florence	137,588	32,146	24,573	2,395	9,989	8,649	81	11,772	1,488	23,016	67,601
Greenville	532,486	121,329	88,239	9,041	38,906	32,592	316	43,966	5,829	63,371	172,611
Horry	365,449	63,274	94,875	4,715	28,602	28,003	216	39,315	3,320	46,156	81,506
Lexington	303,946	69,267	51,064	5,161	22,323	18,993	180	25,713	3,202	31,262	80,086
Oconee	80,015	15,603	19,338	1,163	6,111	5,886	48	8,229	704	8,833	12,730
Pickens	127,983	23,792	21,970	1,773	9,763	7,962	76	10,674	1,466	18,343	19,202
Richland	419,051	89,413	57,157	6,663	30,906	23,579	248	30,974	5,256	62,651	247,020
Spartanburg	326,205	75,244	54,390	5,607	23,775	20,036	193	27,069	3,508	45,129	106,342
York	289,105	68,824	43,468	5,128	20,999	17,345	171	23,279	3,209	25,145	89,799

SOUTH DAKOTA

American Lung Association in South Dakota

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
Brookings	6	0	0	2.0	C
Brown	DNC	DNC	DNC	DNC	DNC
Codington	INC	INC	INC	INC	INC
Custer	2	0	0	0.7	B
Hughes	DNC	DNC	DNC	DNC	DNC
Jackson	0	0	0	0.0	A
Meade	0	0	0	0.0	A
Minnehaha	4	0	0	1.3	C
Pennington	DNC	DNC	DNC	DNC	DNC
Union	3	0	0	1.0	C

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Brookings	0	0	0	0	0.0	A	4.4	Pass
Brown	1	0	0	0	0.3	B	INC	INC
Codington	1	0	0	0	0.3	B	6.9	Pass
Custer	0	0	0	0	0.0	A	3.2	Pass
Hughes	1	0	0	0	0.3	B	3.8	Pass
Jackson	1	0	0	0	0.3	B	4.3	Pass
Meade	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Minnehaha	0	0	0	0	0.0	A	5.2	Pass
Pennington	3	0	0	0	1.0	C	6.5	Pass
Union	1	0	0	0	0.3	B	6.1	Pass

SOUTH DAKOTA

American Lung Association in South Dakota

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Brookings	35,603	7,512	4,581	560	2,334	1,516	19	1,757	561	3,186	3,811
Brown	38,738	9,201	7,017	686	2,420	1,894	21	2,528	488	3,399	5,580
Codington	28,186	6,615	5,269	493	1,764	1,413	15	1,916	327	2,499	2,428
Custer	9,017	1,308	2,948	97	616	615	5	930	76	847	963
Hughes	17,336	4,226	3,157	315	1,073	855	9	1,156	215	1,562	3,258
Jackson	3,321	1,158	459	86	178	135	2	176	37	944	2,030
Meade	28,588	6,273	4,651	467	1,837	1,363	15	1,759	359	2,416	3,823
Minnehaha	196,659	49,550	27,051	3,692	12,158	8,705	105	10,980	2,598	15,537	37,085
Pennington	115,926	26,144	22,539	1,948	7,335	5,927	62	8,072	1,352	13,734	23,549
Union	16,192	3,947	3,043	294	1,001	809	9	1,102	187	955	1,519

TENNESSEE

American Lung Association in Tennessee

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Anderson	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Blount	2	0	0	0.7	B	0	0	0	0	0.0	A	6.8	Pass
Claiborne	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Davidson	5	1	0	2.2	D	2	0	0	0	0.7	B	9.0	Pass
DeKalb	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dyer	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	6.8	Pass
Hamilton	1	0	0	0.3	B	0	1	0	0	0.5	B	8.1	Pass
Jefferson	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Knox	1	0	0	0.3	B	0	0	0	0	0.0	A	8.1	Pass
Lawrence	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Loudon	1	0	0	0.3	B	0	0	0	0	0.0	A	6.6	Pass
McMinn	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.2	Pass
Madison	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	INC	INC
Maury	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.2	Pass
Montgomery	DNC	DNC	DNC	DNC	DNC	2	0	0	0	0.7	B	INC	INC
Putnam	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	6.4	Pass
Roane	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.9	Pass
Sevier	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Shelby	11	0	0	3.7	F	0	1	0	0	0.5	B	8.7	Pass
Sullivan	2	0	0	0.7	B	0	0	0	0	0.0	A	6.7	Pass
Sumner	1	0	0	0.3	B	1	0	0	0	0.3	B	6.7	Pass
Williamson	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wilson	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

TENNESSEE

American Lung Association in Tennessee

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Anderson	77,558	16,391	16,024	1,596	6,425	6,377	55	7,433	779	10,155	8,679
Blount	134,751	26,572	28,667	2,588	11,382	11,391	96	13,285	1,369	12,219	12,828
Claiborne	32,023	6,092	6,624	593	2,723	2,678	23	3,108	334	5,779	1,616
Davidson	694,176	140,831	89,606	13,716	57,062	46,714	491	50,673	9,582	85,618	301,712
DeKalb	20,837	4,424	4,011	431	1,728	1,694	15	1,942	209	3,591	2,589
Dyer	36,693	8,670	6,660	844	2,940	2,824	26	3,234	394	6,022	7,672
Hamilton	371,662	76,552	67,922	7,456	30,803	28,837	263	32,995	4,257	48,007	108,127
Jefferson	55,307	10,506	11,520	1,023	4,730	4,744	39	5,478	554	6,948	4,430
Knox	475,609	98,706	78,711	9,613	39,206	35,320	337	39,805	5,709	50,345	86,670
Lawrence	44,432	11,020	8,084	1,073	3,510	3,404	32	3,905	446	6,651	3,013
Loudon	54,910	10,477	15,164	1,020	4,676	5,084	39	6,245	465	5,736	7,270
McMinn	54,208	11,283	11,148	1,099	4,515	4,487	38	5,214	554	7,439	6,093
Madison	98,360	21,758	17,781	2,119	8,009	7,558	69	8,646	1,118	20,847	43,777
Maury	99,590	22,878	16,923	2,228	8,028	7,497	71	8,481	1,106	9,763	21,457
Montgomery	214,251	57,064	21,039	5,558	16,178	12,619	152	13,263	2,767	22,576	82,248
Putnam	80,929	16,818	13,904	1,638	6,650	5,992	58	6,825	924	13,250	9,922
Roane	53,841	9,974	12,852	971	4,631	4,832	38	5,729	506	7,178	4,144
Sevier	99,244	20,214	20,519	1,969	8,330	8,336	70	9,661	983	13,485	10,962
Shelby	936,017	232,369	135,453	22,631	73,380	65,355	661	72,306	11,170	174,664	608,748
Sullivan	158,755	30,096	35,806	2,931	13,536	13,749	113	16,196	1,582	21,301	11,239
Sumner	195,561	45,298	32,344	4,412	15,786	14,842	139	16,640	2,154	18,595	34,337
Williamson	245,348	64,913	34,573	6,322	19,096	17,903	174	19,488	2,643	10,080	40,625
Wilson	148,130	34,399	23,952	3,350	11,965	11,243	105	12,533	1,622	11,645	24,555

TEXAS

American Lung Association in Texas

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Atascosa	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
Bell	7	0	0	2.3	D	INC	INC	INC	INC	INC	INC	INC	INC
Bexar	22	0	0	7.3	F	1	1	0	0	0.8	B	8.4	Pass
Bowie	DNC	DNC	DNC	DNC	DNC	3	0	0	0	1.0	C	9.4	Pass
Brazoria	12	3	0	5.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Brazos	DNC	DNC	DNC	DNC	DNC	INC	INC	INC	INC	INC	INC	INC	INC
Brewster	0	0	0	0.0	A	0	0	0	0	0.0	A	5.7	Pass
Cameron	0	0	0	0.0	A	6	3	0	0	3.5	F	10.1	Pass
Collin	25	2	0	9.3	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Culberson	INC	INC	INC	INC	INC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dallas	24	1	0	8.5	F	4	2	0	0	2.3	D	9.1	Pass
Denton	32	1	0	11.2	F	INC	INC	INC	INC	INC	INC	INC	INC
Ector	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Ellis	5	0	0	1.7	C	1	0	0	0	0.3	B	INC	INC
El Paso	36	3	0	13.5	F	0	0	0	0	0.0	A	8.8	Pass
Galveston	17	0	1	6.3	F	2	0	0	0	0.7	B	7.7	Pass
Gregg	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Harris	52	11	2	24.2	F	4	2	0	0	2.3	D	10.6	Pass
Harrison	0	0	0	0.0	A	1	0	0	0	0.3	B	8.4	Pass
Hidalgo	0	0	0	0.0	A	9	2	0	0	4.0	F	10.8	Pass
Hood	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hunt	3	1	0	1.5	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Jefferson	13	1	0	4.8	F	2	0	0	0	0.7	B	9.1	Pass
Johnson	16	1	0	5.8	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kaufman	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kleberg	DNC	DNC	DNC	DNC	DNC	7	3	0	0	3.8	F	INC	INC
Lubbock	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	INC	INC
McLennan	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Maverick	DNC	DNC	DNC	DNC	DNC	0	1	0	0	0.5	B	INC	INC
Montgomery	21	1	0	7.5	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Navarro	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Nueces	0	0	0	0.0	A	1	2	0	0	1.3	C	8.8	Pass
Orange	7	0	0	2.3	D	1	0	0	0	0.3	B	9.1	Pass
Parker	6	1	0	2.5	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Polk	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Potter	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	INC	INC
Randall	11	0	0	3.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rockwall	8	0	0	2.7	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Smith	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tarrant	39	6	0	16.0	F	2	0	0	0	0.7	B	9.0	Pass
Travis	7	0	0	2.3	D	4	1	0	0	1.8	C	9.6	Pass
Victoria	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Webb	0	0	0	0.0	A	5	1	0	0	2.2	D	INC	INC

TEXAS

American Lung Association in Texas

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Atascosa	51,724	13,937	7,839	960	2,820	2,050	25	2,961	585	7,618	35,074
Bell	369,927	101,469	42,635	6,988	19,966	12,758	176	17,991	4,714	52,839	207,418
Bexar	2,026,823	508,033	256,003	34,987	113,205	75,013	963	106,225	25,996	297,131	1,487,343
Bowie	93,481	21,998	16,144	1,515	5,328	3,993	45	5,826	1,013	15,191	34,915
Brazoria	380,518	98,618	47,520	6,792	21,108	14,372	181	20,279	4,583	30,696	212,098
Brazos	232,555	47,869	23,030	3,297	13,644	7,644	111	10,578	3,616	48,484	105,169
Brewster	9,237	1,695	2,226	117	560	468	4	705	94	1,282	4,635
Cameron	424,180	125,191	60,281	8,622	22,258	15,753	201	22,742	4,925	102,649	388,243
Collin	1,072,069	271,590	122,633	18,704	60,148	40,392	509	56,314	13,688	65,922	495,470
Culberson	2,149	490	459	34	123	100	1	150	21	397	1,681
Dallas	2,635,888	673,806	300,111	46,404	146,621	95,195	1,252	133,235	34,316	357,084	1,901,458
Denton	919,324	219,412	101,526	15,110	52,519	34,341	436	47,673	12,310	62,596	398,243
Ector	167,701	51,201	16,214	3,526	8,679	5,347	80	7,431	2,036	22,439	118,417
Ellis	191,760	50,547	25,537	3,481	10,581	7,427	91	10,547	2,284	14,973	81,912
El Paso	841,286	223,201	107,874	15,371	46,040	30,804	400	43,799	10,299	145,103	743,741
Galveston	345,089	82,494	52,548	5,681	19,660	14,310	164	20,544	4,058	33,751	150,979
Gregg	124,229	31,745	19,837	2,186	6,890	5,032	59	7,306	1,439	21,845	53,846
Harris	4,738,253	1,245,010	532,122	85,741	261,091	169,473	2,253	237,065	60,889	747,146	3,398,922
Harrison	66,386	16,416	11,946	1,131	3,730	2,892	31	4,238	724	10,136	24,651
Hidalgo	875,200	278,262	101,088	19,163	44,433	29,256	415	41,494	10,667	207,104	824,001
Hood	63,527	13,083	16,415	901	3,749	3,333	30	5,060	589	5,919	10,683
Hunt	99,807	23,618	16,389	1,627	5,696	4,241	47	6,142	1,145	12,240	30,182
Jefferson	250,127	60,632	37,705	4,176	14,137	10,069	120	14,491	2,763	42,858	153,245
Johnson	179,575	46,317	26,260	3,190	9,970	7,185	85	10,305	2,049	16,676	55,399
Kaufman	143,198	40,236	16,863	2,771	7,708	5,185	68	7,296	1,761	12,958	61,455
Kleberg	30,338	7,350	4,163	506	1,698	1,094	14	1,574	401	6,030	24,290
Lubbock	314,772	74,142	40,975	5,106	17,845	11,511	149	16,388	4,275	47,957	150,364
McLennan	259,730	63,184	39,176	4,351	14,602	10,169	123	14,690	3,295	42,552	116,614
Maverick	58,378	17,863	7,075	1,230	3,015	2,006	28	2,855	683	11,439	56,802
Montgomery	626,351	162,296	86,121	11,177	34,785	24,720	298	35,187	7,362	51,122	228,802
Navarro	50,694	13,457	8,702	927	2,781	2,140	24	3,128	542	7,383	23,295
Nueces	363,148	87,760	55,673	6,044	20,522	14,625	173	21,101	4,369	62,210	260,316
Orange	82,878	20,684	13,494	1,424	4,650	3,476	39	5,038	927	12,368	17,210
Parker	148,198	36,480	23,884	2,512	8,377	6,318	71	9,120	1,631	11,729	26,613
Polk	52,995	10,629	10,282	732	3,179	2,545	26	3,719	462	7,282	15,162
Potter	116,004	31,238	15,703	2,151	6,323	4,368	55	6,241	1,301	22,745	66,202
Randall	139,899	33,584	21,936	2,313	7,911	5,640	66	8,166	1,705	13,225	43,193
Rockwall	109,888	29,269	14,136	2,016	6,056	4,261	52	6,021	1,299	5,214	35,604
Smith	235,806	57,144	40,830	3,935	13,296	9,935	112	14,533	2,807	29,150	96,834
Tarrant	2,123,347	547,500	254,161	37,705	117,937	78,765	1,007	110,691	27,168	220,041	1,176,917
Travis	1,300,503	271,448	136,406	18,694	76,783	47,024	620	64,976	18,575	129,969	667,137
Victoria	91,936	23,048	15,537	1,587	5,124	3,794	44	5,545	1,060	14,859	52,206
Webb	277,681	88,873	27,714	6,120	14,094	8,957	132	12,496	3,404	54,564	267,775

UTAH

American Lung Association in Utah

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Box Elder	7	1	0	2.8	D	INC	INC	INC	INC	INC	INC	INC	INC
Cache	4	0	0	1.3	C	24	2	0	0	9.0	F	7.2	Pass
Carbon	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Davis	25	1	0	8.8	F	7	1	0	0	2.8	D	7.1	Pass
Duchesne	16	4	0	7.3	F	7	0	0	0	2.3	D	6.8	Pass
Garfield	2	0	0	0.7	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Iron	0	0	0	0.0	A	0	0	0	0	0.0	A	4.8	Pass
Salt Lake	61	3	0	21.8	F	15	1	0	0	5.5	F	8.1	Pass
San Juan	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Tooele	8	1	0	3.2	D	8	1	0	0	3.2	D	6.8	Pass
Uintah	22	5	1	10.5	F	1	0	0	0	0.3	B	5.8	Pass
Utah	24	1	0	8.5	F	15	6	0	0	8.0	F	7.2	Pass
Washington	4	0	0	1.3	C	0	0	0	0	0.0	A	5.2	Pass
Weber	22	1	0	7.8	F	4	1	0	0	1.8	C	INC	INC

UTAH

American Lung Association in Utah

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Box Elder	57,007	17,626	7,548	1,086	4,243	1,736	15	2,663	701	3,817	7,637
Cache	130,004	38,719	13,069	2,385	9,916	3,460	35	4,948	1,971	11,607	21,451
Carbon	20,760	5,354	3,829	330	1,643	737	6	1,213	254	2,590	3,660
Davis	359,232	111,817	38,278	6,889	26,837	10,229	96	14,843	4,825	17,794	61,724
Duchesne	19,894	6,603	2,525	407	1,433	588	5	898	236	2,076	3,024
Garfield	5,050	1,144	1,222	70	412	203	1	356	52	474	589
Iron	56,814	15,846	7,798	976	4,414	1,733	15	2,668	790	7,593	8,242
Salt Lake	1,165,517	305,484	134,562	18,820	93,257	35,628	313	51,851	16,597	79,980	348,996
San Juan	15,278	4,427	2,281	273	1,166	505	4	790	181	2,782	8,438
Tooele	74,512	23,631	7,024	1,456	5,536	2,081	20	2,931	1,014	4,224	13,572
Uintah	35,970	11,544	4,268	711	2,640	1,042	10	1,560	455	3,853	6,595
Utah	651,059	211,225	52,169	13,013	47,992	16,062	175	21,868	9,689	49,771	120,954
Washington	184,913	46,233	42,016	2,848	14,637	6,963	49	12,169	2,113	12,615	30,166
Weber	262,658	71,841	32,174	4,426	20,647	8,097	70	12,009	3,560	18,994	64,172

VERMONT

American Lung Association in Vermont

HIGH OZONE DAYS 2018–2020

County	Orange	Red	Purple	Wgt. Avg.	Grade
Bennington	1	0	0	0.3	B
Chittenden	0	0	0	0.0	A
Rutland	0	0	0	0.0	A

HIGH PARTICLE POLLUTION DAYS 2018–2020

	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Bennington	0	0	0	0	0.0	A	5.7	Pass
Chittenden	0	0	0	0	0.0	A	6.6	Pass
Rutland	0	0	0	0	0.0	A	7.5	Pass

VERMONT

American Lung Association in Vermont

		AT-RISK GROUPS									
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Bennington	35,338	6,574	8,437	477	3,052	1,853	20	2,636	257	3,536	2,335
Chittenden	164,306	28,617	26,445	2,076	15,433	7,186	91	9,731	1,622	13,194	19,963
Rutland	57,764	10,024	13,626	727	5,085	3,042	32	4,310	418	6,659	2,857

VIRGINIA

American Lung Association in Virginia

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Albemarle	0	0	0	0.0	A	0	0	0	0	0.0	A	6.3	Pass
Arlington	4	0	0	1.3	C	0	0	0	0	0.0	A	7.3	Pass
Caroline	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Charles City	1	0	0	0.3	B	0	0	0	0	0.0	A	6.2	Pass
Chesterfield	0	0	0	0.0	A	0	0	0	0	0.0	A	6.3	Pass
Fairfax	3	0	0	1.0	C	0	0	0	0	0.0	A	8.6	Pass
Fauquier	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Frederick	0	0	0	0.0	A	0	0	0	0	0.0	A	7.2	Pass
Giles	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hanover	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Henrico	1	0	0	0.3	B	0	0	0	0	0.0	A	6.9	Pass
Loudoun	2	0	0	0.7	B	0	0	0	0	0.0	A	6.8	Pass
Madison	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Prince Edward	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Prince William	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Roanoke	0	0	0	0.0	A	0	0	0	0	0.0	A	6.6	Pass
Rockbridge	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rockingham	0	0	0	0.0	A	0	0	0	0	0.0	A	6.6	Pass
Stafford	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wythe	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Bristol City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.4	Pass
Hampton City	0	0	0	0.0	A	0	0	0	0	0.0	A	6.1	Pass
Lynchburg City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.0	Pass
Norfolk City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.6	Pass
Richmond City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.8	Pass
Salem City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.5	Pass
Suffolk City	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Virginia Beach City	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	6.6	Pass

VIRGINIA

American Lung Association in Virginia

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Albemarle	110,652	21,879	21,877	1,630	7,596	5,340	57	7,359	1,217	6,602	25,966
Arlington	240,119	43,510	27,285	3,242	16,557	9,611	123	12,309	3,355	14,273	93,815
Caroline	30,860	6,982	5,330	520	2,069	1,440	16	1,954	308	2,950	11,360
Charles City	6,821	985	1,810	73	515	410	3	580	56	676	3,848
Chesterfield	358,245	84,502	56,749	6,297	23,698	16,117	183	21,657	3,898	23,305	143,881
Fairfax	1,150,847	267,135	165,549	19,906	76,411	50,429	591	66,904	12,617	59,990	581,453
Fauquier	71,361	16,389	12,330	1,221	4,811	3,411	37	4,623	683	4,270	15,297
Frederick	91,119	20,664	16,697	1,540	6,116	4,350	47	5,946	888	6,658	16,765
Giles	16,663	3,319	3,709	247	1,165	880	9	1,227	151	1,757	942
Hanover	108,262	23,357	20,287	1,740	7,412	5,333	56	7,291	1,047	5,266	18,324
Henrico	333,766	74,502	54,871	5,552	22,352	15,181	171	20,467	3,711	27,328	161,813
Loudoun	422,784	115,921	42,912	8,638	26,615	16,485	217	21,124	4,819	13,241	195,047
Madison	13,312	2,634	3,075	196	933	714	7	1,001	119	1,241	2,083
Prince Edward	23,006	3,671	3,948	274	1,624	1,039	12	1,400	276	4,470	8,962
Prince William	475,533	126,506	50,931	9,427	30,119	18,635	244	23,995	5,363	22,884	282,131
Roanoke	94,509	18,668	21,101	1,391	6,579	4,925	48	6,882	916	5,499	14,417
Rockbridge	22,757	4,016	6,162	299	1,633	1,309	12	1,869	191	2,333	1,911
Rockingham	82,346	18,007	16,445	1,342	5,564	4,029	42	5,569	809	6,681	10,381
Stafford	156,748	40,512	17,216	3,019	10,037	6,238	81	8,046	1,699	8,148	65,849
Wythe	28,620	5,570	6,420	415	2,016	1,530	15	2,134	264	3,400	1,835
Bristol City	17,329	3,553	3,845	265	1,190	886	9	1,240	170	2,948	2,144
Hampton City	135,464	28,572	21,774	2,129	9,124	6,018	69	8,084	1,543	17,494	85,522
Lynchburg City	81,561	15,455	11,869	1,152	5,495	3,313	42	4,391	1,152	10,926	30,959
Norfolk City	242,803	46,980	28,925	3,501	16,351	9,448	125	12,197	2,908	36,765	138,009
Richmond City	232,226	39,325	32,809	2,930	16,262	9,951	119	13,073	3,189	39,609	132,963
Salem City	25,340	4,745	4,998	354	1,773	1,253	13	1,721	278	2,087	4,031
Suffolk City	93,913	22,241	14,322	1,657	6,208	4,183	48	5,593	1,003	8,330	48,393
Virginia Beach City	451,231	98,948	68,347	7,373	30,126	19,662	231	26,237	5,068	35,860	178,417

WASHINGTON

American Lung Association in Washington

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Benton	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clallam	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Clark	0	0	0	0.0	A	8	1	2	5	8.7	F	9.4	Pass
King	6	0	0	2.0	C	8	10	3	0	9.7	F	9.1	Pass
Kitsap	DNC	DNC	DNC	DNC	DNC	4	6	3	0	6.3	F	5.8	Pass
Kittitas	DNC	DNC	DNC	DNC	DNC	9	6	3	1	8.8	F	7.8	Pass
Okanogan	DNC	DNC	DNC	DNC	DNC	4	18	5	3	16.2	F	11.9	Pass
Pierce	3	0	0	1.0	C	10	8	3	0	9.3	F	8.6	Pass
Skagit	0	0	0	0.0	A	3	3	0	0	2.5	D	INC	INC
Snohomish	DNC	DNC	DNC	DNC	DNC	9	10	1	0	8.7	F	9.1	Pass
Spokane	4	0	0	1.3	C	5	8	2	3	9.5	F	9.4	Pass
Stevens	DNC	DNC	DNC	DNC	DNC	1	3	1	3	5.0	F	INC	INC
Thurston	1	0	0	0.3	B	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Whatcom	2	0	0	0.7	B	4	9	1	0	6.5	F	5.1	Pass
Yakima	DNC	DNC	DNC	DNC	DNC	14	10	1	4	13.7	F	10.7	Pass

WASHINGTON

American Lung Association in Washington

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Benton	206,426	54,188	32,470	3,961	14,743	8,213	102	11,340	2,055	18,527	64,610
Clallam	78,067	12,901	24,362	943	6,380	4,490	38	6,840	591	10,194	14,182
Clark	496,865	115,440	81,400	8,438	36,992	20,873	244	28,862	5,137	42,918	115,966
King	2,274,315	450,060	311,240	32,899	176,029	90,509	1,119	120,129	26,791	169,478	978,203
Kitsap	272,787	54,570	51,531	3,989	21,161	12,213	134	17,165	2,607	21,851	66,686
Kittitas	49,204	8,226	8,402	601	3,953	2,106	24	2,878	586	5,962	8,156
Okanogan	42,620	9,704	9,791	709	3,211	2,061	21	3,018	363	8,306	15,178
Pierce	913,890	211,603	131,699	15,468	67,896	36,229	450	48,922	9,868	77,361	322,522
Skagit	130,789	27,876	28,615	2,038	10,012	6,183	64	8,946	1,218	12,300	34,605
Snohomish	830,393	185,227	119,179	13,540	62,475	33,722	409	45,520	8,814	57,832	275,008
Spokane	528,225	115,066	89,411	8,411	40,015	22,387	260	30,988	5,557	69,001	86,693
Stevens	46,360	9,743	11,478	712	3,582	2,383	23	3,523	367	6,881	6,284
Thurston	294,074	62,199	53,507	4,547	22,480	12,875	145	18,024	3,107	28,058	77,886
Whatcom	231,016	43,776	42,341	3,200	18,112	10,130	114	14,109	2,599	26,423	51,174
Yakima	251,879	73,890	36,210	5,401	17,214	9,376	124	12,831	2,523	36,781	146,837

WEST VIRGINIA

American Lung Association in West Virginia

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Berkeley	0	0	0	0.0	A	2	0	0	0	0.7	B	8.2	Pass
Brooke	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	8.7	Pass
Cabell	0	0	0	0.0	A	0	0	0	0	0.0	A	INC	INC
Gilmer	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Greenbrier	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hancock	2	0	0	0.7	B	0	0	0	0	0.0	A	INC	INC
Harrison	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	7.0	Pass
Kanawha	1	0	0	0.3	B	0	0	0	0	0.0	A	7.5	Pass
Marion	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	INC	INC
Marshall	DNC	DNC	DNC	DNC	DNC	0	0	0	0	0.0	A	8.6	Pass
Monongalia	0	0	0	0.0	A	0	0	0	0	0.0	A	6.8	Pass
Ohio	2	0	0	0.7	B	0	0	0	0	0.0	A	7.4	Pass
Tucker	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Wood	0	0	0	0.0	A	0	0	0	0	0.0	A	7.5	Pass

WEST VIRGINIA

American Lung Association in West Virginia

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Berkeley	122,125	27,975	18,805	2,634	11,878	12,088	92	11,670	1,275	12,137	20,918
Brooke	21,674	3,803	5,373	358	2,217	2,539	16	2,651	189	2,502	985
Cabell	91,589	17,984	17,977	1,693	9,143	9,430	69	9,499	994	17,499	9,274
Gilmer	7,811	1,139	1,412	107	832	817	6	801	65	1,384	1,440
Greenbrier	34,319	6,600	8,312	621	3,440	3,937	26	4,108	304	5,987	2,475
Hancock	28,571	5,349	6,912	504	2,889	3,332	22	3,465	251	3,380	1,849
Harrison	66,870	14,158	13,489	1,333	6,591	7,182	51	7,260	636	8,940	4,051
Kanawha	176,253	34,925	38,329	3,288	17,600	19,381	133	19,838	1,694	27,150	22,080
Marion	55,962	11,126	11,145	1,047	5,586	5,895	42	5,945	572	7,210	4,152
Marshall	30,103	5,674	7,161	534	3,039	3,473	23	3,603	257	4,042	1,099
Monongalia	106,819	17,383	14,432	1,637	11,172	9,889	81	9,246	1,378	15,281	12,834
Ohio	41,182	7,944	9,408	748	4,120	4,540	31	4,697	397	7,041	3,321
Tucker	6,816	974	1,893	92	724	860	5	910	57	912	182
Wood	82,938	17,312	17,642	1,630	8,197	9,110	63	9,292	769	11,757	4,113

WISCONSIN

American Lung Association in Wisconsin

	HIGH OZONE DAYS 2018–2020					HIGH PARTICLE POLLUTION DAYS 2018–2020							
						24-Hour						Annual	
County	Orange	Red	Purple	Wgt. Avg.	Grade	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Ashland	0	0	0	0.0	A	0	0	0	0	0.0	A	5.1	Pass
Brown	2	0	0	0.7	B	0	0	0	0	0.0	A	7.0	Pass
Columbia	5	0	0	1.7	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Dane	3	0	0	1.0	C	1	0	0	0	0.3	B	8.2	Pass
Dodge	6	0	0	2.0	C	0	0	0	0	0.0	A	7.6	Pass
Door	9	0	0	3.0	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Eau Claire	1	0	0	0.3	B	0	0	0	0	0.0	A	7.6	Pass
Fond du Lac	3	0	0	1.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Forest	0	0	0	0.0	A	0	0	0	0	0.0	A	5.1	Pass
Grant	DNC	DNC	DNC	DNC	DNC	1	0	0	0	0.3	B	8.3	Pass
Jefferson	6	0	0	2.0	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Kenosha	23	4	0	9.7	F	0	0	0	0	0.0	A	7.2	Pass
Kewaunee	4	1	0	1.8	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
La Crosse	0	0	0	0.0	A	0	0	0	0	0.0	A	7.7	Pass
Manitowoc	8	2	0	3.7	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Marathon	0	0	0	0.0	A	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Milwaukee	11	2	0	4.7	F	0	0	0	0	0.0	A	8.4	Pass
Outagamie	4	0	0	1.3	C	1	0	0	0	0.3	B	7.3	Pass
Ozaukee	12	3	0	5.5	F	0	0	0	0	0.0	A	6.6	Pass
Racine	17	3	0	7.2	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Rock	4	0	0	1.3	C	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Sauk	2	0	0	0.7	B	1	0	0	0	0.3	B	7.1	Pass
Sheboygan	15	4	0	7.0	F	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Taylor	0	0	0	0.0	A	0	0	0	0	0.0	A	6.4	Pass
Vilas	0	0	0	0.0	A	0	0	0	0	0.0	A	5.0	Pass
Walworth	7	0	0	2.3	D	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Waukesha	6	0	0	2.0	C	0	0	0	0	0.0	A	9.0	Pass

WISCONSIN

American Lung Association in Wisconsin

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Ashland	15,415	3,345	3,193	200	1,222	684	9	921	140	1,845	2,750
Brown	264,610	61,790	41,957	3,692	20,878	10,436	151	13,490	2,778	21,896	53,625
Columbia	57,668	12,003	10,893	717	4,673	2,533	33	3,332	536	3,873	4,714
Dane	552,536	110,215	81,102	6,585	45,540	20,781	315	26,673	6,774	51,956	117,364
Dodge	87,336	16,898	16,187	1,010	7,227	3,852	50	5,037	765	5,822	9,378
Door	27,889	4,496	8,735	269	2,290	1,542	16	2,202	206	2,159	1,896
Eau Claire	105,260	21,076	17,292	1,259	8,600	4,079	60	5,349	1,267	9,830	11,351
Fond du Lac	102,902	21,669	20,005	1,295	8,273	4,487	59	5,961	1,017	7,562	11,676
Forest	8,960	1,718	2,139	103	728	437	5	596	75	1,055	1,902
Grant	51,021	10,676	9,230	638	4,101	2,066	29	2,748	501	5,616	2,709
Jefferson	85,038	17,317	15,618	1,035	6,940	3,687	49	4,831	865	6,003	9,250
Kenosha	169,671	37,450	25,722	2,238	13,703	6,814	97	8,669	1,821	18,137	42,834
Kewaunee	20,386	4,235	4,410	253	1,635	940	12	1,267	179	1,355	1,217
La Crosse	118,502	23,103	20,590	1,380	9,731	4,762	67	6,277	1,407	11,307	12,817
Manitowoc	78,757	16,015	17,215	957	6,353	3,676	45	4,952	692	6,126	8,311
Marathon	135,593	30,696	25,214	1,834	10,714	5,782	77	7,635	1,294	8,986	16,340
Milwaukee	945,016	224,058	135,814	13,387	74,315	34,880	538	44,736	11,108	175,538	473,053
Outagamie	188,766	43,675	29,904	2,609	14,959	7,528	108	9,701	1,938	12,271	24,970
Ozaukee	90,043	18,941	18,932	1,132	7,210	4,090	51	5,492	833	3,786	8,402
Racine	195,802	44,587	34,187	2,664	15,521	8,185	112	10,685	1,909	17,971	57,578
Rock	163,084	36,951	28,577	2,208	12,932	6,789	93	8,881	1,647	14,946	29,663
Sauk	64,449	14,555	12,626	870	5,073	2,790	37	3,723	603	5,151	6,390
Sheboygan	115,240	25,049	21,966	1,497	9,203	4,995	66	6,611	1,076	8,529	19,675
Taylor	20,318	4,646	4,134	278	1,595	914	12	1,219	172	1,920	938
Vilas	22,356	3,717	7,026	222	1,829	1,258	13	1,788	143	2,136	3,272
Walworth	103,953	20,805	19,835	1,243	8,481	4,514	59	5,974	1,050	8,418	15,271
Waukesha	406,172	85,747	80,221	5,123	32,675	18,097	231	24,004	3,862	16,952	50,961

WYOMING

American Lung Association in Wyoming

	HIGH OZONE DAYS 2018–2020				
County	Orange	Red	Purple	Wgt. Avg.	Grade
Albany	6	0	0	2.0	C
Big Horn	2	0	0	0.7	B
Campbell	1	0	0	0.3	B
Carbon	INC	INC	INC	INC	INC
Converse	4	0	0	1.3	C
Fremont	4	0	0	1.3	C
Johnson	0	0	0	0.0	A
Laramie	0	0	0	0.0	A
Natrona	2	0	0	0.7	B
Park	INC	INC	INC	INC	INC
Sheridan	INC	INC	INC	INC	INC
Sublette	13	3	0	5.8	F
Sweetwater	6	0	0	2.0	C
Teton	2	0	0	0.7	B
Uinta	4	0	0	1.3	C
Weston	2	0	0	0.7	B

	HIGH PARTICLE POLLUTION DAYS 2018–2020							
	24-Hour						Annual	
County	Orange	Red	Purple	Maroon	Wgt. Avg.	Grade	Design Value	Pass/ Fail
Albany	3	1	0	0	1.5	C	4.9	Pass
Big Horn	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Campbell	1	0	0	0	0.3	B	INC	INC
Carbon	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Converse	0	0	0	0	0.0	A	INC	INC
Fremont	4	1	0	0	1.8	C	7.2	Pass
Johnson	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Laramie	4	2	0	0	2.3	D	3.4	Pass
Natrona	3	0	0	0	1.0	C	4.7	Pass
Park	4	0	0	0	1.3	C	3.8	Pass
Sheridan	1	0	0	0	0.3	B	6.5	Pass
Sublette	1	1	0	0	0.8	B	3.8	Pass
Sweetwater	0	0	0	0	0.0	A	INC	INC
Teton	8	5	0	0	5.2	F	4.5	Pass
Uinta	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Weston	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC

WYOMING

American Lung Association in Wyoming

				AT-RISK GROUPS							
				Lung Diseases							
County	Total Population	Under 18	65 & Over	Pediatric Asthma	Adult Asthma	COPD	Lung Cancer	CV Disease	Pregnancies	Poverty	People of Color
Albany	38,950	6,150	5,026	528	3,404	1,599	15	2,135	558	5,635	6,818
Big Horn	11,575	2,822	2,548	242	857	615	4	823	103	1,311	1,466
Campbell	46,676	12,539	5,430	1,077	3,471	1,870	18	2,506	512	3,340	5,995
Carbon	14,711	3,298	2,671	283	1,137	722	6	966	136	1,453	3,395
Converse	13,804	3,341	2,457	287	1,038	674	5	903	134	1,120	1,594
Fremont	39,317	9,913	7,767	852	2,902	1,972	15	2,641	368	5,772	12,015
Johnson	8,588	1,816	2,291	156	653	516	3	690	73	757	791
Laramie	100,595	22,903	17,155	1,968	7,784	4,758	38	6,370	1,060	7,242	22,127
Natrona	80,815	19,332	13,153	1,661	6,167	3,730	31	4,995	863	7,420	11,212
Park	29,331	5,969	7,346	513	2,273	1,702	11	2,279	265	2,368	2,660
Sheridan	30,863	6,405	6,856	550	2,403	1,685	12	2,255	299	2,839	2,693
Sublette	9,856	2,104	2,146	181	761	536	4	717	91	610	1,103
Sweetwater	42,673	10,843	5,864	932	3,218	1,824	16	2,444	468	3,187	8,878
Teton	23,497	4,161	3,900	357	1,945	1,149	9	1,539	275	1,207	4,461
Uinta	20,215	5,608	3,165	482	1,460	902	8	1,208	205	1,697	2,667
Weston	6,743	1,360	1,515	117	527	375	3	503	56	679	670

About the American Lung Association

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through education, advocacy and research. The work of the American Lung Association is focused on four strategic imperatives: to defeat lung cancer; to champion clean air for all; to improve the quality of life for those with lung disease and their families; and to create a tobacco-free future. For more information about the American Lung Association, a holder of the coveted 4-star rating from Charity Navigator and a Gold-Level GuideStar Member, or to support the work it does, call 1-800-LUNGUSA (1-800-586-4872) or visit: Lung.org.