

Episode 56FQ June 30, 2023. My personal PM2.5 monitor is informing you of the air quality in zip code 53716. You're welcome.

Did I purchase a \$249 PurpleAir PM2.5 monitor almost two years ago out of the goodness of my heart, and out of a desire to be of public service during a (wood burning pollution) wildfire smoke incident in 2023? No. The PurpleAir PM2.5 monitor that informs you that the air is indeed code Purple (the worst air quality) in the last week of June 2023 in zip code 53716, was purchased in order to shut down for good my near neighbor's indoor residential wood burning. The indoor residential wood burning pollution of my near neighbor, 60 feet away, enters my yard and infiltrates my home, requiring continuous use of three air purifiers during the days and weeks when the near neighbor decides to turn down his natural gas furnace and burn wood for recreation or ambience. The organization Residents Against Wood Smoke Emission Particulates, formed over 16 years ago, and reformed as RAWSEPresidents two years ago, has that simple aim, to shut down indoor residential wood burning because of the health effects of particulate emissions from residential wood burning on near neighbors of indoor residential wood burners. That simple aim is shared by residents in the United States, Canada, Australia, New Zealand, the United Kingdom, Germany, France, Italy, Finland, Kenya, Nigeria, and India to name a few countries, and the many countries of Scandinavia, the European Union, Africa, and Asia. There are analogies of Residents Against Wood Smoke Emission Particulates (RAWSEP) to Mothers Against Drunk Driving (M A D D), which in the 1980s began demanding the use of breathalyzer tests for drunk drivers, in order to get them off the road and get the mothers' innocent children, and other innocent people out of the way of drunk drivers who were hitting and killing people with their cars after drinking and driving. The technology was there, the breathalyzers only needed to be used. The penalties for drunk driving had to fit the crime, or misdemeanor in some cases. Residents Against Wood Smoke Emission Particulates (RAWSEPresidents.wordpress.com) asks that PurpleAir PM2.5 monitors be handed out to any near neighbor of an indoor residential wood burner who complains of pollution from indoor residential wood burning entering the near neighbor's yard and infiltrating their home, requiring use of air purifiers to combat the pollution. There is no other effective way to regulate the pollution from indoor residential wood burning except using hyper-localized PM2.5 monitors. The pollution from indoor residential wood burning affects and is usually noticed by only near neighbors, but the effects of PM2.5 pollution are profound. Near neighbors of indoor residential wood burners are like canaries in a coalmine. The canaries would prefer that PM2.5 monitors tell the simple story, instead of the canaries dropping off their perches to demonstrate that there is pollution in this cave. PM2.5, particulate matter of 2.5 micrometer size, is the perfect size to infiltrate the human lung, producing a cascade of human health problems and early deaths. PM2.5 monitors can monitor PM2.5 emitted overnight and on weekends, so that data can be downloaded from Public online maps, either AirNow Maps of Smoke and Fire or PurpleAir Maps which store years of downloadable historic data, during normal government working hours. Indoor residential wood burning can be shut down without entering wood burning residences, nor checking the certification of wood stoves. In February 2023 the Office of the Inspector General (O I G), watchdog of the Environmental Protection Agency (E P A) issued a report stating that the certification of wood stoves was flawed, resulting in highly polluting wood stoves continuing to be manufactured and sold. The flaw in certification was the loopholes of exemption to certification for large swaths of wood stoves, as a result of lobbying by the wood stove industry. Wood stove industry tactics are identical in many cases or very similar to tactics of the tobacco lobby in the past to keep cigarettes highly addictive and unhealthy even if labeled "low tar", et cetera. No wood stove is clean energy. Wood burning emits more CO2 and PM2.5 than the fossil fuel coal burning. Wood burning emits 450 times the PM2.5 as the fossil fuel natural gas burning.

Just stop burning things. As an afterthought, Carbon Capture might be possible, but prohibitively expensive without incentives. Climeworks, founded in Zurich, Switzerland in November 2009 is described in Wikipedia, below. But Climeworks' carbon capture is expensive to implement and requires long-term incentives to exist.

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates. Aktiengesellschaft is a German word for a corporation which is owned by its shareholders, whose shares may be traded on a stock market. Climeworks uses a technology called direct air capture.

Type	Aktiengesellschaft
Industry	Direct air capture
Founded	November 2009
Headquarters	Zürich Switzerland

Climeworks AG is a [Swiss](#) company specializing in [carbon dioxide](#) air [capture technology](#). The company filters CO2 directly from the ambient air through an [adsorption-desorption](#) process. Climeworks refers to the filtering of CO2 from the ambient air for underground storage as [carbon dioxide removal](#). History. Climeworks equipment displayed in 2015 on [Bundesplatz](#) in [Bern](#). In November 2009 Climeworks was a [spin-off](#) from [ETH Zurich](#). A partnership with the automaker [Audi](#) succeeded. Climeworks includes the production of [synthetic fuels](#) from CO2. Since 2018 a [Swiss mineral water bottler](#) in [Vals](#) has been producing beverages with carbon dioxide from the air. The company's goal by 2025 is to filter one percent of annual global CO2 emissions from the air. This requires the construction of 250,000 systems comparable to the one in [Hinwil](#). A German subsidiary, Climeworks Deutschland GmbH, has opened in [Cologne](#). In January 2019, the [Coca-Cola Hellenic Bottling Company](#) (partially-owned by [The Coca-Cola Company](#)) announced that its [carbonated water](#) brand Valser would use captured carbon from Climeworks. In January 2021, [Microsoft](#) disclosed an investment in Climeworks. Since July 2021 the Swiss and Icelandic governments jointly develop "negative emission technologies" by extracting CO2 from the atmosphere and storing it underground using Climeworks and [CarbFix](#) (CO2-to-stone). In 2022, Climeworks received investment of [CHF](#) 600 million. In January 2023, Climeworks successfully sequestered carbon dioxide underground permanently on a [carbon credit](#) contract that was verified by [DNV](#). In May 2023, [JPMorgan Chase](#) announced that it would purchase 25,000 metric tons of carbon dioxide removal from Climeworks for \$20 million on a 9-year contract. In May 2017 it filtered CO2 from the ambient air in [Hinwil](#). 18 [direct air capture](#) modules filter 900 tonnes of CO2 each year, sold to a [greenhouse](#) operator for use as [fertilizer](#). A CO2 filter is used at the [Hellisheiði Power Station](#) in [Iceland](#). In [Horizon 2020](#), CO2 is stored underground as a mineral. In September 2021, Climeworks's [Orca](#) carbon capture plant came online and was the largest [direct air capture](#) facility in the world, capturing 4,000 tonnes of CO2 per year. [Carbon Engineering](#) direct air capture like [photovoltaics](#) or [hydraulic fracturing](#) and [horizontal drilling](#), will likely require long-term government investment in incentives.

United States

[More Than 100 Million Americans at Risk as Canadian Wildfire Smoke Spreads - VOA](#)

VOA (Voice of America)

People living in major cities such as New York, Chicago and Philadelphia may see murky skies and smell burning wood throughout the day.

[What's that smell? Smoke from Canadian wildfires emitting particular scent - Yahoo News](#)

Yahoo News

Isoprenoids are compounds released when vegetation burns. Those compounds produce what we think of as a wood-burning smell or "campfire" smell. Well, ...

Illinois, Chicago

[What can we do about the unhealthy air quality in Chicago?](#)

Environment America

... one of the most concerning types of pollutants is particle pollution, especially particles that are very small, referred to as PM 2.5.

The Midwest

[Smoke hangs over US Midwest, East, hurting air quality | Reuters](#)

Reuters

Hazy, smoke-filled skies from raging Canadian wildfires hovered Wednesday over ... washing out the summer sun, and the air smelled of wood smoke.

Michigan, Grand Rapids

[Are wildfires getting worse? | The Hill](#)

The Hill

GRAND RAPIDS, Mich. (WOOD) — Wildfire smoke has grayed the skies of many states several times already this summer, prompting some to ask, ...

[Why does the wildfire smoke in Northern Michigan smell like burning plastic? - 9&10 News](#)

9&10 News

Michigan Environment

What causes the burning plastic smell? According to a toxicologist at the Michigan Environment, Great Lakes, and Energy Department: "Wood fires emit a ...

Michigan, Niagara

[Air quality to remain poor on Thursday - Niagara Frontier Publications](#)

Niagara Frontier Publications

Fine particulate matter consists of tiny solid particles or liquid droplets in the air that are 2.5 microns or less in diameter. PM 2.5 can be made of ...

New England

[New England Continues to Experience Poor Air Quality due to Smoke from Canadian ...](#)

Environmental Protection Agency

Hazy skies, reduced visibility, and the odor of burning wood is likely as the smoke plumes are transported over the region.

New York, New York City

[New York "kills" traditional pizza. Wood-burning ovens closed for emissions - Breaking Latest News](#)

BreakingLatest.news

The new rules if approved provide for wood-fired ovens to come inspect yourself to understand the level of pollutants they produce and, if they are ...

[What New York's Proposed Oven Ban Means For Our Favorite Pizzerias - The Daily Meal](#)

The Daily Meal

While reducing the level of carbon-based particulate matter is ... The particulates emitted by coal and wood-fired pizza ovens create very poor ...

[The 14 Best Pizza Ovens for a Gourmet Quality Pie at Home: Shop Cuisinart, Ooni, Breville and More](#)

Entertainment Tonight

This pizza oven lets you bake restaurant-grade pies from the comfort of your backyard. Attach it to the gas burner, or use the wood-burning function— ...

[Why There's Little To Worry About Over New York's Proposed Pizza Oven 'Ban'](#)

Tasting Table

... for one, tweeted, "New York City wants to ban wood-fired pizzerias. ... burning of coal and wood can lead to coughing or even asthma attacks.

[Plan to slice New York pizza oven emissions by 75% causes backlash - Yahoo News](#)

Yahoo News

A proposal to slice emissions from coal and wood-burning pizza ovens in ... (DEP) will apply to coal and wood-fired ovens installed before 2016.

[Piers Morgan Slams New York Crackdown On Wood-Fire Ovens - "It Will Make No Difference!"](#)

YouTube

... order eateries using wood-fire baking method to slice carbon emissi... ... caused by human activities, especially the burning of fossil fuels.

[Regulations on coal and wood-fired pizza ovens is not 'intended to solve climate change'](#)

YouTube

Heated's Editor Emily Atkin says the latest emissions regulations on wood and coal-fired pizza ovens are not "intended to solve climate change".

North Carolina, Department of Environmental Quality

[Unhealthy Air Quality Possible in NC This Week Due to Canadian Wildfires - NC DEQ](#)

NC DEQ - NC.gov

Smoke can carry elevated levels of fine particulate matter, or PM2.5, which consists of particles smaller than the width of a human hair. These ...

North Carolina, Fayetteville

[Canadian wildfire smoke back in the air of North Carolina - The Fayetteville Observer](#)

The Fayetteville Observer

Hold your breath — smoke from Canadian wildfires again clouds North Carolina's air ... and some people may have noticed the scent of burnt wood.

Ohio Health Department

[Ohio Health Department issues precautions for smoky air - The Times Leader](#)

The Times Leader

Avoiding using candles, gas, propane, wood-burning stoves, fireplaces and aerosol sprays. Smoking tobacco products and vacuuming may worsen indoor ...

Ohio, Canton

[Stark County's air quality worsens to 'hazardous' late Wednesday - Canton Repository](#)

Canton Repository

The instruments measure for the level of a pollutant known as PM 2.5 or particulate matter that's smaller than 2.5 microns or micrometers in width ...

[Air quality remains "very unhealthy" in Stark County - Canton Repository](#)

Canton Repository

N in downtown Canton. The instruments measure for the level of a pollutant known as PM 2.5 or particulate matter that's smaller than 2.5 microns or ...

Ohio, Cincinnati

[Air quality alerts continue from Canadian wildfire smoke - WVXU](#)

WVXU

Curran studies the effects of pollutants on the human body. She says breathing in wood smoke is as bad as smoking a cigarette. "And I've seen this ...

Ohio, Dayton, Miami Valley

[Air Quality Alert issued for Miami Valley extended into Thursday - WDTN.com](#)

WDTN.com

Precautions include spending time in a room closed off from outside air and avoiding using candles, gas, propane, wood-burning stoves, fireplaces, ...

Pennsylvania

[DEP Declares Code Red Air Quality Action Day for Fine Particulate Matter for June 28, 2023 ...](#)

Pennsylvania Pressroom - PA.GOV

Fine particulate matter (or PM-2.5) comes in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted ...

Pennsylvania, Pittsburgh

[Canadian wildfire smoke spreads, 100 million Americans under air-quality alerts | Reuters](#)

Reuters

[1/6]Pittsburgh's Duquesne Incline ascends Mount Washington as smoke, ... dulled the summer sun as the smell of burning wood lingered in the air.

Rhode Island, Providence

[RI issues air quality alert as smoke from Canadian fires flows south - The Providence Journal](#)

The Providence Journal

The fine particles in smoke are so small they can get past the body's defenses ... "Expect periods of wood burning odors, haze, and unhealthy fine ...

Virginia, Augusta County, The News Leader

[Canadian wildfire smoke causes unhealthy air quality in the valley - The News Leader](#)

The News Leader

"The estimated Air Quality Index (AQI) based upon the current ground-level particulate pollution (PM 2.5) concentrations are in the Code Red range ...

Virginia, Roanoke

[Air Quality Alert issued in the Roanoke area - WSET](#)

WSET

... current ground-level particulate pollution (PM 2.5) concentrations are in the Code Red range in Winchester and Roanoke on Wednesday afternoon.

Wisconsin, Milwaukee, Froedtert Hospital

[Tips To Protect Yourself From Wildfire Smoke | Froedtert & MCW](#)

Froedtert Hospital

Fine particulate matter, or PM 2.5, is the main component in wildfire smoke and is what makes the sky appear hazy. PM 2.5 particles are inhalable ...

United Kingdom, Reading

[Reading: 'Smoke Control Area' fines considered - BBC News](#)

BBC

It has estimated that 22 to 38% of all damaging particulate emissions (PM2.5) in Reading are caused by the burning of solid fuel, like wood or ...

United Kingdom

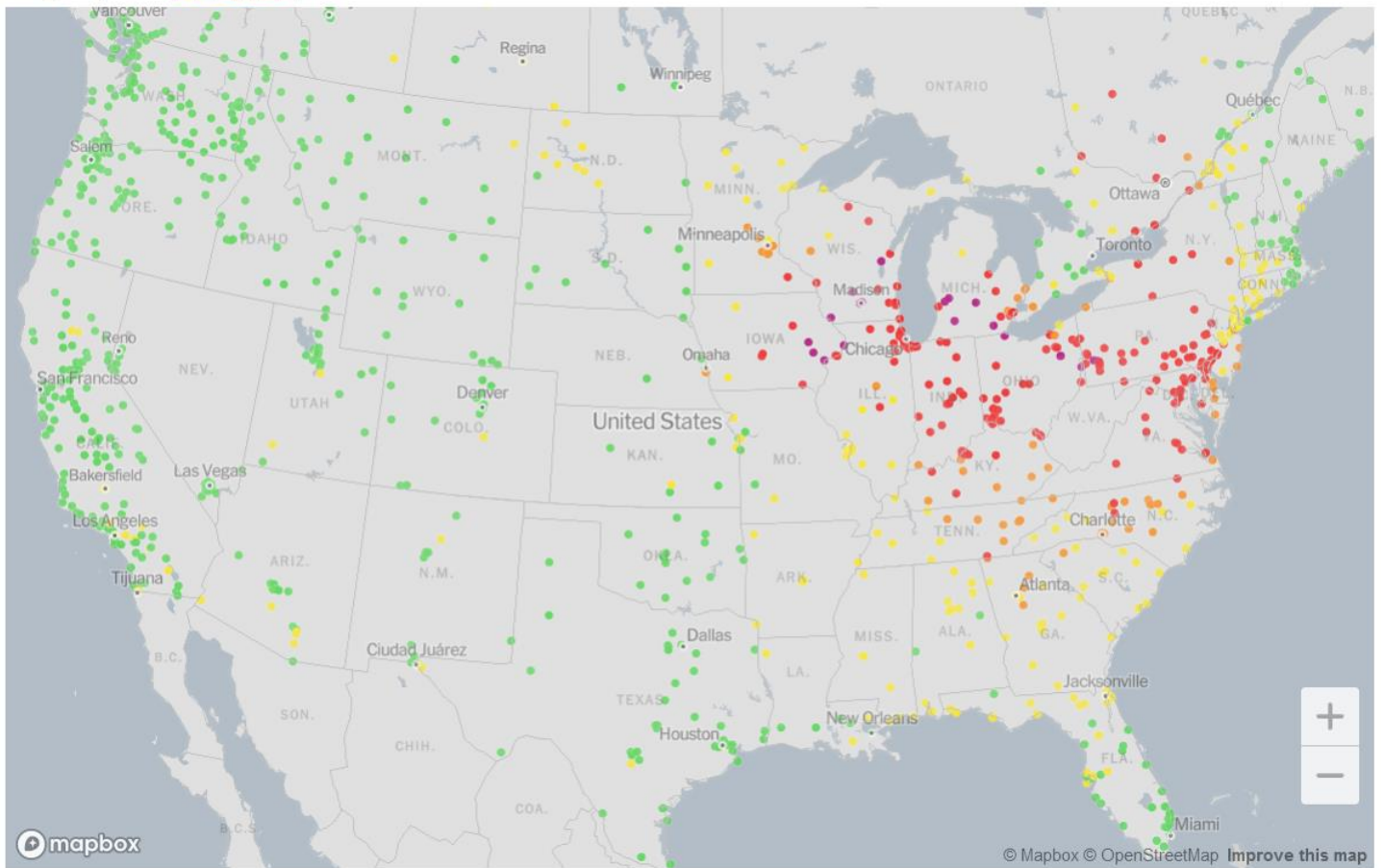
[Air Pollution Is Deadlier Than You Think | WIRED UK](#)

Wired UK

Recently, we've shown a close association between rising air pollution levels—specifically 2.5 micrometers particles (known as PM 2.5) from diesel ...

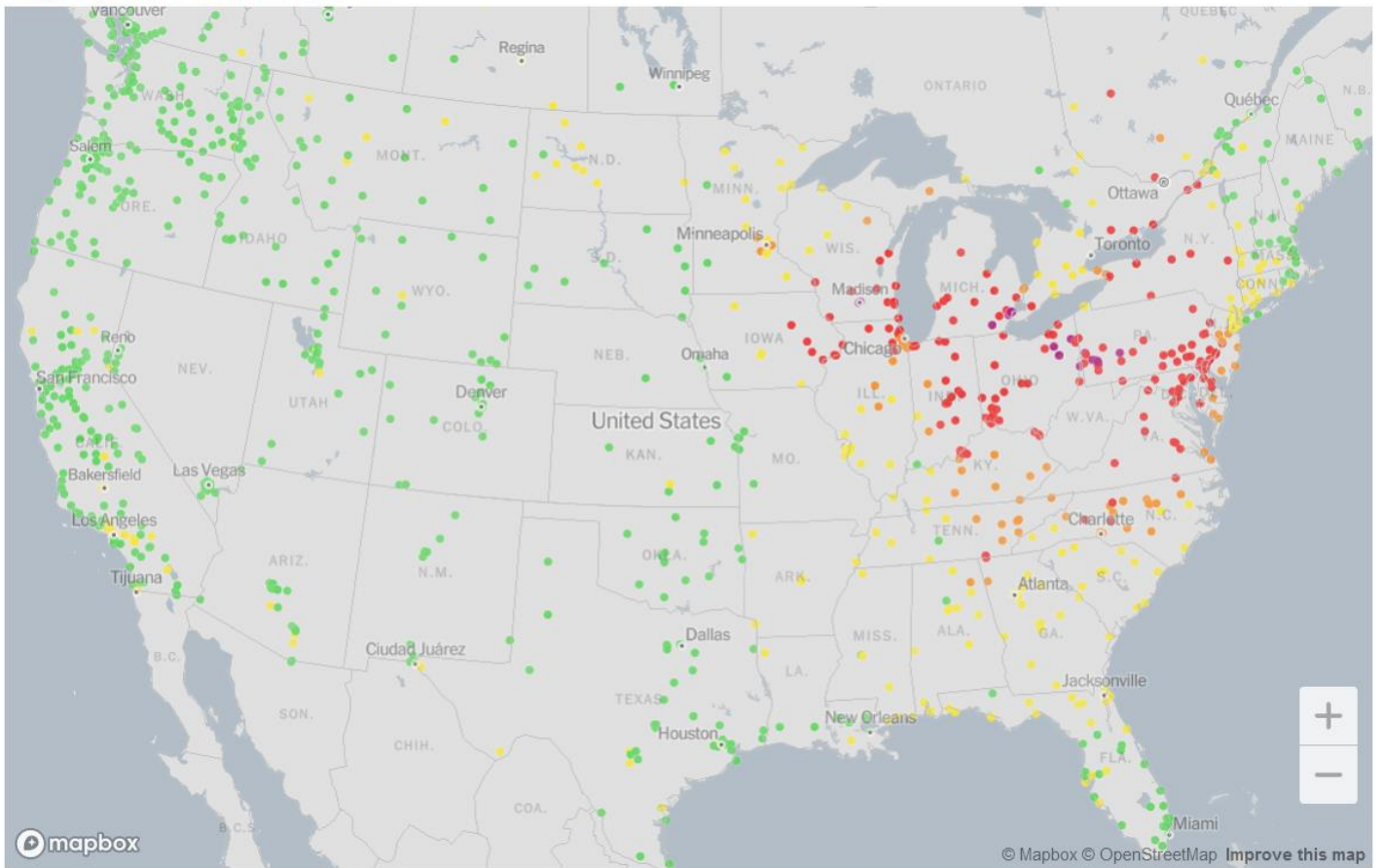
Residents Against Wood Smoke Emission Particulates, see <https://RAWSEPresidents.wordpress.com> and click on the nearest right icon for the latest month, June 2023, of PDFs of articles with U R L's to search on. To the right of that, Stickers to handout for RAWSEP <https://rawsepresidents.wordpress.com/rawsep-sticker-templates-get-your-two-cents-in/> Games such as 1)Bingo for RAWSEP, 2)Crosswords for RAWSEP, 3)EndWoodSmokeJeopardy. 4)EndWoodSmokeMonopoly Games, 5) a RAWSEP Flyer, 6)the Un-Twist-it Game, and 7)"Vending Machines for PM2.5 monitors", and icon links to 30 minute Youtube videos and Spotify podcasts as well as podcasts on Amazon Music Prime (free for Prime subscribers), podcasts.google.com, Cast Box, and Pocket Cast (Pocket Cast is only free on the phone App. Pocket Cast works on Apple phones) and, below those icons, icon links to monthly PDFs of articles with URL's to search on, from May 2023 to May 2022.

Air quality Good ■ ■ ■ ■ ■ Hazardous

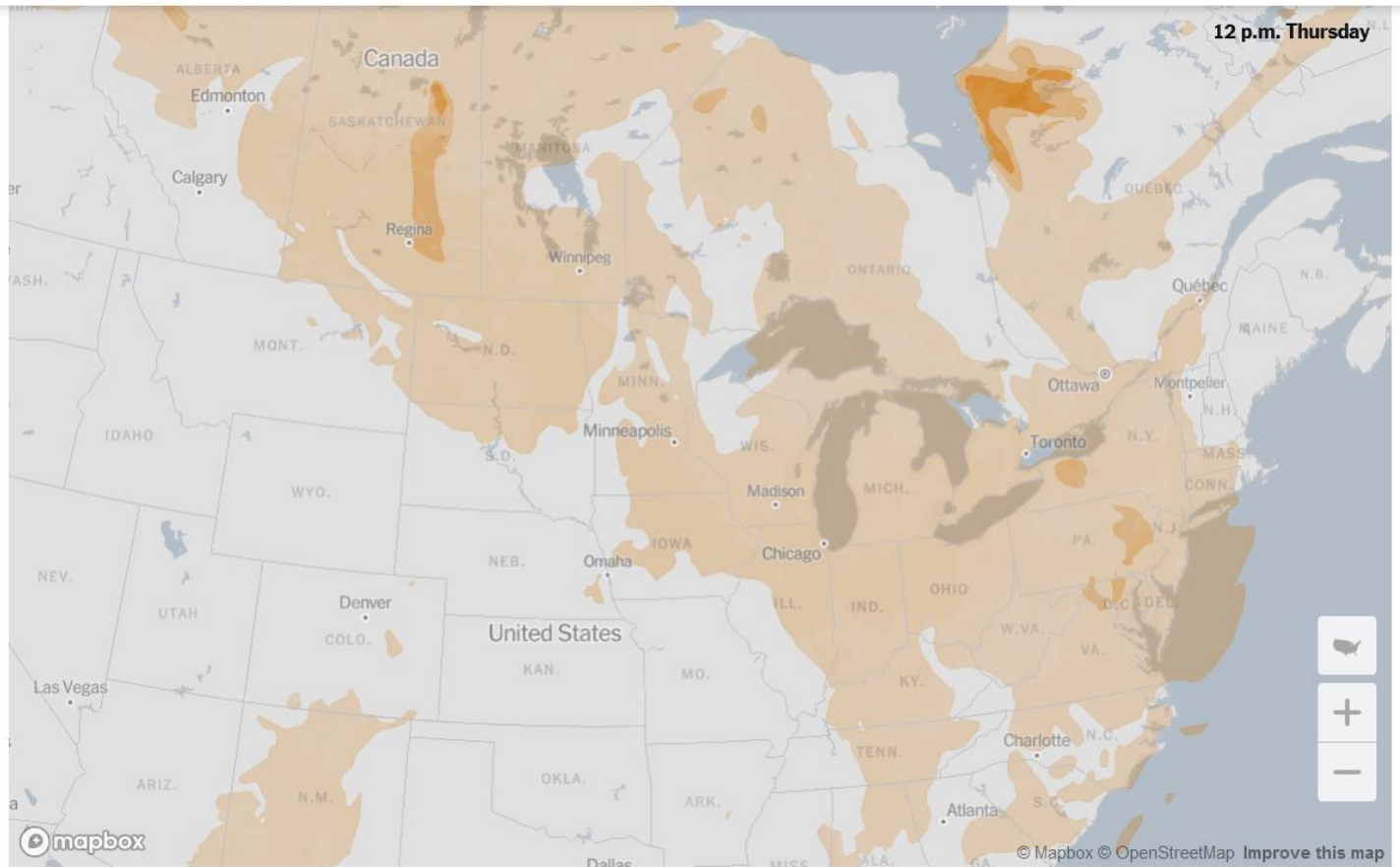


Source: AirNow • Note: Data is as of 10 a.m. Eastern on June 29, 2023. • By Matthew Bloch and Bea Malsky

Air quality Good ■ ■ ■ ■ ■ Hazardous



Source: AirNow • Note: Data is as of 1 p.m. Eastern on June 29, 2023. • By Matthew Bloch and Bea Malsky



Source: National Oceanic and Atmospheric Administration • Notes: Data is as of 12 p.m. Eastern on June 29. Forecast is based on models and may underestimate smoke because of cloud cover or other obstructions. Contours show estimates of wildfire smoke near the surface. • By Madison Dong and Bea Malsky

(New York is at a moderate 83.) The index runs from 0 to 500; the higher the number, the greater the level of air pollution. An A.Q.I. of 201 or more is considered very unhealthy. [Find your city here.](#)

SELECT CITIES	AIR QUALITY	A.Q.I.
Pittsburgh	Very Unhealthy	231
Detroit	Very Unhealthy	227
Washington, D.C.	Unhealthy	187
Baltimore	Unhealthy	180
Philadelphia	Unhealthy	179
Chicago	Unhealthy	168
Cincinnati	Unhealthy	162
Buffalo	Unhealthy	153
Charlotte	Unhealthy for some	149
Atlanta	Unhealthy for some	116

