

The Air You Breathe

Free Quarterly Newsletter from Akron Regional Air Quality Management District

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Lightning Crashes...A Little Less

Excerpted from the article *Cleaner Pandemic Air Led to Reduced Lightning Strikes Worldwide* by Krystal Vasquez on the Eos website.

For the past 2 years, the COVID-19 pandemic has disrupted nearly every aspect of modern life, but it has also provided scientists with a rare chance to study how the environment responds to reduced human activity. Perhaps one of the most famous examples of this is the pandemic's indirect impact on global air quality as more people stayed home, especially during the 2020 lockdowns, the world's air pollution was significantly reduced, according to Yakun Liu, a postdoctoral researcher at the Massachusetts Institute of Technology.

The sharp drop in pollution during this time didn't just clean the air; Liu noticed that it was also accompanied by unusual meteorological side effects. In new research Liu and colleagues compared global lightning data with satellite measurements of aerosol optical depth, a proxy for the amount of aerosols in the atmosphere. The researchers found that the reduction in particle pollution corresponded with an 8% decrease in lightning activity over Africa, Europe, Asia, and, to a lesser extent, the Americas.

The correlation between the two is no coincidence. After all, storm clouds require aerosols to form. These microscopic specks of pollution help water molecules condense into larger droplets. The size of these droplets is contingent on the amount of aerosols present, which then determines whether the water falls back to Earth or is uplifted to higher altitudes. In areas where there are greater concentrations of aerosols, the latter is more likely to occur, creating a mixture of supercooled water and ice crystals, two essential ingredients for generating static electricity in clouds. Simply put, when "you increase [the amount of] aerosols, you get a huge increase in lightning activity," said Tianle Yuan, an associate researcher at NASA Goddard Space Flight Center who was not involved in this study.

Recently, Liu showed that lightning activity jumped by 270% off the coast of Australia, which was caused by the offshore transport of smoke produced by the wildfires in late 2019 and early 2020. On the basis of observations and the results of previous studies, Liu concluded that "aerosol emissions are not only deteriorating the air quality, but [they] may also be influencing the electrical process and triggering more lightning discharges."

To read more about Yakun Liu's fascinating research on PM2.5 and lightning go to: <https://eos.org/articles/cleaner-pandemic-air-led-to-reduced-lightning-strikes-worldwide>



in this issue

- Lightning Crashes P.1
- 1st Half Reporting Dates P.1
- AQA Week P.2
- Asbestos Information P.2
- Asthma Program P.2
- AQ by the Numbers P.3
- MowGREENER 2022 P.4

1st Half Reporting Dates

Many reports are due in the first half of 2022. Please be aware that any due date that falls on a weekend or holiday, where State agencies are closed for business, will be extended to the following business day. Below are the due dates for the first half of 2022.

- **Permit Evaluation Report**
- due **February 15** (for some facilities)
- **Annual Emissions Report**
- due **April 15**
- **Title V Compliance Certification**
- due **May 2** (April 30 falls on weekend)
- **Quarterly Compliance Report**
- due **May 2** (April 30 falls on weekend)

If you have questions regarding these dates, you can contact your permit engineer by calling ARAQMD at: 330-375-2480

Air Quality Awareness Week 2022

On behalf of EPA and our AirNow partners – National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Centers for Disease Control and Prevention (CDC), U.S. Forest Service, U.S. National Park Service, and U.S. Department of State, we are pleased to announce that Air Quality Awareness Week (AQAW) 2022 will be held **May 2nd - 6th**.

The theme for this year is, “**Be Air Aware & Prepared**”. Our goal is to promote air quality awareness and encourage people to take action and incorporate knowledge of the Air Quality Index (AQI) into their daily living.

We plan to focus on the following topics this year, featuring one each day on the AQAW website:

- Monday – Wildfires & Smoke
- Tuesday – Asthma & Your Health
- Wednesday – Citizen Science & Sensors
- Thursday – Environmental Justice & Air Quality
- Friday – Air Quality Around the World

Keep an eye on airnow.gov/aqaw for updates and great information!

Asbestos—Check BEFORE You Wreck!

Did You Know?! Commercial, Industrial and other large scale demolition *and* renovation projects are subject to Ohio’s Administrative Code 3745-20 which is managed by the Ohio Environmental Protection Agency (EPA). Demolition and renovation projects may require an asbestos survey (a thorough inspection to determine the presence of asbestos), **written notification to Ohio EPA**, specific work practices and proper disposal of asbestos-containing material. Written notification to Ohio EPA is required **10 working days** prior to scheduled demolition or renovation projects even if no asbestos is present. An asbestos survey must be performed in order for a written notification to be considered complete.

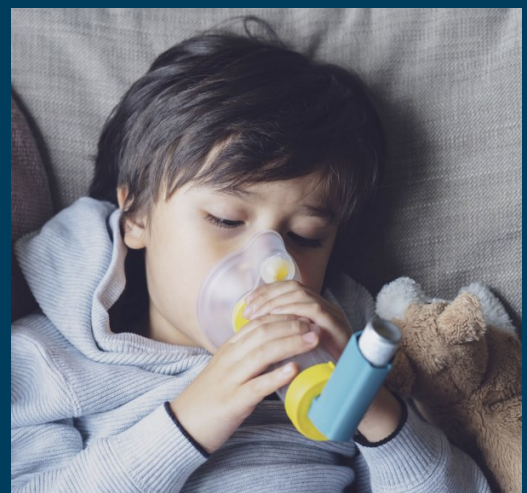
Homeowners are not subject to the same rules, but can benefit from having a licensed asbestos contractor inspect any areas of concern in their homes.

Ohio EPA has information on licensing, notifications, and even a list of licensed asbestos contractor on their website. Follow this link for all the information: <https://tinyurl.com/y3n5nzjb>. ARAQMD is here to help as well, email araqmd@schd.org or call 330-375-2480 if you have questions.

Managing Asthma Triggers @ Home

In 2018 ARAQMD in coordination with Akron Children’s Hospital (ACH) and Summit County Public Health’s (SCPH) Healthy Homes program piloted MATH - Managing Asthma Triggers @ Home. MATH is designed to help the families of children with high risk asthma identify and, if possible, eliminate or mitigate asthma triggers in the home. Families were identified by and referred to the program by ACH. Staff from SCPH would then begin a one year relationship with the family by doing a healthy homes inspection and providing equipment to help identify and reduce common asthma triggers in the home. In the initial 3 years, the data collected showed a positive impact on Asthma Control Test scores and feedback from the families involved was overwhelmingly positive.

In discussions with regional partners, we are excited to learn that MATH is under consideration by agencies in the greater Cleveland and Youngstown areas for their pediatric, high-risk asthma families. We hope to be able to announce more details for those communities in 2022. To learn more about our MATH program send an email to ARAQMD Administrator, Sam Rubens at srubens@schd.org.

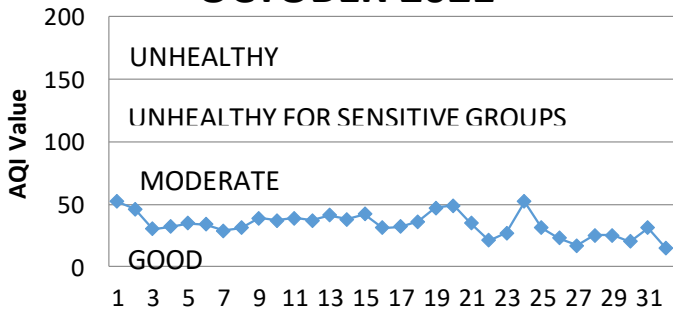


AQ by the Numbers: 4th Quarter 2021

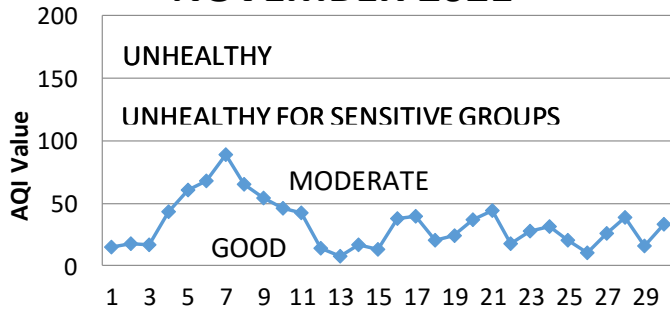
Air Quality Index

Complaints & Inspections

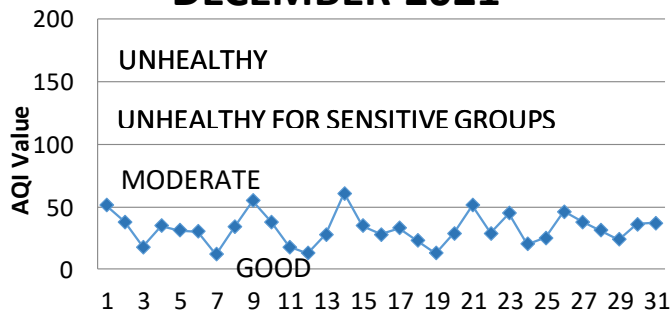
OCTOBER 2021



NOVEMBER 2021

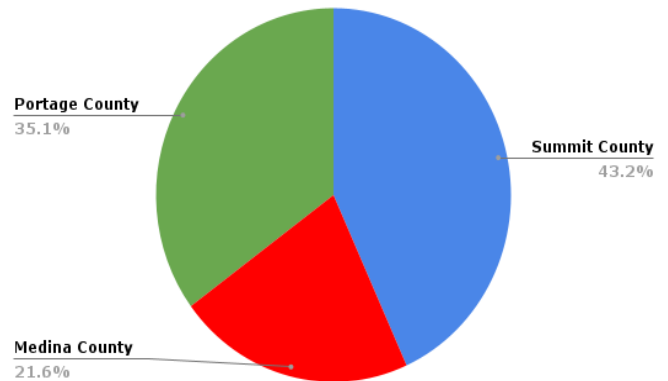


DECEMBER 2021



Area/ Health District	Commercial/ Industrial	Residential	Total
Summit County	13	10	33
Medina County	2	4	6
Portage County	5	8	13
Kent	0	0	0

4th Quarter Complaints



Site Visits*	4th Quarter 2021
FEPTIO	11
Title V	3
Non Title V	18
Full Compliance Evaluations	3

*virtual or limited in person visits per OEPA

Additional Stats

Permits Issued

4th Quarter 2021	Permit to Install		Permit to Install & Operate		Title V		Permit by Rule
	Draft	Final	Draft	Final	Draft**	Final	Total
**Includes - Preliminary Proposed Permits & Proposed Permits	0	1	3	29	2	1	10

Asbestos

4th Q- Notifications	60
4th Q- Inspections	22



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A service of Summit County Public Health

MowGREENER Bigger & Better in 2022

ARAQMD is excited to announce it's 3rd offering of the MowGREENER Lawnmower Exchange program. Some exciting changes happened as we planned this year's exchange. This year ARAQMD hopes that **TWO hundred** households will make the switch to cleaner running battery powered lawnmowers. Additionally, participants will now be able to use the scrap facility most convenient for them to responsibly dispose of their old gas lawnmower.

For those new to MowGREENER, this is a rebate-style program to encourage residents of Medina, Summit & Portage counties to make the switch to a battery powered lawnmower (and maybe encourage the purchase of other battery powered lawn care equipment). ARAQMD will provide confirmed registrants of our program with a \$100 Visa™/Mastercard gift card once all program requirements have been met.

Also, if you have family or friends in the Cleveland Division of Air Quality or Southwest Ohio Air Quality Agency service areas, let them know that those agencies will be offering a lawnmower exchange program this year as well! Families in several parts of Ohio will have the opportunity to get a rebate AND cleaner air this Spring/Summer.



Registration will begin on March 13th. Keep an eye on our website, araqmd.org, for full details and the sign up link to be available that day.

For questions, contact:
Dawn Meyers at:
dmeyers@schd.org or
330-812-3948