

Episode 56FT July 5, 2023. Fireworks can be replaced by lighted drone shows or laser shows.

<https://www.nytimes.com/2023/07/04/climate/fireworks-air-quality-drones-laser.html>

As concerns over wildfires and air quality mount, lighted drone shows and laser shows are an alternative to fireworks on the fourth of July. Fireworks worsen air quality and could set off wildfires. But fireworks are treated as “exceptional events”, along with wildfires, by the Environmental Protection Agency.

Excerpts edited by RAWSEP for brevity and clarity and relationship to Residents Against Wood Smoke Emission Particulates.

Crowds in Los Angeles, California watched lighted drones on Independence Day.

July 4, 2023.

American fireworks on the fourth of July goes back to the first Independence Day celebration in Philadelphia in 1777, 246 years ago. In 2023 Salt Lake City is replacing fireworks with [drone displays](#) to avoid worsening air quality and setting off wildfires, Boulder, Colo., is switching to drones, and Minneapolis is opting for lasers. Drones and lasers have been easier to source than fireworks recently. Even as wildfire smoke from Canada again blanketed much of the United States last week, New York City officials decided not call off fireworks. Other countries see similar spikes in air pollution around their own major holidays, said [Dian Seidel](#), an author of the 2015 study and a retired NOAA climate scientist. Montreal canceled July 1st Canada Day fireworks, citing poor air quality from the more than 100 wildfires burning [across Quebec](#). There was a drone show for New Year’s Eve in Singapore, a [drone show in Windsor, England](#), for King Charles III’s coronation in May, and a drone show for the [Bordeaux Wine Festival](#), in France in June 2023. “Fireworks compound existing air pollution,” said an epidemiologist at the [Environmental Defense Fund](#) who specializes in air pollution and public health. Fireworks cause a spike in a form of [air pollution](#) called particulate matter, the same type of pollution that is elevated from wildfire smoke. Particulate matter less than 2.5 micrometers, PM2.5, can enter human lungs and bloodstreams and cause breathing problems and inflammation. Since the coronavirus pandemic, more people may be more vulnerable to air pollution, especially people with long Covid, or Covid infections resulting in heart ailments. Wearing the same N95 face masks that protect against Covid can protect people from smoke and air pollution. On July 4th and 5th, fine particulate matter levels across America rise by 42 percent on average, concluded a [2015 study](#) by the National Oceanic and Atmospheric Administration (NOAA). Near fireworks, particulate matter pollution, PM2.5 can rise as much as 370 percent, almost 4 times more than usual. PM2.5 levels from fireworks often exceed what’s allowed by the Environmental Protection Agency (EPA) for day-to-day outdoor air quality, but local, state, and tribal governments are generally allowed to flag one-time events like fireworks, as well as wildfires, as “exceptional events” and avoid officially violating national air standards. Background air pollution from wildfire smoke concerns can lead to use of alternative celebrations like drone shows. “There are ways to have something pretty in the sky, and not cause a big amount of pollution,”

[Maps: Tracking Air Quality and Smoke From Canada Wildfires](#)

[See maps of where smoke is traveling and how harmful the air has become across the region.](#)

Animals don’t like fireworks. Dogs and other household pets are known to hate the fourth of July, and many humane societies and animal shelters prepare for an influx of lost or runaway pets after the holiday. A [2022 study](#) of wild geese in Europe found that many birds abandoned their sleeping sites on New Year’s Eve during crucial rest stops on the wild geese’s long migrations. Fireworks cause people injuries and some deaths. In 2022, Americans had [10,200 fireworks-related injuries](#) and [11 reported deaths](#), reported the [U.S. Consumer Product Safety Commission](#). Many injuries resulted from smaller firecrackers and sparklers set off at home, not during large public or commercial shows. Fireworks are treated as exceptional events by the EPA, as wildfires are also treated as “exceptional events” by the EPA. This year, the E.P.A. [proposed](#) strengthening its air quality standard for fine particulate matter, PM2.5, to better protect public health, but said the EPA would still allow special consideration for “exceptional events.”

Residents Against Wood Smoke Emission Particulates, see <https://RAWSEPresidents.wordpress.com> and click on the nearest right icon for the latest month, July 2023, of PDFs of articles with URL’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 June 2023 to May 2022.

