US Southwest dust storm: A public health and safety disaster

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On Tuesday, March 4, much of Texas was hit with a large dust storm caused by high winds. Gusts of up to 60 miles per hour were recorded in some areas.

A massive dust wall, towering thousands of feet and spanning a 1,000-mile front, swept across the American Southwest, causing haze over the large population centers of Dallas–Fort Worth, Austin, and San Antonio. California saw a similar storm last November, while Texas experienced an earlier one in 2023. The cities of Amarillo and Lubbock experienced "brownouts," in which visibility was less than one mile at times.

The storm, a phenomenon known as a haboob—more familiar in the arid regions of North Africa and the Middle East—is now an increasingly common occurrence in North America due to climate change. Scientists have attributed the intensity of the storm to the prolonged drought conditions in West Texas, much as was the case in 2023.

US and world capitalism have made no meaningful effort to stop or reverse the increasingly disastrous effects of climate change, with their own limited emission reduction pledges—if they even meet them—projected to result in more disastrous global warming.

Haboobs form as a result of winds moving in a direction opposite to that of a thunderstorm's path. Precipitation causes wind direction to reverse and blow most strongly in the direction the storm is heading, picking up dust and debris that can travel long distances.

The haboob struck New Mexico and northern Mexico on Monday after moving through Arizona over the weekend, prompting officials to issue shelter-in-place orders. Visibility during the height of the storm was near zero. Multiple auto accidents were reported in the affected area, including one west of Phoenix, Arizona, in which four people died.

Haboobs move quickly, making for dangerous driving conditions, with drivers advised to pull over and not attempt to outrun the storm. From 2007 to 2017, an estimated 232 people died in the US as a result of dust storm-related traffic accidents. No federal effort to quantify deaths beyond this period has been identified.

The winds, along with dry conditions caused by an ongoing drought, created extreme fire danger in parts of the state. There were multiple house fires in San Antonio on Tuesday afternoon as wind-driven blazes broke out, forcing evacuations. The National Weather Service warned that extreme conditions—high winds, low humidity, and warm temperatures—in West Texas would contribute to a high fire danger. In central Texas, there was an extreme risk of wildfires, and several fires broke out within the boundaries of Hays County, part of which lies in the Austin metro area.

The winds knocked down power lines throughout the region. In Austin alone, over 31,000 customers lost power, highlighting the sorry state of the electrical infrastructure in the Texas capital—a city dominated by the Democrats—as well as in the state more generally. In 2021, the state grid went dark during Winter Storm Uri as a result of what a lawsuit alleges was "market manipulation " by gas companies, leading to 700 deaths.

In the Dallas area in north Texas, small aircraft parked on the ground were flipped over. Over 500 flights were canceled at airports in the storm's path. Ground stops—air traffic control orders requiring all aircraft to remain on the ground—were issued at Dallas-Fort Worth International Airport and Austin-Bergstrom International Airport.

Visibility in downtown Dallas was reduced to two miles, with the city covered in an "apocalyptic red fog." In Austin, the storm arrived just as the evening rush hour began, giving the sky an orange tint.

Neither public officials nor the corporate media warned of possible health risks, which were downplayed and said to be of concern only for "vulnerable populations" or "sensitive groups." These statements are made to give the

false impression that the vast majority of people do not have to worry about the effects or take additional safety measures, which is not the case at all.

In San Antonio, the Air Quality Index (AQI) reached 110—a level deemed "unhealthy for sensitive groups" by the Environmental Protection Agency (EPA). The EPA establishes an AQI for five major pollutants, all of which are known to cause long-term, serious health conditions if present in significant concentrations.

These five major pollutants are calculated individually to produce an "index" for each respective pollutant. The highest value among these five indexed values is then taken, and this becomes the AQI. In this case, PM2.5 had the highest value, so it determined the reported AQI.

PM2.5—dust particles of a size of 2.5 micrometers—can cause premature death in people with heart or lung disease, which includes 129 million Americans, or about two out of every five people in the country. Long-term exposure can cause or contribute to diseases of the heart and blood vessels. Young children, the elderly, the poor, and those with asthma are at elevated risk of illness and even death from poor air quality.

As one 2018 study noted, "Recent scientific studies have demonstrated that dust transmits measles virus, influenza virus, and *Coccidioides immitis* [the fungus that causes Valley fever], and that mortality in the United States increases following dust storms with 2-3-day lag periods."

In Kansas in 1935, at the height of the Dust Bowl, one of the most severe measles outbreaks up to that point occurred, with more than 40,000 cases and 145 deaths in just over five months. Given the decreasing vaccination rates in Texas and other states, it cannot be ruled out that the dust storm contributed to the growing measles outbreak, which has infected hundreds and killed two people to date.

In the Sahel region of West Africa—a region also known as the "meningitis belt," where half of all global meningitis cases occur—severe bacterial meningitis epidemics from *Streptococcus pneumoniae* (the bacteria that causes strep throat and pneumococcal pneumonia) were found to be linked to dust storms as well as exposure to high temperatures. As the United Nations notes, sand and dust storms "can cause respiratory diseases, heart disorders, and eye and skin irritation and can also spread other diseases, such as meningitis."

With environmental conditions in Texas and other states in the Southwest becoming more and more like the Sahel, it is not unreasonable to expect that such effects will follow.

A topic equally important to the health risks is the preventive measures that can be used to address them—measures that were not even mentioned by authorities. It is necessary to go into some detail on this latter point, given the lack of information provided by the state or federal governments.

N95 respirators are rated to filter out 95 percent of airborne PM2.5 (hence the name) and are an effective measure to mitigate inhaled dust and airborne pathogens such as those previously mentioned, if worn properly. Lower-quality masks such as KN95s, while still useful, are not nearly as effective—either because they provide a lower-quality seal on the face, meaning more unfiltered air infiltrates around the mask without passing through the filter media, or, as in the case of surgical and cloth masks, because of inferior filter media and an even poorer seal.

When indoors, the use of MERV 13 or higher filters in heating, ventilation, and air conditioning (HVAC) systems can significantly reduce inhaled dust. The MERV 13 rating removes 85 percent of particles sized PM1 to PM3. However, some older HVAC units are unable to use these filters. High-Efficiency Particulate Arresting (HEPA) filters are rated to remove 99.97 percent of dust particles of size 0.3 microns and are available in standalone filters for indoor use. HEPA cabin air filters are also typically available for automobiles and can be found for under $20.

Despite these widely available technical means to dramatically decrease or virtually eliminate the incidence of illness and death from dust and airborne diseases, barely any attempt was made at all by government agencies—or by either the Democrats or Republicans—to inform the public of the dangers of the dust storms or the measures that could be taken to mitigate their effects, let alone to provide such technical means.

The treatment of the health dangers posed by dust storms is very much in line with the treatment by the ruling class of the COVID-19 pandemic, measles epidemic, and bird flu.