

# Traffic and Pollution Plummet as U.S. Cities Shut Down for Coronavirus

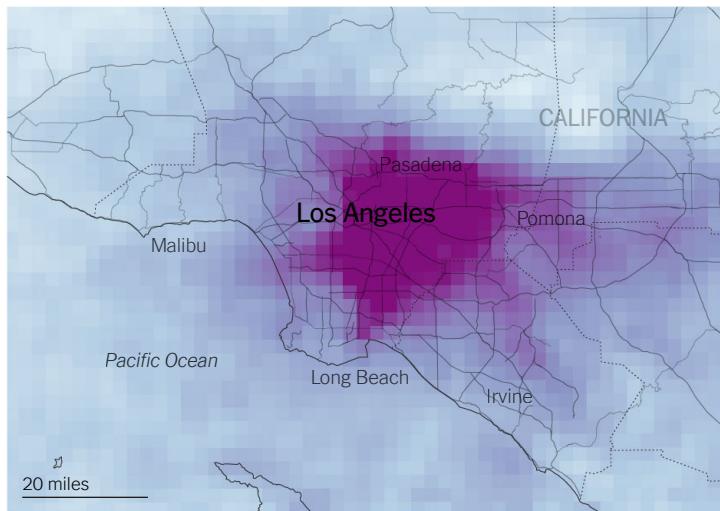
By Brad Plumer and Nadja Popovich March 22, 2020

In cities across the United States, traffic on roads and highways has fallen dramatically over the past week as the coronavirus outbreak forces people to stay at home and everyday life grinds to a halt.

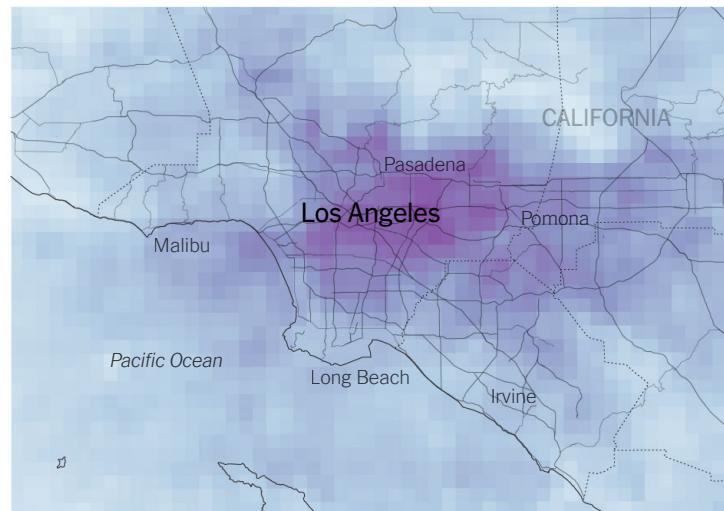
Pollution has dropped too.

A satellite that detects emissions in the atmosphere linked to cars and trucks shows huge declines in pollution over major metropolitan areas, including Los Angeles, Seattle, New York, Chicago and Atlanta.

**2019** March 1 to March 19



**2020** March 1 to March 19

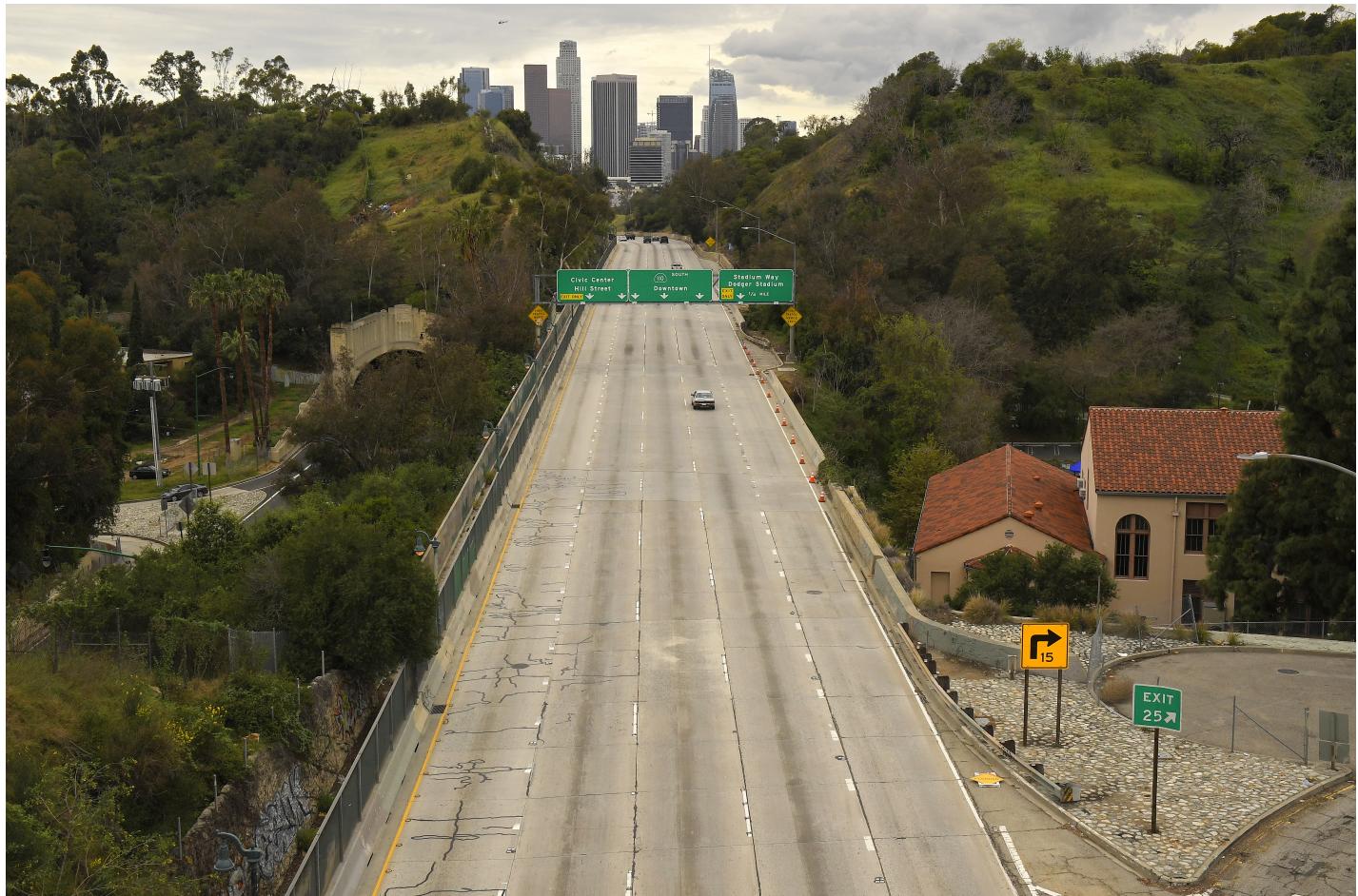


Source: Sentinel-5P satellite data processed by Descartes Labs

## Los Angeles

In Los Angeles, as businesses and schools have closed this month and drivers have stayed off the roads, air pollution has declined and traffic jams have all but vanished.

Preliminary data from the European Space Agency's Sentinel-5P satellite show that atmospheric levels of nitrogen dioxide, which are influenced in large part by car and truck emissions, were considerably lower over Los Angeles in the first two weeks of March compared to the same period last year. The car-dependent city normally features some of the highest smog levels in the country.



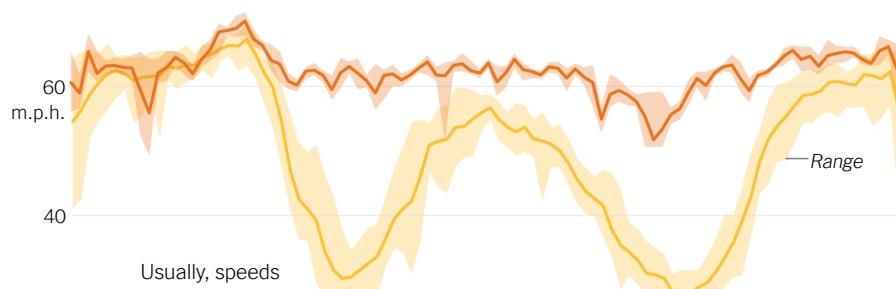
The 110 Harbor Freeway toward central Los Angeles on Friday afternoon, a time when traffic would normally be bumper-to-bumper. Mark J. Terrill/Associated Press

Los Angeles's famous rush-hour congestion has virtually disappeared. On Wednesday at 8 a.m., traffic in the city was moving 53 percent faster than it usually does on a Wednesday morning, according to data from INRIX, a company that analyzes traffic data from vehicle and phone navigation systems. At 5 p.m., when the freeways are typically congested, traffic was moving 71 percent faster than usual.

"There's basically no rush hour anymore, or at least not what we would recognize as a rush hour," said Trevor Reed, a transportation analyst at INRIX. He said that traffic has decreased even more sharply in the evening because that's when people are normally running errands in addition to commuting home, but many of those activities have now been put on hold.

#### Traffic speeds along Interstate 110 in Los Angeles were much faster than usual

● Wednesday, March 18, 2020   ● Normal Wednesdays, Jan. to Feb. 2020





Speeds for north/east-bound traffic along I-110. Source: INRIX

Similar changes can be seen in the Bay Area, where local officials on Monday ordered the region's 6.7 million residents to shelter in place. Since then, the number of cars and trucks crossing eastbound on the Bay Bridge each day between San Francisco and Oakland has fallen roughly 40 percent compared with two weeks ago, according to data from monitoring stations operated by the California Department of Transportation.

While that's a sign that people are heeding the advice of public health experts, it's yet another warning that the nation's economy is facing serious peril. Traffic and congestion, while often a source of annoyance, are also a telltale sign of bustling economic activity. On Thursday, Gov. Gavin Newsom of California extended the shelter in place order to cover the entire state.

The satellite emissions data was analyzed for The New York Times by Descartes Labs, a geospatial analysis group. Nitrogen dioxide levels can also fluctuate with weather conditions, and experts said quantifying the precise effects of the shutdown on such pollution will take further study.

More NO<sub>2</sub> emissions

**2019** March 1 to March 19

**2020** March 1 to March 19

Redmond

Redmond

Seattle

Seattle

KITSAP  
PENINSULA

KITSAP  
PENINSULA

Tacoma

Tacoma

WASHINGTON

WASHINGTON

10 miles

Source: Sentinel-5P satellite data processed by Descartes Labs

**Seattle**

Air pollution from vehicles has likewise plummeted in the Seattle area, which had one of the earliest recognized coronavirus outbreaks in the country. Traffic patterns there changed drastically before most other cities.

In early March, local officials recommended that residents over 60 years old stay in their homes and that workers telecommute if possible. Shortly after, Microsoft and Amazon, two of the region's largest employers, told their workers to stay home.

The impact was immediate: By March 8, the number of trips into downtown Seattle during morning rush hour had declined nearly 40 percent, according to a recent report by INRIX.

But it's not just commuting patterns that have shifted in Seattle. Traffic on Saturdays has also declined, suggesting that people are making fewer social and recreational trips. The data also shows that visits to grocery stores and bulk retailers like Costco soared early in the month, as residents stocked up on supplies, but have since fallen off. "We saw an upsurge in panic buying in the first part of the month but that seems to be over now that people are stocked up," Mr. Reed said.

These trends, INRIX noted in its report, represented a "radical departure" from normal driving patterns and offered "a preview of what is to come for hundreds of cities across America if the Covid-19 outbreak continues."

**2019** March 1 to March 19

**2020** March 1 to March 19

More NO<sub>2</sub> emissions



Source: Sentinel-5P satellite data processed by Descartes Labs

## New York

In New York City, residents are less dependent on car travel than in other metro areas, but vehicle traffic has still seen a steep drop-off in recent days as office buildings, schools and restaurants have shut down. On Wednesday afternoon, rush-hour traffic moved 36 percent faster than normal as the roads cleared out, according to data from INRIX.

Separately, researchers at Columbia University have seen emissions of carbon monoxide over New York City decline more than 50 percent below typical levels over the past week — a change linked to the drop in car traffic across the city.

“We’ve never seen anything like the drop we saw starting last Friday,” said Roisin Commane, an assistant professor at Columbia who conducts the air-monitoring work, referring to March 13. “We often see dips during weekends or over holidays, but this is completely different.”

Scientists caution that while the decline in air pollution over U.S. cities could have some near-term health benefits, those are likely to be relatively minor in the grand scheme of things. For one, air pollution is expected to rebound once the coronavirus outbreak subsides and people are allowed to leave their homes, and studies have found that long-term exposure to air pollution tends to have a larger impact on public health.

And any short-term benefits could easily be swamped by the broader impacts from the virus itself, from the risks created by an overloaded health care system and from the negative effects of a large recession and rising unemployment. “This really shouldn’t be seen as a silver lining,” said Jill Baumgartner, an associate professor and epidemiologist at McGill University. “It’s not a sustainable way to reduce air pollution, and the long-term economic and well-being impacts of this crisis are going to be devastating for many people.”