



1.17.03

[Science and Health:](#)

Deadly Smog

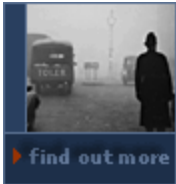


The Donora Smog Disaster

In late October 1948 the Monongahela River Valley town of Donora, Pennsylvania was subsumed in a noxious smog. Residents had to keep lights on all day and the high school football teams couldn't see their opponents. In the five days between October 26 and 31, 20 people died, more than 7,000 were sickened. And some, like Devra Davis' grandmother, were debilitated for the rest of their lives.

The cause was a deadly mixture of emissions of the plants and coal furnaces located in the valley and town. Sulfur dioxide, carbon monoxide and metal dust were trapped in the town by a layer of warm air. Years later views over the valley showed large patches of land on which no vegetation would grow. The investigation into Donora Smog Disaster was essential to the first federal clean-air act, passed in 1955. The plants located in the valley began to close in the 1950s — a downward economic turn still effecting the region.

- [More about the Donora Smog Disaster](#)



London: The Big Smoke

Clichés are based in fact. One good example: Dickensian and even Hollywood images of a dark and foggy London and non-Londoners' traditional reference to a visit to the capitol as "going down the Smoke." The history is long — the very first effort to combat the combination of mist and noxious smoke was made in 1272 by King Edward I. He banned the burning of sea-coal in order to clean the London skies.

Centuries of combustion led to more pollution and more famous renderings of the dirty atmosphere of London town. Coal burning was a major culprit, and there was no city more dependent on that material than London. In fact it was a London physician who coined the word smog — combining smoke and fog.

Then came the Great Smog of 1952. The bright lights of Piccadilly Circus theaters stayed on all day. Conductors walked in front of buses with flashlights to guide the way. Gas masks became a fashion item. And funeral parlors and florists couldn't meet the demand of increased hospitalizations and deaths. The direct result was the Clean Air Act in 1956 — the first effective limitation on the burning of coal.

Last year London commemorated the fiftieth anniversary of the Great Smog with conferences, art exhibits and new information. The official death toll was raised from 4,000 to nearly 12,000. The National Society for Clean Air estimates that 20,000 lives a year are still shortened by air pollution in England.

- ["The Great Smog," Devra Davis, HISTORY TODAY, December 2002](#)
- [Metropolitan Office Education, Historic Weather Events](#)
- [BBC News, "The Great Smog of London," December 5, 2002.](#)
- [The Environmental Literacy Council: History](#)



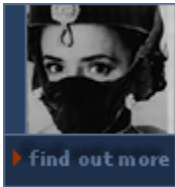
Los Angeles: Welcome to Car Land

Los Angeles, with its little red corvettes running up Sunset Boulevard, has taken over from London as the cultural icon of air pollution. Of course, LA's notorious smog is not the result of burning coal, but car exhaust trapped in the basin of the San Fernando Valley. As California paved the way for America's highway culture, California also has led the way in air quality reforms — a few of which are noted below. However, in 2002 the Los Angeles area also led the nation in hazardous air quality days.

- **1943** - First recognized episodes of smog occur in Los Angeles in the summer of 1943. Visibility is only three blocks and people suffer from smarting eyes, respiratory discomfort, nausea, and vomiting.
- **1945** - The City of Los Angeles begins its air pollution control program, establishing the Bureau of Smoke Control in its health department.
- **1947** - California Governor Earl Warren signs into law the Air Pollution Control Act, authorizing the creation of an Air Pollution Control District in every county of the state.
- **1959** - California enacts legislation requiring the state Department of Public Health to establish air quality standards and necessary controls for motor vehicle emissions.
- **1966** - Auto tailpipe emission standards for hydrocarbons and carbon monoxide are adopted by the California Motor Vehicle Pollution Control Board. They are the first of their kind in the nation. California Highway Patrol begins random roadside inspections of vehicle smog control devices.
- **1969** - First state Ambient Air Quality Standards are promulgated by California for total suspended particulates, photochemical oxidants, sulfur dioxide, nitrogen dioxide, and carbon monoxide

- **1976** - California limits lead in gasoline.
- **1988** - California Clean Air Act is signed by Governor Deukmejian. Sets forth the framework for how air quality will be managed in California for the next 20 years
- **1990** - California approves standards for Cleaner Burning Fuels and Low and Zero Emission Vehicles.
- **1999** - In California consumer products rules were adopted to cut smog-forming emissions and volatile organic compounds (VOC) from an estimated 2,500 common household products ranging from nail polish remover to glass cleaners.
- **2001** - LA regains the title of having the most number of high ozone days. LA fails the national standards for 3 criterion pollutants: CO, particulates and ozone.

[More from the California Air Resources Board.](#)

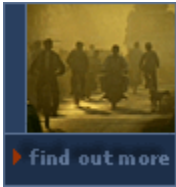


Environmental Health

The World Health Organization (WHO) estimates that 3 million people die each year as a result of exposure to air pollution. That number is approximately 5 percent of all deaths every year. In its recent report on environmental health hazards WHO noted that the death toll may actually be as high as 6 million people a year.

Air quality hazards are not solely the result of industrial or automotive pollutants. Burning of material for heat and fuel in homes greatly adds to infant and child mortality. And then there's asthma, on the rise worldwide. Around 30-40 percent of cases of asthma and 20-30 percent of all respiratory diseases may be linked to air pollution in some locales.

- [Monitor the air quality in your neighborhood](#)
- [National Center for Environmental Health](#)
- [World Health Organization Protection of the Human Environment](#)



The Dusky Future

The prospect for the future of air quality is a murky one. As population grows and less developed nations rush to industrialize and motorize, the need for energy grows. And energy consumption often means air pollution.

In addition, an old air pollution foe is on the return. Recently, THE ECONOMIST labeled coal "Environmental Enemy No. 1." Projections by [International Energy Agency](#) show coal's share of energy production growing. And coal production is up in the United States and worldwide.

- [The Cost of Coal](#)
- [More on the world's energy outlook](#)
- [United Nations Earthwatch](#)