

National Air Quality and Emissions Trends Report, 1997

U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Emissions Monitoring and Analysis Division
Air Quality Trends Analysis Group
Research Triangle Park, North Carolina 27711

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Disclaimer

This report has been reviewed and approved for publication by the U.S. Environmental Protection Agency's Office of Air Quality Planning and Standards. Mention of trade names or commercial products are not intended to constitute endorsement or recommendation for use.

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Preface

This is the twenty-fifth annual report on air pollution trends in the United States issued by the U.S. Environmental Protection Agency. The report is prepared by the Air Quality Trends Analysis Group (AQTAG) in Research Triangle Park, North Carolina and is directed toward both the technical air pollution audience and other interested parties and individuals.

The report, complete with graphics and data tables, can be accessed via the Internet at <http://www.epa.gov/oar/aqtrnd97/>. AQTAG solicits comments on this report and welcomes suggestions regarding techniques, interpretations, conclusions, or methods of presentation. Comments can be submitted via the Web site or mailed to:

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For additional air quality data, readers can access the Aerometric Information Retrieval System's (AIRS) executive software at <http://www.epa.gov/oar/airs/aewin>.

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Acronyms

AIRS	Aerometric Information Retrieval System	NET	National Emissions Trends Inventory
AIRMoN	Atmospheric Integrated Assessment Monitoring Network	NMOC	Non-Methane Organic Compound
AQRV	Air-Quality Related Values	NO ₂	Nitrogen Dioxide
BEIS	Biogenic Emissions Inventory System	NO _x	Nitrogen Oxides
CAA	Clean Air Act	NOAA	National Oceanic and Atmospheric Administration
CAAA	Clean Air Act Amendments	NPS	National Park Service
CARB	California Air Resources Board	NTI	National Toxics Inventory
CASAC	Clean Air Scientific Advisory Committee	O ₃	Ozone
CASTNet	Clean Air Status and Trends Network	OTAG	The Ozone Transport Assessment Group
CEMs	Continuous Emissions Monitors	OTC	Ozone Transport Commission
CEP	Cumulative Exposure Project	PAHs	Polyaromatic Hydrocarbons
CFR	Code of Federal Regulations	PAMS	Photochemical Assessment Monitoring Stations
CO	Carbon Monoxide	Pb	Lead
CMSA	Consolidated Metropolitan Statistical Area	PCBs	Polychlorinated Biphenyls
DRI	Desert Research Institute	PM ₁₀	Particulate Matter of 10 micrometers in diameter or less
DST	Daylight Savings Time	PM _{2.5}	Particulate Matter of 2.5 micrometers in diameter or less
EPA	Environmental Protection Agency	POM	Polycyclic Organic Matter
FRM	Federal Reference Method	ppm	Parts Per Million
GDP	Gross Domestic Product	PSI	Pollutant Standards Index
HAPs	Hazardous Air Pollutants	RFG	Reformulated Gasoline
IADN	Integrated Atmospheric Deposition Network	RVP	Reid Vapor Pressure
IMPROVE	Interagency Monitoring of PROtected Environments	SAMI	Southern Appalachian Mountain Institute
LMOS	Lake Michigan Ozone Study	SIP	State Implementation Plan
MACT	Maximum Achievable Control Technology	SLAMS	State and Local Air Monitoring Stations
MARAMA	Mid-Atlantic Regional Air Management Association	SNMOC	Speciated Non-Methane Organic Compound
MDN	Mercury Deposition Network	SO ₂	Sulfur Dioxide
MSA	Metropolitan Statistical Area	SO _x	Sulfur Oxides
NAAQS	National Ambient Air Quality Standards	SOS	Southern Oxidant Study
NADP	National Atmospheric Deposition Program	STP	Standard Temperature and Pressure
NADP/NTN	National Atmospheric Deposition Program/National Trends Network	TNMOC	Total Non-Methane Organic Compound
NAMS	National Air Monitoring Stations	TRI	Toxic Release Inventory
NAPAP	National Acid Precipitation Assessment Program	TSP	Total Suspended Particulate
NARSTO	North American Research Strategy for Tropospheric Ozone	UATMP	Urban Air Toxics Monitoring Program
NESCAUM	Northeast States for Coordinated Air Use Management	VMT	Vehicle Miles Traveled
		VOCs	Volatile Organic Compounds
		µg/m ³	Micrograms Per Cubic Meter

Foreword

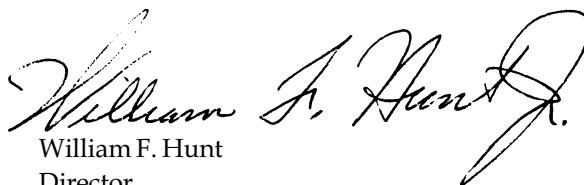
It is my pleasure to provide the Foreword for this special 25th Anniversary Edition of the National Air Quality and Emissions Trends Report. A great deal has happened since I was involved with the publication of the first report. Twenty-five years ago, there were very limited ambient air pollution data. Today, there are thousands of air monitoring stations nationwide producing data of the highest quality. As a result, we can generate much better information on the status of air pollution problems and efforts to solve them. The state and local air pollution control agencies are to be applauded for the success of their monitoring programs.

On the occasion of this 25th report, I would like to acknowledge the following EPA staff who were responsible for producing the very first Trends Report - Bill Cox, Tom Curran, Bob Faoro, Neil Frank, Virginia Henderson, Alan Hoffman, Tom McMullen, and Willie Tiggs. Today, the report is produced by the new "Trends Team" consisting of the following members - Terence Fitz-Simons, Neil Frank, Warren Freas, Dave Guinnup, James Hemby, Vasu Kilaru, David Mintz, Sharon Nizich, Anne Pope, Mark Schmidt, Rhonda Thompson, and Miki Wayland.

I would like to thank the Trends Team for developing the report and ensuring coordination among EPA's Air Offices. In addition, I would like to thank the peer reviewers who year-after-year help strengthen the report's content, the EPA offices (in particular, the Acid Rain Division and the Office of Mobile Sources) who provide data and coordinate with the Trends Team on various sections of the report, and the EPA staff who contribute to and maintain the Aerometric Information Retrieval System - EPA's largest source of ambient air quality data.

I would also like to acknowledge the feedback we have received over the years from our constituents which include many concerned citizens, the Congress, transportation and fuel industries, colleges and universities, foreign governments, and state and local air agencies. So that we can continue to provide a report relevant to the needs of our broad audience, I encourage you to continue communicating your reactions to us.

We have come a long way in the past 25 years. I hope you enjoy reading this report and learn more about air pollution issues - our successes, the problems still out there, and what more needs to be done. We have made tremendous strides towards cleaner air, but we still have a ways to go.



William F. Hunt
Director
Emissions, Monitoring,
and Analysis Division

Letter from the Administrator

The Environmental Protection Agency's (EPA) twenty-fifth report on the status and trends in our nation's air quality shows the progress we have made towards protecting public health and achieving clean air in the United States. EPA has worked in partnership with industries, state, local, and tribal governments, as well as concerned citizens on a wide variety of air quality issues. These partnerships have been invaluable in meeting air quality goals and protecting the nation's citizens. This annual Trends Report documents recent air quality improvements.

For example, emissions of the six principal pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide) discussed in the Trends Report have decreased 31 percent since 1970. The Midwest, Northeast, and Mid-Atlantic regions, which have historically been affected by acid rain, have experienced reductions in rainfall acidity. We also have seen reductions in hazardous air pollutant emissions from cars and trucks.

The Trends Report shows there are still areas in the country where air pollution problems threaten public health and the environment. Many cities have levels of air pollution that exceed national health standards. Some of our most pristine areas, like national parks, are threatened with high levels of pollution that are harmful to breathe and reduce our ability to see great distances.

In 1997, EPA approved more protective health standards for the two most pervasive air pollutants, ozone (smog) and particulate matter (soot). At the same time, EPA proposed a new regional haze program to address visibility impairment in national parks and wilderness areas. In September 1998, EPA issued a rule that will significantly reduce the regional transport of ozone in 22 eastern states and help states meet the new national air quality standard for ozone. The Acid Rain Program's successful market-based trading approach assists industry in reducing emissions that contribute to acid rain. This trading program serves as a guide for future trading programs that will play an important role in implementing EPA's new ozone health standard and in cleaning the air we breathe.

In marking the 25th anniversary of EPA's National Air Quality and Emissions Trends Report, we acknowledge important improvements in our nation's air quality as we work to ensure public health and environmental protection for this generation as well as generations to come.



Carol M. Browner

