

APPENDIX

TERMINOLOGY

AQI	Air Quality Index	NO	nitric oxide
AQS	Air Quality System	NO _x	oxides of nitrogen
BC	black carbon	NO ₂	nitrogen dioxide
CASTNET	Clean Air Status and Trends Network	NSF	National Science Foundation
CFCs	chlorofluorocarbons	O ₃	ground-level ozone
CH ₄	methane	OC	organic carbon
CO	carbon monoxide	PAHs	polycyclic aromatic hydrocarbons
CO ₂	carbon dioxide	ppb	parts per billion
dv	deciviews	ppm	parts per million
EC	elemental carbon	PFCs	perfluorinated compounds
EPA	U.S. Environmental Protection Agency	PM	particulate matter (particle pollution)
GHG	greenhouse gas	PM _{2.5}	particulate matter (fine) 2.5 μm or less in size
HFCs	hydrofluorocarbons	PM ₁₀	particulate matter 10 μm or less in size
ICOADS	International Comprehensive Ocean-Atmosphere Data Set	POPs	persistent organic pollutants
IMPROVE	Interagency Monitoring of Protected Visual Environments	ppm	parts per million
IPCC	Intergovernmental Panel on Climate Change	SF ₆	sulfur hexafluoride
LRTAP	Long-Range Transboundary Air Pollution	SIP	state implementation plan
N	Nitrogen	SO _x	oxides of sulfur
NAAQS	National Ambient Air Quality Standards	SO ₂	sulfur dioxide
NAS	National Academy of Sciences	μm	micrometers (microns)
NASA	National Aeronautics and Space Administration	μg/m ³	micrograms per cubic meter
NATA	National-Scale Air Toxic Assessment	VOCs	volatile organic compounds
NATTS	National Air Toxics Trends Stations		
NEI	National Emissions Inventory		
NH ₃	ammonia		
NOAA	National Oceanic and Atmospheric Administration		

WEB SITES

Atmospheric Deposition

Acid Rain Program: <http://www.epa.gov/airmarkets/progsregs/arp/index.html>

Acid Rain Program 2006 Progress Report: <http://www.epa.gov/airmarket/progress/arp06.html>

National Atmospheric Deposition Program: <http://nadp.sws.uiuc.edu/>

Background/General Information

Air Quality Index: <http://www.airnow.gov>

Air Quality System: <http://www.epa.gov/ttn/airs/airsaqs/>

Air Quality System Detailed Data: <http://www.epa.gov/ttn/airs/airsaqs/detaildata>

Clean Air Research Program: <http://www.epa.gov/airscience>

EPA-Funded Particulate Matter Research Centers:

http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/outlinks.centers#19

Framework for Assessing the Public Health Impacts of Risk Management Decisions:

<http://www.epa.gov/ORD/npd/hhrp/files/hhrp-framework.pdf>

Health and Ecological Effects: <http://www.epa.gov/air/urbanair/>

HELPS International: <http://www.helpsintl.org>

Multi-Ethnic Study of Atherosclerosis and Air Pollution (MESA Air): <http://depts.washington.edu/mesaair/>

National Ambient Air Quality Standards: <http://www.epa.gov/air/criteria.html>

National Center for Environmental Assessment: <http://cfpub.epa.gov/ncea/>

National Particle Components Toxicity (NPACT) Initiative: <http://www.healtheffects.org/Pubs/NPACT.pdf>

Office of Air and Radiation: <http://www.epa.gov/air/>

Office of Air Quality Planning and Standards: <http://www.epa.gov/air/oaqps/>

Office of Atmospheric Programs: <http://www.epa.gov/air/oap.html>

Office of Transportation and Air Quality: <http://www.epa.gov/otaq/>

Climate Change

Climate change: <http://www.epa.gov/climatechange/>

U.S. Climate Change Science Program: <http://www.climatescience.gov>

Emissions and trends in greenhouse gases:

<http://www.epa.gov/climatechange/emissions/usinventoryreport.html>

Green Car Congress: <http://www.greencarcongress.com/2008/06/us-vehicle-mile.html>

Intergovernmental Panel on Climate Change: <http://www.ipcc.ch>

Traffic Volume Trends: <http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm>

Emissions and Control Programs

Emissions: <http://www.epa.gov/air/emissions/>

NO_x Budget Trading Program/NO_x SIP Call: <http://www.epa.gov/airmarkets/progsregs/nox/sip.html>

Toxic Air Pollutants

2002 National-Scale Air Toxics Assessment: <http://www.epa.gov/ttn/atw/nata2002/>

Measurements and Trends

Air Quality Trends: <http://www.epa.gov/airtrends/>

Air Trends Design Values: <http://www.epa.gov/air/airtrends/values.html>

Clean Air Status and Trends Network (CASTNET): <http://www.epa.gov/castnet/>

EPA Monitoring Network: <http://www.epa.gov/ttn/amtic/>

Local air quality trends: <http://www.epa.gov/airtrends/where.html>

National Air Monitoring Strategy Information: <http://www.epa.gov/ttn/amtic/monstratdoc.html>

National Core Monitoring Network: <http://www.epa.gov/ttn/amtic/ncore/index.html>

Trends in ozone adjusted for weather conditions: <http://www.epa.gov/airtrends/weather.html>

Visibility

National Park Service: <http://www.nature.nps.gov/air/>

Regional Haze Program: <http://www.epa.gov/visibility>

Visibility Information Exchange Web System (VIEWS): <http://vista.cira.colostate.edu/views/>

International Transport

International Maritime Organization: <http://www.imo.org>

FAA's Aviation Climate Change Research Initiative (ACCRI):

http://www.faa.gov/about/office_org/headquarters_offices/aep/aviation_climate/

Task Force on Hemispheric Transport of Air Pollution: <http://www.htap.org>

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Ozone

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Dentener, et. al., *The Impact of Air Pollutant and Methane Emission Controls on Tropospheric Ozone and Radiative Forcing: CTM Calculations for the period 1990-2030*, Atmospheric Chemistry and Physics Discussions, 4, 2004.

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Quinn, et. al., *Short-lived Pollutants in the Arctic: Their Climate Impact and Possible Mitigation Strategies*, Atmospheric Chemistry and Physics, 8, pg. 1723-1735 (2008).

Particle Pollution

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National Academy of Sciences, *Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties*, October 2005.

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U.S. Environmental Protection Agency, *Assessment of the Impacts of Global Change on Regional U.S. Air Quality: A Synthesis of Climate Change Impacts on Ground-level Ozone*, Office of Research and Development, National Center for Environmental Assessment, EPA/600/R-07/094F, April, 2009.

Shindell, et. al., *Role of Tropospheric Ozone Increases in 20th-Century Climate Change*, Journal of Geophysical Research, Geophysical Research Union, Vol. III, D08302, 2006.

International Transport of Air Pollution

National Academy of Sciences, National Research Council, *Global Sources of Local Pollution: An Assessment of Long-Range Transport of Key Air Pollutants to and from the United States*, National Academies Press, Washington, D.C. November, 2009.

METHODOLOGY USED IN THIS REPORT

1. In Figure 3 of this report, the trend line in “Aggregate Emissions” is derived by 1) determining the percentage change in emissions for each pollutant from 1990 to a later year (e.g., 2005) then 2) determining the average percentage change from among all pollutant emissions for that time period. In previous reports, this trend line was based on the percentage change in the yearly sum of the emissions from all individual pollutants. The earlier approach allowed carbon monoxide changes to dominate the overall trend line because emissions of carbon monoxide are about 10 times those of any other pollutant. The new approach results in an indicator that is more balanced among the pollutants.

2. In this report, figures and statistics involving air concentrations of all common pollutants are based on the inclusion of all valid measured concentrations even if these measured concentrations were affected by natural or other exceptional events. In previous reports, air concentrations that EPA had determined were affected by such events—and could therefore be excluded for regulatory purposes—were excluded from the figures and statistics. The new approach uses indicators that are more reflective of the air quality to which people have been exposed.



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