

EPA, along with State, local, and tribal officials, is evaluating the nation's air monitoring networks to assess their future ability to meet clean air objectives set forth by the Congress and the Clean Air Act.

The overarching objective of the strategy is to manage the nation's air monitoring networks such that changing priorities and needs, both national and local, can be accommodated within a scientifically sound and resource optimized framework.

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**Why Do We Need Monitoring Networks?**

EPA administers two grant programs to assist States in collecting and evaluating ambient air data from the nation's air monitoring networks. These grant programs, authorized in the Clean Air Act §105 and §103, address a variety of air quality program data collection needs that include:

1. **Compliance:** Comparing air quality data to National Ambient Air Quality Standards (NAAQS) or other benchmarks which drive regulatory actions.
2. **Population exposure/public awareness:** Data to support the Air Quality Index (AQI) and other means to indicate levels of pollution to which populations may be potentially exposed.
3. **Accountability for progress in emissions control programs:** Data to capture measurable ambient impacts associated with emissions control programs.
4. **Emission control program development:** Data to support construction of emission reduction programs.
5. **Environmental welfare assessments:** Data to support assessments such as visibility impairment, and watershed degradation.
6. **Research:** Data to assist research programs (e.g., develop associations between measurements and adverse health indicators, describe physical and chemical atmospheric processes).

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**What are the Network Priorities?**

Responding effectively to changing priorities, which are largely established by Congressional, scientific, and EPA leadership, is clearly an important goal of the monitoring strategy. Current national monitoring program priorities include developing a complete PM<sub>2.5</sub> monitoring program, and answering attainment questions on ozone, nonattainment areas. Toxic air pollutants are emerging as a national program priority and represent one of several challenges facing the monitoring community. Other priorities of a more localized nature include responding to public concerns, other criteria pollutant concerns (e.g., CO, SO<sub>2</sub>), and specific air quality modeling needs. The monitoring strategy focus will be to produce a system capable of responding to an evolution of changing program priorities. After developing a concise list of monitoring objectives, priorities will be assigned through consensus among a Monitoring Strategy Steering Committee (NMSC) composed of EPA, state and tribal officials. In addition, public outreach efforts are an important component and can help strengthen public acceptance. While the NMSC will guide the outreach effort, state and local agencies can solicit public comment and input throughout the entire process.

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**Why does EPA Believe Change is Needed?**

Several indicators are pointing to a need for a revamped network. In the following graph<sup>1</sup>, the trends data is shown for the last 20 years for each major pollutant tracked. Reductions in ambient concentrations range from 20 percent for ozone and PM<sub>10</sub> to 98 percent for lead. This is great news: the Clean Air Act is working, and the hard work that air regulators have done to reduce air pollution is paying off. To maintain progress, however, we still need air quality monitors. Duplicate monitors, monitors in areas with excessively low ambient concentrations of pollutants, or monitors within close proximity of each other that show the same concentration levels, are

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<sup>1</sup>Percentages reflect annual means for sulfur dioxide, PM10, nitrogen dioxide, and annual maximums for lead, ozone, and carbon monoxide.

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**United States  
Environmental Protection Agency  
Office of Air Quality Planning  
& Standards**

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**National Air Monitoring Strategy  
Outlook for the Future**

**January 14, 2002**

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**Emissions, Monitoring & Analysis Division  
Monitoring & Quality Assurance Group  
Research Triangle Park, North Carolina**

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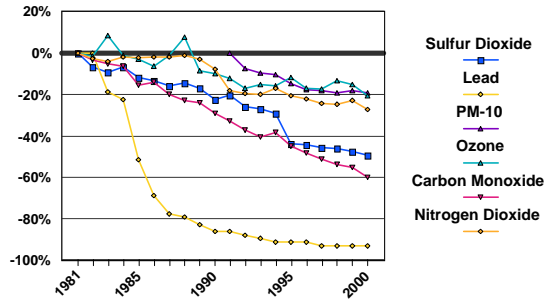
examples of possible inefficient use of resources.

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### Will Our Region or State Lose Monitoring Grant Funds?

No. The NMSC members and other state and local representatives seek to assess the present network and align it with the needs of the future network. Reducing monitors that provide little information on air quality will free resources to build new monitors needed for assessing other issues, such as toxic air pollutants. In addition, new technologies which will yield more accurate information and become less costly in the long term can be implemented in place of older and less effective monitors. And, local monitoring personnel

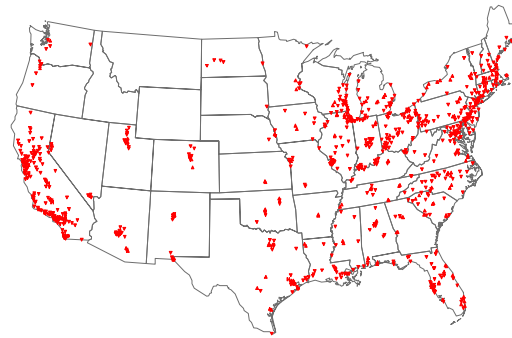
Percent Change in Ambient Concentrations Since 1981  
(since 1991 for PM-10)



will benefit as well, with a switch to continuous monitoring technology that takes fewer hours of hands-on operation. Site operators can be redirected from operating obsolete monitoring equipment to more continuous technologies that can provide real time information to the public.

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The map below displays the current distribution of ozone air monitoring sites in the continental United States. You can see how certain monitoring networks have become densely sited in some geographic locations. The combination of national and regional network assessment work will help us to identify those monitors that are statistically measuring the same concentrations within a local area that could be omitted or better located.



### Distribution of Current Ozone and PM Monitoring Sites

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### What are the Local Resource Implications for Changing Monitors?

Funding for ambient air monitoring programs is expected to remain level for the foreseeable future. However, to enable network changes, EPA will modify regulations and technical guidance to reflect technological advances including continuous particle methods, satellite reporting to database systems, and monitor placement geared toward pollutants that are posing the greatest risk (such as toxic air pollutants in some areas) and co-location of multi-pollutant monitors.. Each State and local agency will have the opportunity to gear their networks to their local needs and also maintain a minimum, Federal core network as mandated by regulation. EPA expects the minimum core network to be smaller than the current network. The savings from reducing the size of the present network would offset the costs encountered by building new, localized networks.

To learn more about the monitoring strategy, visit EPA's website at: <http://www.epa.gov/ttn/amtic/monitor.html>

This website also has detailed maps that represent the present monitoring configuration. Go to the following link and scroll to the last file: <http://www.epa.gov/ttn/amtic/netamap.html>

