

standard to implementation of the 8-hour standard.

B. What Is the Geographic Extent of the 8-hour Ozone Problem?

Although the nation as a whole has made significant progress since 1970 in reducing ground-level ozone pollution (sometimes called “smog”), ozone remains a significant public health concern. At present, unhealthy ozone levels—exceeding the 8-hour standard—occur over wide geographic areas including most of the nation’s major population centers. These areas include much of the eastern half of the United States and large areas of California.

The geographic extent of the 8-hour ozone problem is expected to shrink between now and 2020 due to existing regulatory requirements. We estimate that existing control measures (*e.g.*, Federal motor vehicle standards, EPA’s regional NO_x rule known as the NO_x

SIP Call, and local measures already adopted under the CAA) will dramatically reduce the number of areas² not attaining the 8-hour ozone standard—from 122 in 2000 (using data from 1998, 1999, and 2000), to 51 in 2007, to 30 in 2010 and 13 in 2020. See Table 1 below.

The total population living in areas that we have hypothesized may be designated nonattainment is also projected to decline over time—from 178 million in 2000, to 143 million in 2007, to 116 million in 2010, to 82 million in 2020. However, the number of people living in areas with excessive ozone levels remains high for the foreseeable future because existing control programs alone will not eliminate unhealthy ozone levels in some of the nation’s largest population centers.

Based on information in EPA’s Trends Report issued in 2002,³ over the past 20

years, national ambient ozone levels decreased 18 percent based on 1-hour data and 11 percent based on 8-hour data. Between 1982 and 2001, emissions of VOCs decreased 16 percent. During that same time period, emissions of NO_x increased 9 percent. For the period 1982 to 2001, the downward trend in 1-hour ozone levels seen nationally is reflected in every broad geographic area in the country. The Northeast and West exhibited the most substantial improvement over the last 20 years, while the South and North Central regions experienced the least rapid progress in lowering ozone concentrations. Similar to the 1-hour ozone trends, all regions experienced improvements in 8-hour ozone levels between 1982 and 2001 except the North Central region, which showed little change during this period.

TABLE 1.—8-HOUR OZONE HYPOTHETICAL NONATTAINMENT AREAS AND POPULATION
[Projected by modeling]

	2000	2007	2010	2020
Number of areas—base case (without Clear Skies Act controls)	122	51	30	13
Number of areas with Clear Skies Act controls	122	51	24	12
Population (millions)—base case (without Clear Skies Act controls)	178	143	116	82.4
Population (millions)—with Clear Skies Act controls	178	143	103	82.1

Note: The number of areas¹ projected to each future year is based on modeled projections without consideration of application of new emission control measures that would be required under the SIP process for areas designated nonattainment for the 8-hour NAAQS.

¹ See discussion below on how we have developed hypothetical nonattainment areas for purposes of analysis of this proposed rulemaking and options.

C. What Is EPA’s Overall Strategy for Reducing Ozone Pollution?

Our overall strategy for achieving the 8-hour ozone standard is based on the structure outlined in the CAA. The CAA gives both the States and EPA important roles in implementing national air quality standards.

States have primary responsibility for developing and implementing SIPs that contain local and in-State measures needed to achieve the air quality standards in each area. We assist States by providing technical assistance and guidance, including guidance on control measures. In addition, we set national emissions limits for sources such as motor vehicles. Where upwind sources contribute to downwind problems in other States, we can also ensure that the

upwind States address these contributing emissions or regulate them federally, where a State fails to act to address them.

We intend to work closely with States and Tribes to use an appropriate combination of national, regional and local pollution reduction measures to meet the standard expeditiously and in a cost-effective manner.

1. The SIP System

States use the SIP process to identify the emissions sources that contribute to the nonattainment problem in a particular area, and to select the emissions reductions measures most appropriate for that area, considering costs and a variety of local factors. Under the CAA, SIPs must ensure that

areas reach attainment as expeditiously as practicable. However, other programs, such as Federal controls, also provide reductions, and States may rely on those reductions when developing their attainment plans.

The SIP system for nonattainment areas is an important component of the CAA’s overall strategy for meeting the 8-hour ozone standard, but it is not the only component. As noted below, the CAA also requires or anticipates the use of national rules that will reduce emissions and help achieve cleaner air.

2. National Rules

For the States to be successful in developing local plans showing attainment of standards, EPA must do its part to control the sources that are

² See discussion below on how EPA has developed hypothetical nonattainment areas for purposes of analysis of this proposed rulemaking and options. Modeling analyses for projections to 2007 are found in: U.S. Environmental Protection Agency, Office of Air and Radiation, Technical Support Document for the Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements: Air Quality Modeling Analyses. EPA420-R-00-028. December 2000.

Located at: <http://www.epa.gov/otaq/reg/hd2007/fm/r00028.pdf>.

Information on the modeling analyses for projections to 2010 and 2020 are found in “Technical Addendum: Methodologies for the Benefit Analysis of the Clear Skies Initiative.” September 2002. This can be found at the following Web site: http://www.epa.gov/clearskies/Tech_adden.PDF. Results are summarized in “Human Health and Environmental Benefits

Achieved by the Clear Skies Initiative.” July 1, 2002. http://www.epa.gov/clearskies/CSlhealth_env_benefits7-01.ppt.

³ Latest Findings on National Air Quality—2001 Status and Trends. U.S. EPA; Office of Air Quality Planning and Standards; Emissions, Monitoring and Analysis Division; Research Triangle Park, NC. September 2002. EPA 454/K-02-001. Found at: <http://www.epa.gov/airtrends/ozone.html>.