

**FACT SHEET**  
**PROPOSED DECISION**  
**REVIEW OF THE PRIMARY NATIONAL AMBIENT AIR QUALITY STANDARDS**  
**FOR OXIDES OF NITROGEN**

**ACTION**

- On July 14, 2017, the U.S. Environmental Protection Agency (EPA) proposed to retain, without revision, the health based or primary National Ambient Air Quality Standards (NAAQS) for Oxides of Nitrogen.
- EPA proposed that the current standards protect public health with an adequate margin of safety, and that the available evidence and information does not support the consideration of potential alternative standards that would provide a different degree of public health protection.
- This decision is based on a review of the full body of scientific evidence and of the information available from analyses of potential nitrogen dioxide (NO<sub>2</sub>) exposures. EPA's independent scientific advisors, the Clean Air Scientific Advisory Committee (CASAC), also concluded that the available information supports retaining the current 1-hour and annual primary NO<sub>2</sub> standards without revision.
- NO<sub>2</sub> is the component of oxides of nitrogen of greatest concern for health and is the indicator for the primary NAAQS. There are currently two primary NO<sub>2</sub> standards:
  1. a 1-hour standard, established in 2010, at a level of 100 parts per billion (ppb). It is based on the 98<sup>th</sup> percentile of the annual distribution of daily maximum 1-hour NO<sub>2</sub> concentrations, averaged over 3 years; and
  2. an annual standard, originally set in 1971, at a level of 53 ppb. It is based on annual average NO<sub>2</sub> concentrations.

**NO<sub>2</sub> AND PUBLIC HEALTH**

- There is strong evidence that both short- and long-term exposure to NO<sub>2</sub> are associated with asthma-related health effects. Exacerbation of asthma symptoms, in some cases resulting in hospitalization, has been shown to occur following short-term exposures (i.e., typically hours to days). The development of asthma in children has been shown to be associated with long-term exposures (typically years).
- Consistent with the prior review, the evidence indicates that people with asthma, children (under the age of 18), and older adults (over the age of 65) are at increased risk for NO<sub>2</sub>-related health effects.
- Exposures to elevated ambient concentrations of NO<sub>2</sub> can occur near important emissions sources, such as major roadways.

**PROGRESS IN REDUCING EMISSIONS AND EXPOSURE**

- Currently, there are no monitors in the United States measuring air quality values that exceed either the 1-hour or annual standard.

- Nationwide estimates indicate a 61 percent decrease in total NO<sub>x</sub> emissions from 1980 to 2016 as a result of federal, state, local and tribal efforts to improve air quality. NO<sub>x</sub> is a term commonly used to describe the combination of NO and NO<sub>2</sub>.
- As NO<sub>x</sub> emissions have declined, ambient concentrations of NO<sub>2</sub> have also declined broadly across the U.S. Since 1980, the median annual NO<sub>2</sub> level compared to the NAAQS, known as the design value, has decreased by about 65 percent and the median 1-hour design value has decreased by about 50 percent.

## **BACKGROUND**

- The Clean Air Act requires EPA to set national ambient air quality standards for criteria pollutants. Currently, oxides of nitrogen and five other major pollutants are listed as criteria pollutants. The others are ozone, lead, carbon monoxide, sulfur oxides, and particulate matter. The law also requires EPA to periodically review the relevant scientific information and the standards, and to revise the standards as appropriate to ensure that they provide the requisite protection for public health, allowing an adequate margin of safety, and the public welfare.
- In the prior review, which was completed in 2010, EPA increased the protection provided against NO<sub>2</sub> exposures by adding the current 1-hour standard. This decision was based on scientific evidence, together with analyses of NO<sub>2</sub> exposures and health risks, showing that the annual standard alone would not be sufficiently protective against the respiratory effects that can occur following short-term NO<sub>2</sub> exposures, particularly in people with asthma.
- While NO<sub>x</sub> is emitted from a wide variety of source types, the top three categories of sources of NO<sub>x</sub> emissions are from highway vehicles, off-highway vehicles, and stationary fuel combustion sources. NO<sub>x</sub> emissions also come from electric utility sources, both coal and gas-fired.

## **HOW TO COMMENT**

- EPA will accept comment on the proposal for 60 days after publication in the Federal Register. Comments, identified by Docket ID No. EPA-HQ-OAR-2013-0146, may be submitted by one of the following methods:
  - Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the online instructions for submitting comments.
  - Email: [A-and-R-Docket@epa.gov](mailto:A-and-R-Docket@epa.gov). Include docket ID No. EPA-HQ-OAR-2013-0146 in the subject line of the message.
  - Fax: (202) 566-9744.
  - Mail: Environmental Protection Agency, EPA Docket Center (EPA/DC), Mailcode 28221T, Attention Docket ID EPA-HQ-OAR-2013-0146, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.
  - Hand/Courier Delivery: EPA Docket Center, Room 3334, EPA WJC West Building, 1301 Constitution Avenue, NW., Washington, DC 20004. Such deliveries are only accepted

during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

- If one is requested, EPA will hold a public hearing. In that case, EPA will announce the place and time.

#### **FOR MORE INFORMATION**

- To download a copy of the proposal, go to EPA's Web site at: <https://www.epa.gov/no2-pollution>.
- Today's proposed decision and other background information are also available either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
  - The Public Reading Room is located in the EPA Headquarters, Room Number 3334 in the EPA West Building, located at 1301 Constitution Avenue, NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
  - Visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
  - Materials for this proposed action can be accessed using Docket ID No. EPA-HQ-OAR-2013-0146.