

**FACT SHEET
PROPOSED DECISION
PRIMARY NATIONAL AMBIENT AIR QUALITY STANDARD
FOR SULFUR OXIDES**

ACTION

- On May 29, 2018, EPA announced its proposed decision to retain, without revision, the existing national ambient air quality standard (NAAQS) for sulfur oxides (SO_x). The current primary standard is set at 75 ppb, as the 99th percentile of daily maximum 1-hour SO₂ concentrations, averaged over three years. EPA is proposing that the existing primary (health-based) standard continues to provide health protection for the at-risk group (people with asthma) against respiratory effects following short-term (e.g., 5-minute) exposures to SO₂ in ambient air.
- Sulfur dioxide (SO₂) is the component of sulfur oxides for which we have the greatest concern for public health. Accordingly, the current primary (health-based) NAAQS for sulfur oxides is in terms of SO₂.
- In the prior review of the standard, EPA significantly strengthened the health-based, primary standard, establishing a 1-hour standard and revoking the 24-hour and annual standards. The evidence from health studies available in the 2010 review showed that people with asthma experience negative respiratory effects following very short (e.g., 5-10 minute) exposures to SO₂ while breathing at elevated rates. The evidence available in this review is consistent with the evidence available at the time of the 2010 review.
- The scientific evidence also supports the Administrator's proposed conclusion that the current standard continues to meet the Clean Air Act's requirement for the primary standard to be set at a level that, based on the scientific evidence "and allowing an adequate margin of safety", is "requisite to protect the public health."
- Based on their review of draft documents in this review, EPA's independent science advisors, the Clean Air Scientific Advisory Committee (CASAC), concluded that the newly available evidence supports retaining the current primary standard set at a level of 75 ppb, as the 99th percentile of daily maximum 1-hour SO₂ concentrations, averaged over three years, without revision.

PROGRESS IN REDUCING SO₂ EMISSIONS AND EXPOSURE

- As a result of Clean Air Act programs and efforts by state, local, and tribal governments, since 1980, maximum ambient air concentrations of SO₂ have declined 87 percent.
- There are currently 42 nonattainment areas designated for the current 1-hour primary SO₂ standard, due primarily to emissions from electrical generating units (EGUs). Once an area is designated as nonattainment, air agencies are responsible for preparing and

implementing control plans to reduce these emissions in order to achieve attainment of the standard. EPA is currently working with states to ensure that the plans for these areas adequately address emissions of SO₂ so that they will be able to attain the standard by the statutory attainment dates.

- On July 25, 2013, EPA designated 29 areas in 16 states as nonattainment, but did not at that time designate other areas (Round 1). A March 2, 2015, court-ordered schedule, required the agency to complete the remaining SO₂ designations by three specific deadlines: July 2, 2016 (completed), December 31, 2017 (completed), and December 31, 2020 (Round 4).

BACKGROUND

- The Clean Air Act requires EPA to set national ambient air quality standards for “criteria pollutants.” Currently, sulfur oxides and five other major pollutants are listed as criteria pollutants. The others are oxides of nitrogen, ozone and other photochemical oxidants, carbon monoxide, lead, and particulate matter. The law also requires EPA to periodically review the relevant scientific information and the standards and revise them, if appropriate, to ensure that the standards provide the requisite protection for human health and the environment.
- Sulfur oxides are emitted into air from specific sources (e.g., fuel combustion processes) and also formed in the atmosphere from other atmospheric compounds (e.g., as an oxidation product of reduced sulfur compounds, such as sulfides). Sulfur oxides are also transformed in the atmosphere to particulate sulfur compounds, such as sulfates. Sulfur oxides known to occur in the troposphere include SO₂ and sulfur trioxide (SO₃). As a result of rapid atmospheric chemical reactions involving SO₃, the most prevalent sulfur oxide in the atmosphere is SO₂.
- Fossil fuel combustion is the main man-made source of SO₂ emissions, while volcanoes and landscape fires (wildfires as well as controlled burns) are the main natural sources. The largest SO₂-emitting sector within the U.S. is electricity generation, of which 97 percent of SO₂ from electricity generation is from coal combustion. Other man-made sources of SO₂ emissions include industrial fuel combustion and process emissions, industrial processing, commercial marine activity, and fire used in landscape management and agriculture.

HOW TO COMMENT

- EPA will accept comments for 45 days after the proposed decision is published in the Federal Register.
- Comments on the proposed decision should be identified by Docket ID No. EPA-HQ-OAR-2013-0566, and may be submitted by one of the following methods:
 - **Online:** Go to <https://www.regulations.gov> and follow the online instructions for

submitting comments to Docket ID No. EPA-HQ-OAR-2013-0566.

- **Email:** Comments may be sent to a-and-r-Docket@epa.gov. Include Docket ID No. EPA-HQ-OAR-2013-0566 in the subject line of the message.
 - **Fax:** Fax your comments to: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2013-0566
 - **Mail:** Environmental Protection Agency, EPA Docket Center (EPA/DC), Mail Code 28221T, Attention Docket ID No. EPA-HQ-OAR-2013-0566, 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, Attention Docket ID No. EPA-HQ-OAR-2013-0566. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.
- For additional information, including the full EPA public comment policy, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>

FOR MORE INFORMATION

- To download a copy of the proposed rule, go to EPA's Web site at: <https://www.epa.gov/so2-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 at 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 action can be accessed using Docket ID No. EPA-HQ-OAR-2013-0566.