



# Sulfur Dioxide

## Frequently Asked Questions

### What is Sulfur Dioxide?

Sulfur dioxide (SO<sub>2</sub>) is a gas with a pungent, irritating smell that can aggravate the respiratory system. The U.S. Environmental Protection Agency's (EPA) National Ambient Air Quality Standards for sulfur dioxide are designed to protect against exposure to the entire group of sulfur oxides (SO<sub>x</sub>). Sulfur dioxide is the component of greatest concern and is used as the indicator for the larger group of gaseous SO<sub>x</sub>. Other gaseous SO<sub>x</sub> are found in the atmosphere at concentrations much lower than sulfur dioxide.

### How is sulfur dioxide created?

Sulfur dioxide is commonly created when fuel containing sulfur is burned or when sulfur is used in an industrial process. High heat during fuel combustion causes the sulfur to react and combine with oxygen from the air to create sulfur dioxide.

### How much sulfur dioxide is in the air in Florida?

EPA has established National Ambient Air Quality Standards for sulfur dioxide. The primary standard is based on the highest one-hour average concentration each day. All sulfur dioxide monitors in the State are currently in compliance with this health-based standard of 75 parts per billion. Information on real-time sulfur dioxide levels is available online at <https://floridadep.gov/air/air-monitoring/content/floridas-air-quality>.

### What are the sources of sulfur dioxide?

Sulfur dioxide is emitted from a variety of sources. The largest source of sulfur dioxide in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. In Florida, sulfuric acid plants which support phosphate fertilizer production are also a significant source. Trains, ships, heavy equipment, cars, trucks and other vehicles that burn diesel fuel containing sulfur emit small amounts of sulfur dioxide. Residential heating and small commercial combustion operations are also sources of sulfur dioxide emissions. There are very few natural sources, such as volcanoes, which rarely impact Florida. Emissions of sulfur dioxide from manmade sources have been declining for more than a decade in Florida.

