



Texas Commission on Environmental Quality

December 19, 2024

Summary of 2023 Exceptional Event Demonstration for Fine Particulate Matter

Background on Particulate Matter

The U.S. Environmental Protection Agency (EPA) sets health-based standards for the amount of very small particles, also known as particulate matter, allowed in the air. Fine particulate matter is made up of particles that are 2.5 micrometers and smaller (PM_{2.5}), much smaller than the width of a human hair. Breathing air with high levels of particulate matter can cause health problems.

Exceptional Events Caused Elevated Concentrations of PM_{2.5}

Exceptional events are unusual or naturally occurring events that affect air quality and are not reasonably controllable or preventable. States can request that EPA not consider air quality data affected by an exceptional event when determining if an area met an air quality health standard. EPA has stated that events that affect air quality such as wildfires, prescribed fires, high winds blowing dust, dust from the Sahara Desert, fireworks to celebrate days such as July 4th, etc., can be considered exceptional events. In 2023, air quality in several locations in Texas were impacted by PM_{2.5} exceptional events on multiple dates. Below is a list of locations, dates, and the type of exceptional event that the Texas Commission on Environmental Quality (TCEQ) identified as affecting air quality.

Date	Location	Type of Event
January 1, 2023	Travis County	Fireworks
January 3, 2023	Kleberg County	Smoke from fires in Mexico/Central America
January 16, 2023	Kleberg County	Smoke from fires in Mexico/Central America
January 18, 2023	Kleberg County	Smoke from fires in Mexico/Central America
February 14, 2023	Kleberg County	Smoke from fires in Mexico/Central America
February 27, 2023	Harrison County	Smoke from fires in Mexico/Central America and high winds blowing dust
March 2, 2023	Travis County	Smoke from fires in Mexico/Central America and high winds blowing dust
March 15, 2023	Harrison County	Smoke from wildfires and prescribed fires in U.S.
May 5, 2023	Kleberg County	Smoke from fires in Mexico/Central America
June 13, 2023	Travis County	Smoke from fires in Mexico/Central America
June 14, 2023	Kleberg and Travis Counties	Smoke from fires in Mexico/Central America
June 15, 2023	Travis County	Smoke from fires in Mexico/Central America
July 15-16, 2023	Kleberg County	Dust from Saharan desert
July 25-28, 2023	Kleberg County	Dust from Saharan desert

Due to these exceptional events, the levels of PM_{2.5} at monitors within these counties were not reasonably controllable or preventable. TCEQ plans to submit an exceptional event demonstration to EPA to exclude monitor data from these days.

Analyses to Support the Demonstration

Analyses of data related to the proposed exceptional events from 2023 show that the measured PM_{2.5} concentrations:

- were not reasonably controllable or preventable;
- were associated with natural events due to dust blown into the affected counties; and
- exceeded normal historical fluctuations.

EPA Decides Whether Standards Were Met

If EPA agrees with the demonstration for 2023, the PM_{2.5} concentrations on the referenced dates would not be considered when EPA determines whether the affected counties met the PM_{2.5} health-based standard.