



**Texas Commission on Environmental Quality**

## Summary of Exceptional Event Demonstration for Ozone

June 20, Sept. 13, Sept. 21, and Oct. 8, 2022, in the Houston-Galveston-Brazoria Nonattainment Area

### Ozone Background

The U.S. Environmental Protection Agency sets National Ambient Air Quality Standards (NAAQS) for ground-level ozone to protect human health and the environment. Ozone at ground level is the main ingredient in smog. Ground level ozone is not emitted directly into the air but is created by chemical reactions between nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. When the air in an area has elevated ozone concentrations, state and local officials must take certain actions, including possibly creating new rules to reduce emissions.

### Wildfire Smoke Caused Elevation of Ozone

Exceptional events are unusual or naturally occurring events that affect air quality and are not reasonably controllable or preventable. States can request the EPA not consider air quality data affected by an exceptional event when determining if an area meets an air quality health standard. The Houston Bayland Park monitoring site (48201005) measured high maximum daily eight-hour average ozone concentrations on June 20, Sept. 13, Sept. 21, and Oct. 8, 2022. The Houston Harvard Street monitoring site (482010417) also measured high maximum daily eight-hour average ozone concentrations on June 20 and Sept. 21, 2022. Fires adversely influenced these ozone measurements, causing the area to exceed the 2008 eight-hour ozone NAAQS. Because of the wildfires, the ozone concentrations were not reasonably controllable or preventable. TCEQ plans to submit an exceptional event demonstration to the EPA and request that they exclude these data when determining if the HGB area met the 2008 eight-hour ozone NAAQS.

### Analyses to Support the Demonstration

Analyses of data related to the proposed exceptional events on June 20, Sept. 13, Sept. 21, and Oct. 8, 2022 show that the measured ozone concentrations:

- were not reasonably controllable or preventable,
- exceeded the 99th percentile for maximum daily eight-hour ozone averages over 2018 through 2022 on an annual basis, and
- were associated with natural wildfires and a clear causal relationship exists between the wildfires and the monitored concentrations.

### EPA Decides Whether Standards Were Met

If the demonstration is approved by the EPA, the ozone concentrations recorded at the Houston Bayland Park and Houston Harvard Street monitors on the dates listed above would not be considered when the EPA determines whether the HGB area met the 2008 eight-hour ozone standard.