



*Texas Commission on Environmental Quality*

January 30, 2025

# Summary of the Release of TCEQ's Preliminary 2022 Meteorological Modeling Files

## Background on Air Quality Modeling

The Texas Commission on Environmental Quality (TCEQ) uses modeling to understand the air quality in a region and how the air quality will be affected by changes in population, economy, and other factors. Air quality modeling uses computer simulations to show how the amount of pollutants in the air change due to the physical and chemical processes that happen in the atmosphere. Photochemical models are a type of air quality model that TCEQ uses to understand what causes air quality problems and to test different strategies for controlling air pollution. TCEQ uses photochemical models to evaluate impacts of pollutants such as ground-level ozone and fine particulate matter in Texas.

## TCEQ's Preliminary 2022 Meteorological Modeling Files

Since weather conditions play a key role in air quality, photochemical models need meteorological inputs. TCEQ is using a meteorological model called the Weather Research and Forecasting (WRF) model to generate the meteorological inputs for the entire year of 2022. The meteorological inputs for 2022 will be used in the photochemical modeling for upcoming air quality plans, known as State Implementation Plan (SIP) revisions, that Texas will develop to meet federal air quality requirements.

## Review of TCEQ's Preliminary 2022 Meteorological Modeling Files

TCEQ is asking interested parties to review and provide feedback on the inputs used and options chosen to generate the 2022 meteorological files.