

Start of 2023 Ozone Season

NCTCOG Public Meeting • April 10, 2023

Nick Van Haasen, Air Quality Planner

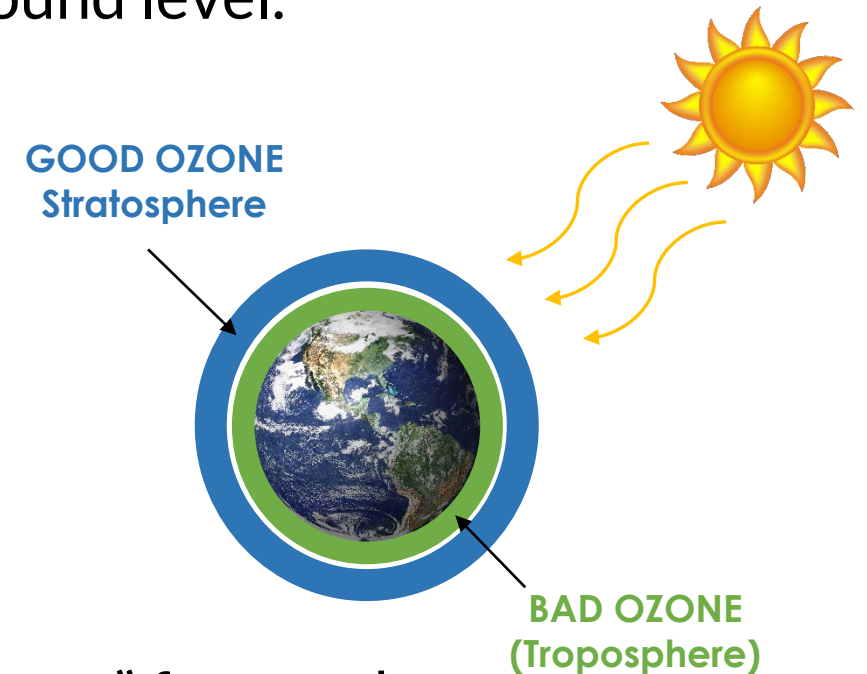


Ozone

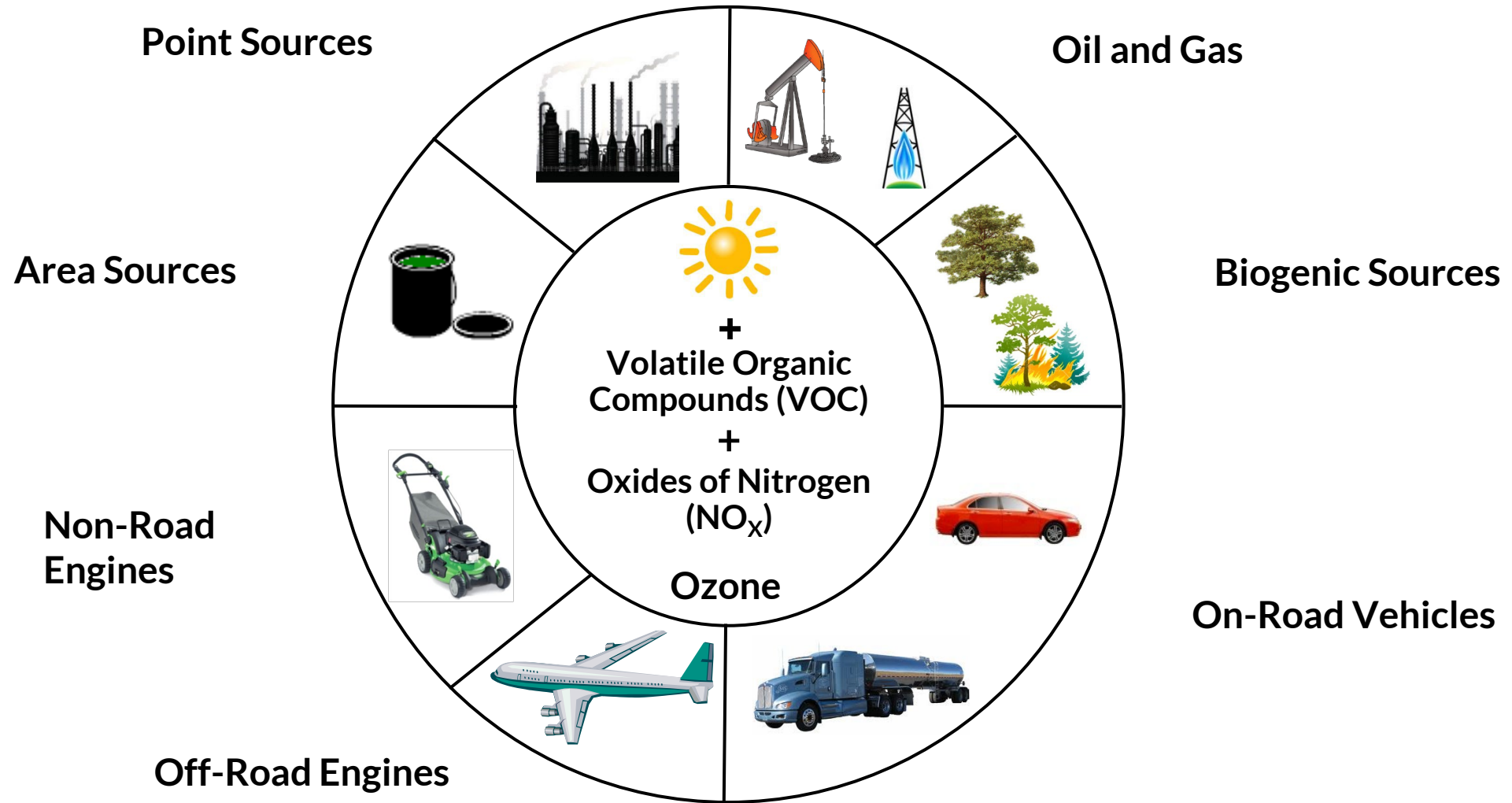
Ozone, a gas composed of three atoms of oxygen (O_3), occurs both in the Earth's upper atmosphere and at ground level.

Stratospheric Ozone: forms high in the atmosphere when intense sunlight causes oxygen molecules (O_2) to break up and re-form as ozone molecules. Popularly called “good ozone,” it shields us from the harmful effects of the sun's ultraviolet light.

Ground-Level Ozone: commonly referred to as “bad ozone” forms when emission sources, including, but not limited to, transportation, industrial and commercial operations, and vegetation emit oxides of nitrogen (NO_x) and/or volatile organic compounds (VOC) that react in the presence of sunlight.



Ozone Formation



Optimum conditions for the formation of ozone include high temperatures and low winds. Sections are not to scale and are for illustrative purposes only.

Health Effects of Ground-Level Ozone

Ozone can:

Make it more difficult to breathe deeply and vigorously.

Increase the frequency of asthma attacks.

Cause shortness of breath and pain.

Cause coughing and sore or scratchy throat.

Inflame and damage the airways.

Aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.

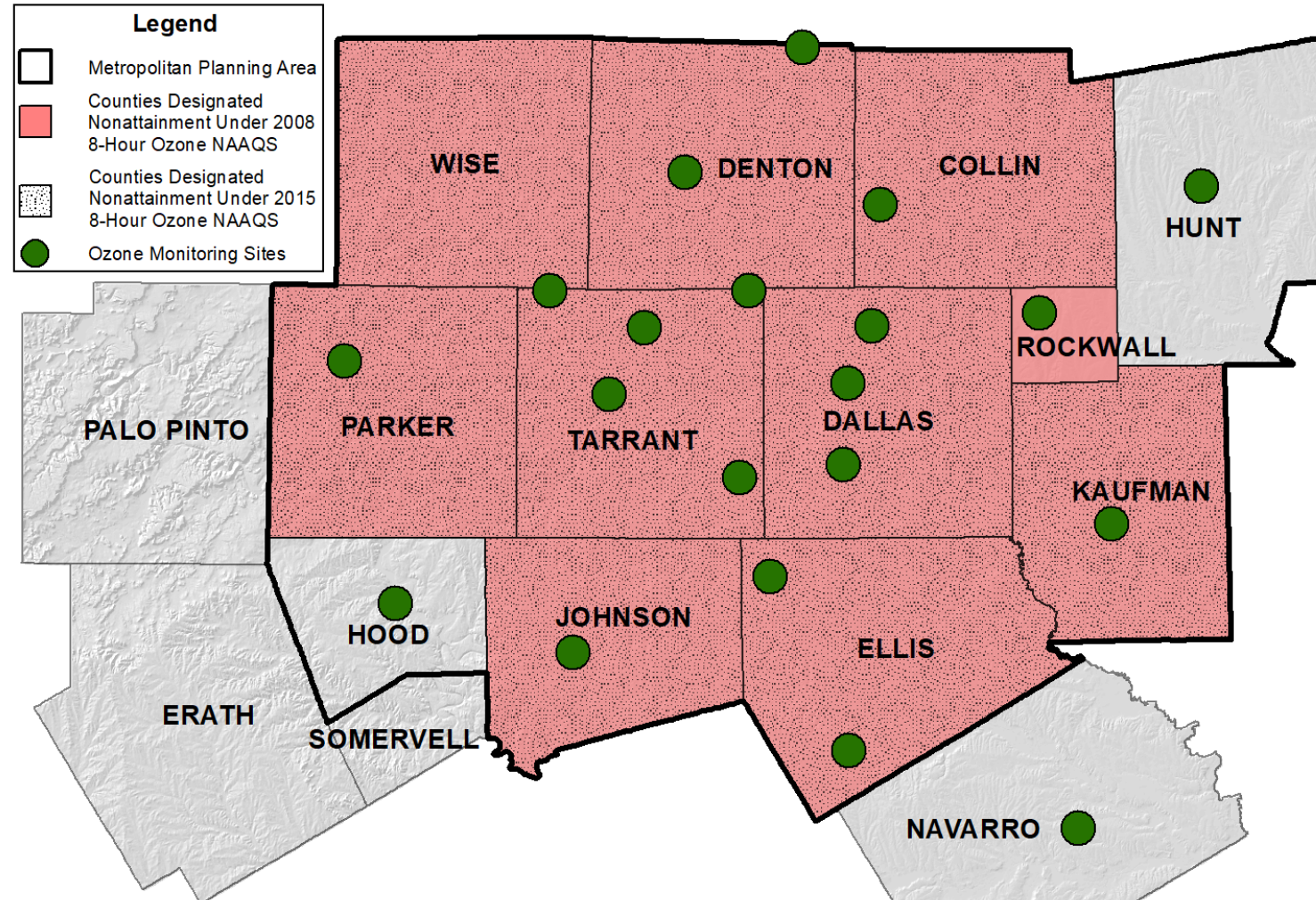
Cause chronic obstructive pulmonary disease (COPD).

Make the lungs more susceptible to infection.

Continue to damage the lungs even when the symptoms have disappeared.

Monitor Locations

2008 and 2015 Ozone National Ambient Air Quality Standards (NAAQS)



Timeline and Milestones

2008 Ozone Standard
(≤ 75 ppb)

Attainment Date:
No later than **July 20, 2027**

*Attainment will be based on
2024-2026 Ozone Monitor Data*

Environmental Protection
Agency (EPA) NAAQS
Classifications

Marginal
(3 years to attain)

Moderate
(6 years to attain)

Serious
(9 years to attain)

Severe
(15/17 years to attain)

Extreme
(20 years to attain)

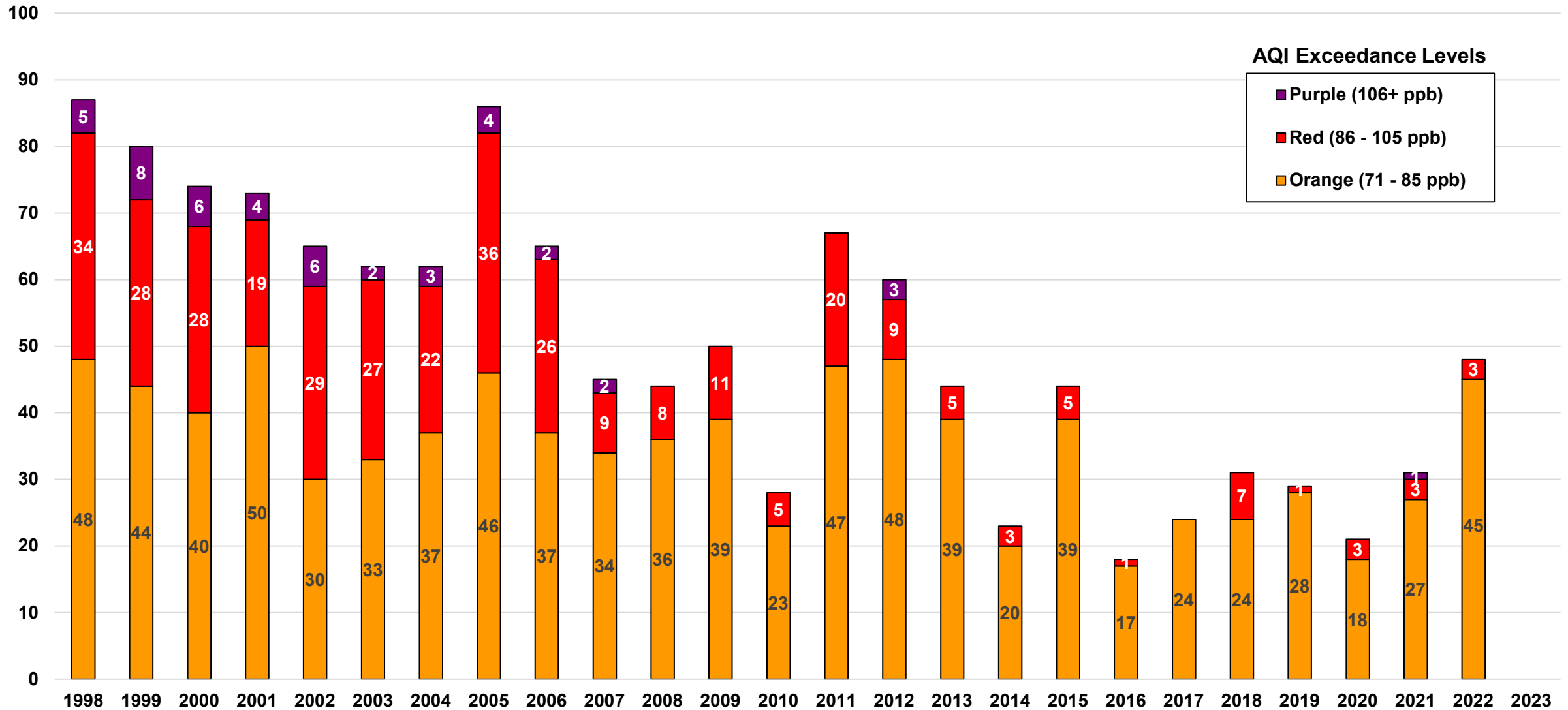
2015 Ozone Standard
(≤ 70 ppb)

Attainment Date:
No later than **August 3, 2024**

*Attainment will be based on
2021-2023 Ozone Monitor Data*

8-hour Ozone NAAQS Historical Trends

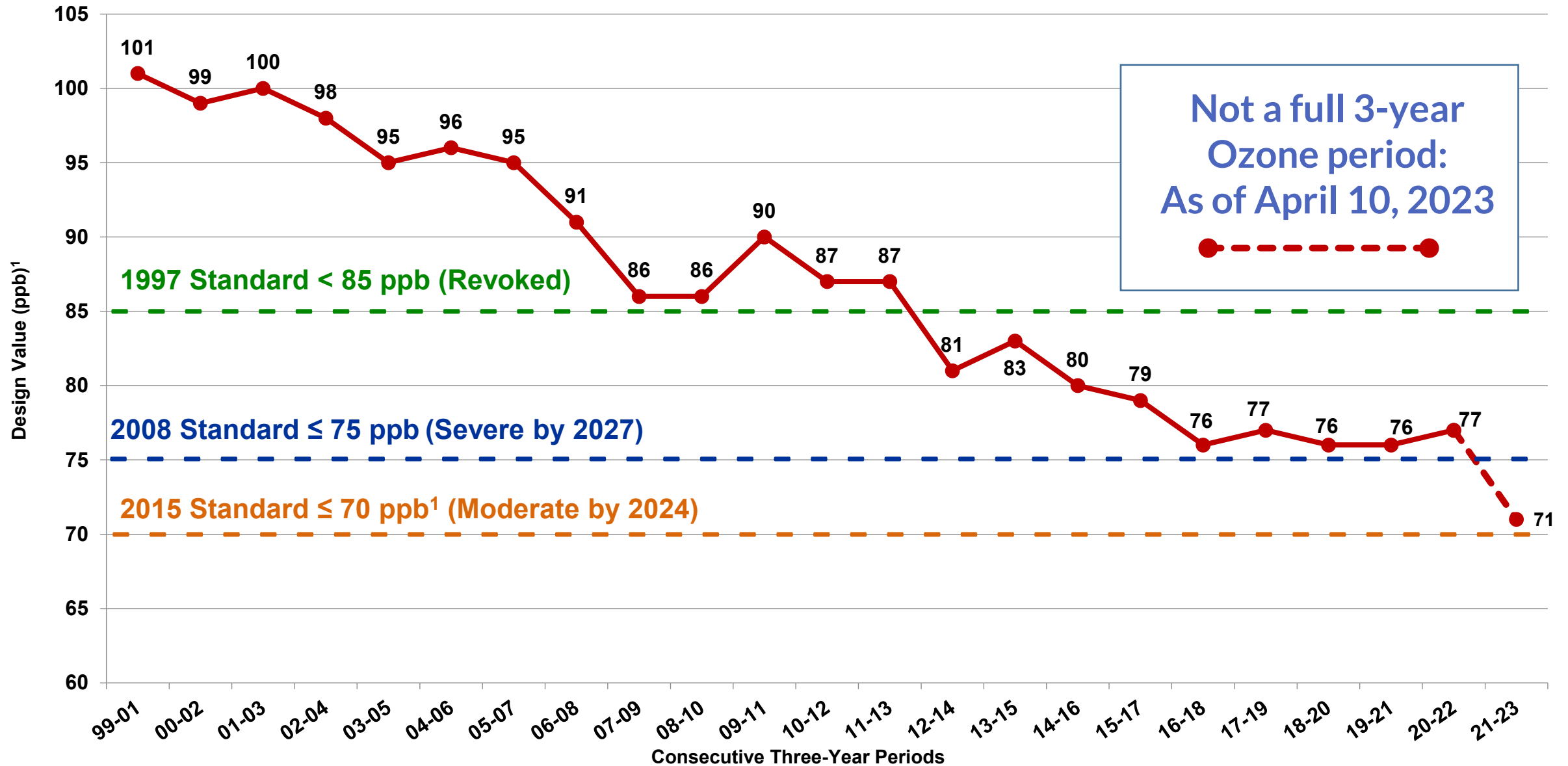
Based on ≤ 70 ppb (As of April 10, 2023)



Exceedance Level indicates daily maximum eight-hour average ozone concentration.
Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

Source: TCEQ, http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl
ppb = parts per billion

Ozone Design Value Trends



¹Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the *Design Value* (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

Air Quality Education

What Can You Do?

Work from home

Carpool

Bring lunch to work or carpool to lunch

Use mass transit

Bicycle or walk

Reduce idling, including during start up

Avoid unnecessary trips

Maintain consistent driving speed

Conserve water to conserve electricity

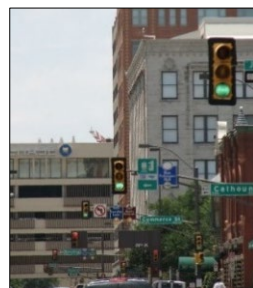
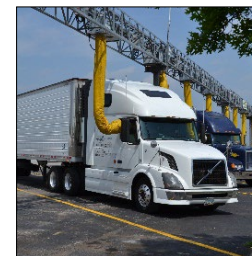
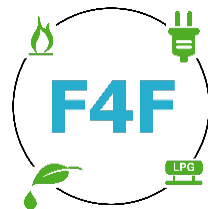
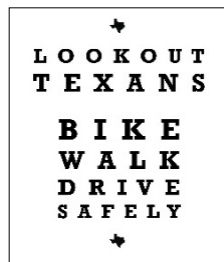
Postpone mowing to a day that is not an Ozone Action Day

Limit use of recreational vehicles

Sample of Air Quality Initiatives



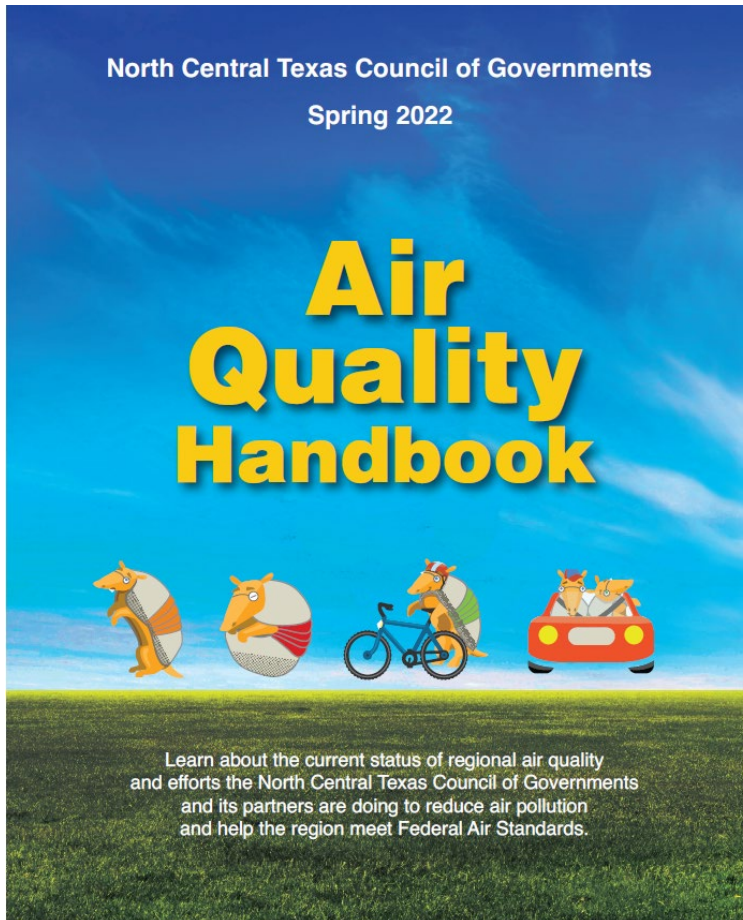
Rideshare. Record. Reward.



Air Quality Handbook

Multilingual

English



https://www.nctcog.org/getmedia/3e4466f8-aad7-4979-b336-d0b79c6fd10e/eq2022printer_spring.508e33.pdf?lang=en-US

Spanish



<https://www.nctcog.org/getmedia/8d3a380e-dc11-4286-8efa-e430b74e337c/eq2022spanish.b128ac.pdf?lang=en-US>

Vietnamese



<https://www.nctcog.org/getmedia/787b9fe9-94d9-d476-9701-020876a06e61/AQHbkViet.pdf>

Air Quality Education

Air North Texas

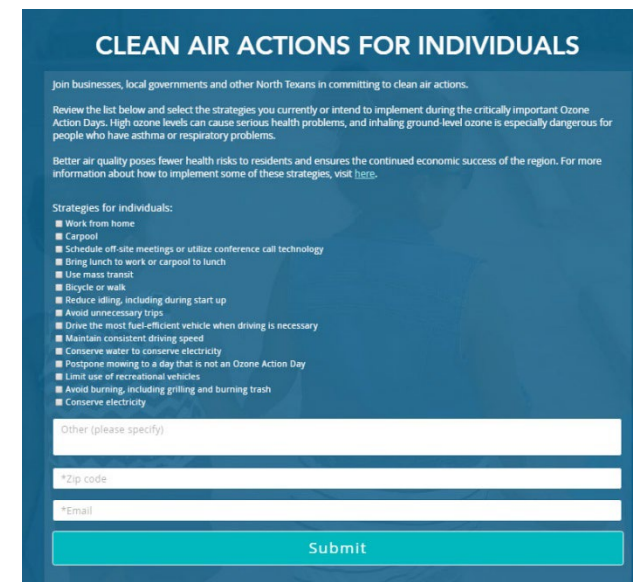
Website: www.airnorthtexas.org

Sign up for air pollution alerts

Find air quality and ozone information

Commit to clean air actions for individuals, businesses, governments

Become a partner



Air North Texas 2023 Plans

Staff presence at regional outreach events throughout the spring, summer, and fall

Social media campaign for Air Quality Awareness Week, May 1-5

Clean Air Action Day, June 2

Air North Texas paid education in May – August timeframe

Air North Texas Air Pollution Alert emails

Air North Texas Weekend Forecast emails

Social media campaign with regional partners featuring Arlo the Airmadillo

www.airnorthtexas.org

Current Air Quality Index



Highlight of Outreach Events

- April 14** **UNT University Day**
- April 16** **Oak Cliff Earth Day**
- April 17** **El Centro Earth Day Celebration**
- April 19** **UTA Earth Day**
- April 20** **UNT Health Science Center Earth Day Fair**
- UT Dallas Earth Day Fair**
- April 21-23** **EarthX**
- April 22** **Grapevine's Earth Action Day**
- June 2** **Clean Air Action Day**



www.airnorthtexas.org

For More Information

Nick Van Haasen
Air Quality Planner
NVanhaasen@nctcog.org

Jenny Narvaez
Program Manager
JNarvaez@nctcog.org

Chris Klaus
Senior Program Manager
cklaus@nctcog.org

<https://www.nctcog.org/trans/quality/air/ozone>