

Ground-level Ozone Nonattainment Area Reclassification

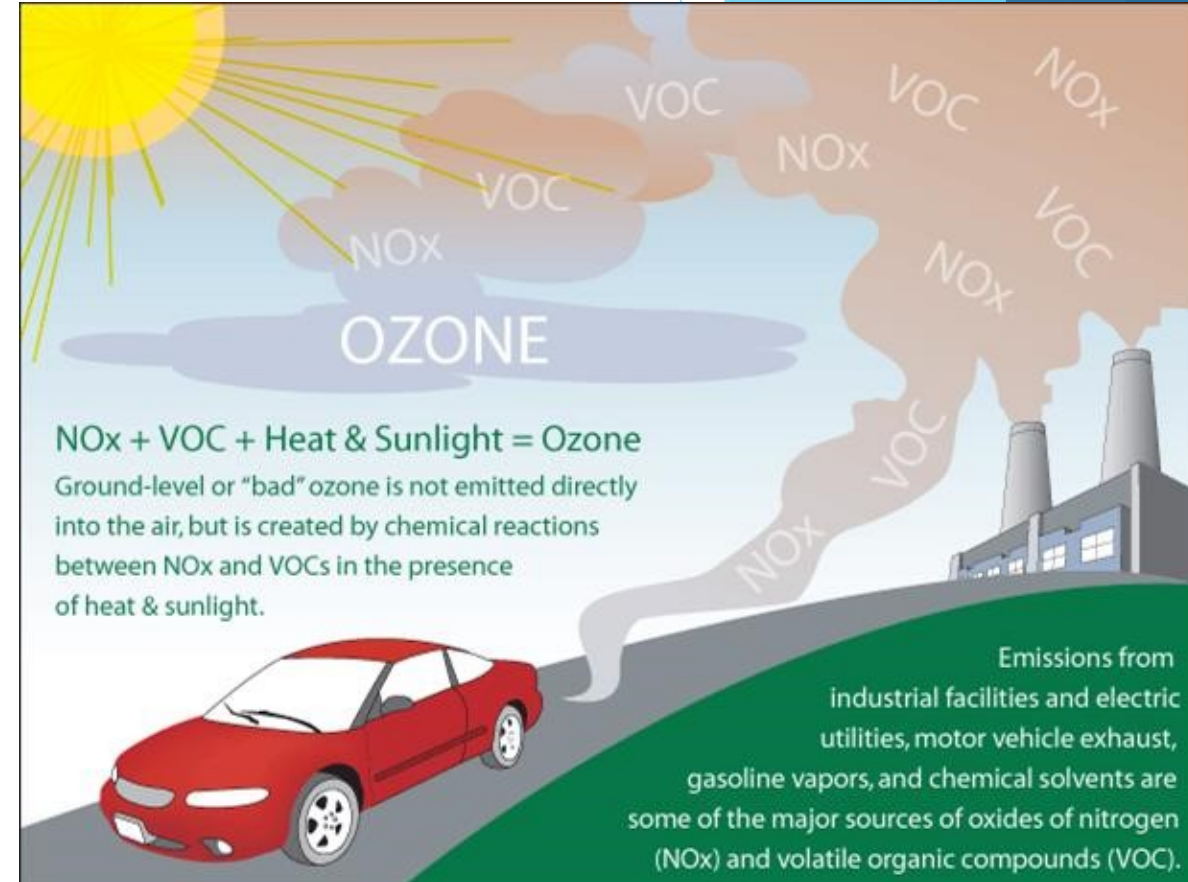
Executive Advisory Committee

Board of Directors

January 2025

Ground-Level Ozone (Bad Ozone)

- ▶ Emissions Influences
 - ▶ Hydrocarbons/Volatile Organic Compounds (VOCs), and nitrogen oxides (NOx) from both vehicle exhaust and industrial processes chemically react with oxygen in the lower atmosphere
- ▶ Weather Influences
 - ▶ Strong sunshine, low wind speed, temperature 85°+
- ▶ Carried by wind after it is formed
- ▶ One of the six criteria pollutants with National Ambient Air Quality Standards (NAAQS) set by the U.S. EPA per the Clean Air Act.



Ozone Standard Over Time

- ▶ Federal Clean Air Act requires EPA to periodically review the standard to ensure that, based on current relevant science and risk assessment, it is still protecting human health and the environment from harmful exposure to ozone.
 - ▶ EPA Administrator receives input from independent Clean Air Science Advisory Committee
 - ▶ Opportunities for public comment
- ▶ When review is complete, EPA Administrator can decide to either strengthen the standard or retain as is.
- ▶ History -
 - ▶ 1979 – Standard set
 - ▶ 1997 – Standard strengthened (lowered)
 - ▶ 2008 – Standard strengthened (lowered)
 - ▶ 2015 – Standard strengthened (lowered)
 - ▶ 2020 – 2015 Standard retained
 - ▶ 2021 – 2020 retention decision to be reconsidered
 - ▶ 2023 – Full review of 2015 standard, decision anticipated in 2026

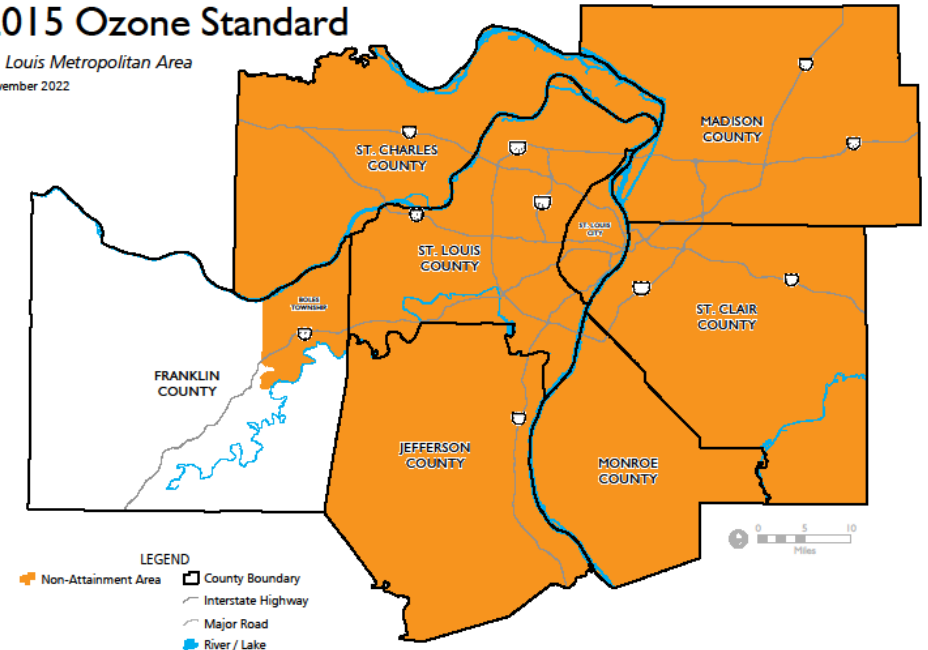


Classification History - 2015 Ozone Standard

- ▶ 2015 standard - 70 parts per billion (ppb)
 - ▶ 2018 - **Marginal** nonattainment, not including Jefferson and Monroe counties
 - ▶ 2021 – After review of data, EPA also designated Jefferson and Monroe counties as nonattainment with the **Marginal** classification
 - ▶ 2022 - EPA reclassified the area to **Moderate**
 - ▶ 2024 (MO) & 2025 (IL) – EPA reclassified the area to **Serious**
 - ▶ Attainment date - August 3, 2027
 - ▶ State Air Agencies currently working on Attainment Demonstration Plans

Non-Attainment Area 2015 Ozone Standard

St. Louis Metropolitan Area
November 2022

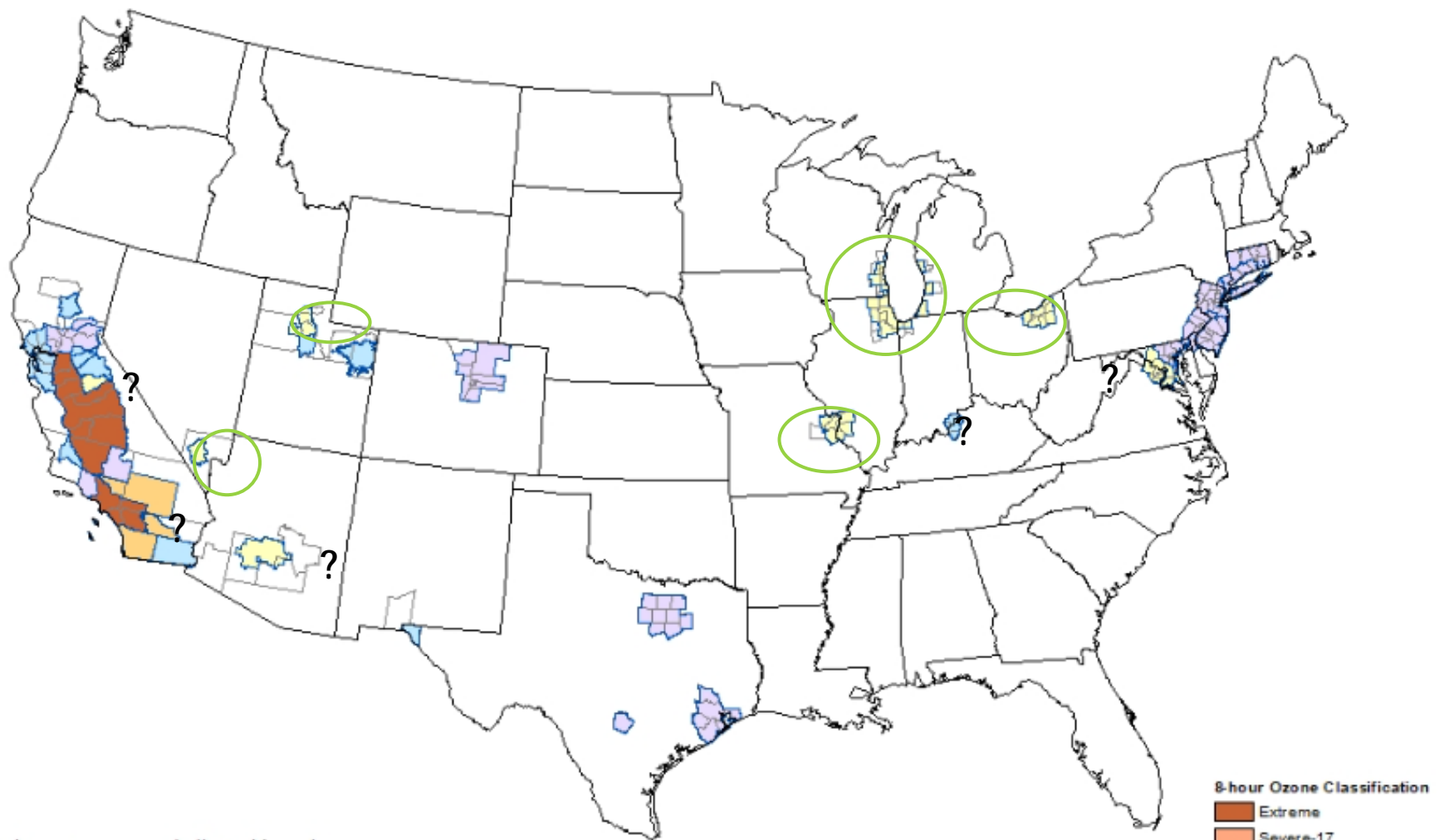


Sources: East-West Gateway Council of Governments




8-Hour Ozone Nonattainment Areas (2015 Standard)

12/31/2024



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

 Moderate areas which have been reclassified to Serious

? Classification status of these Moderate areas not known

For the Ozone-8Hr (2015) Louisville, KY-IN nonattainment area, the Ohio portion was redesignated on July 5, 2022. The Kentucky portion has not been redesignated. The Kentucky portion of the Louisville area was reclassified from Marginal to Moderate on November 7, 2022. The entire area is not considered in maintenance until all states in a multi-state area are redesignated.

Ground Level Ozone – Health Impacts

- ▶ Affects children, older adults, outdoor workers and people that exercise outdoors
- ▶ Asthma attacks, shortness of breath, aggravate lung diseases
- ▶ Lessens productive work and school days
- ▶ Permanent damage to lungs, aggravates chronic heart disease
- ▶ Increased emergency room visits and hospitalizations
- ▶ Scientific studies show long-term exposure to ozone is associated with increased risk for multiple causes of mortality*



https://www.cdc.gov/climateandhealth/effects/air_pollution.htm

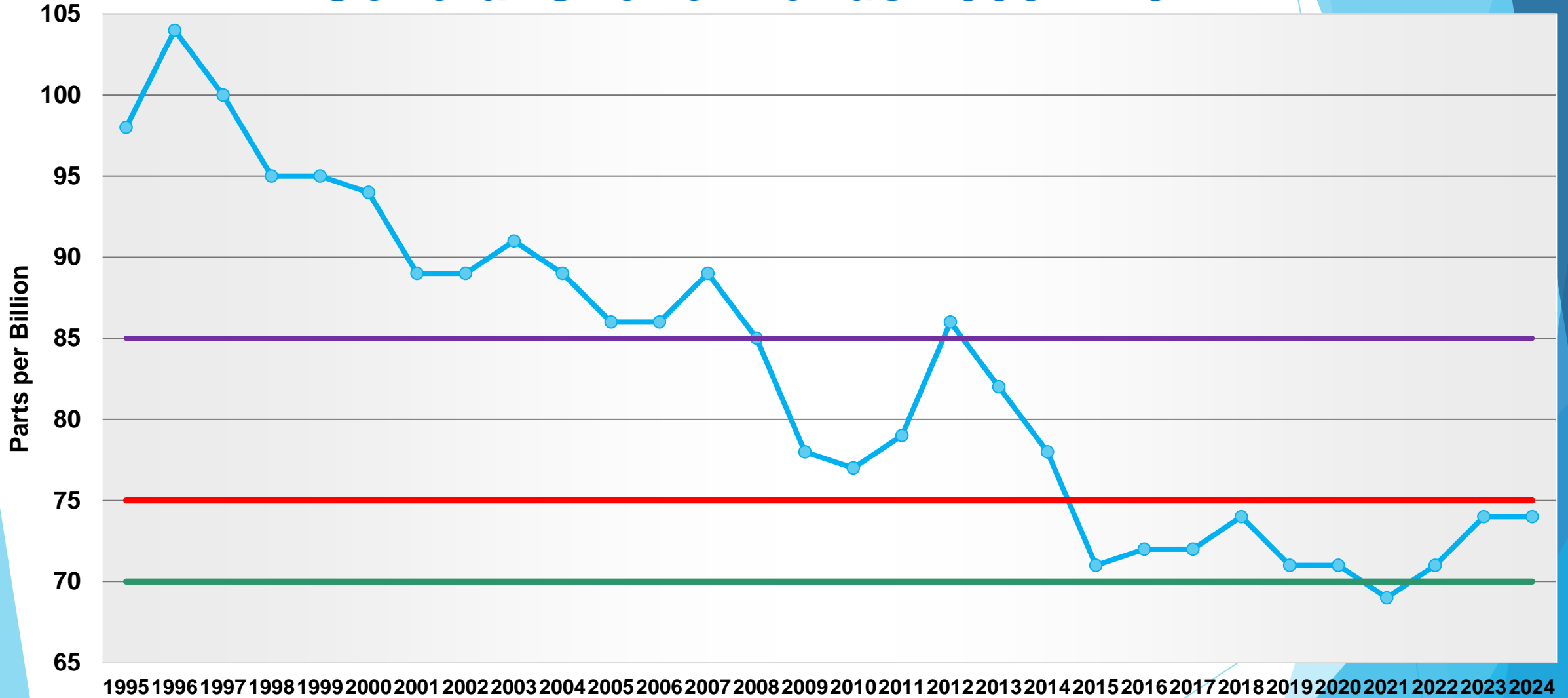
*Long-Term Exposure to Ozone and Cause-Specific Mortality Risks in the United States – American Journal of Respiratory and Critical Care Medicine; October 15, 2019



EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

St. Louis Region General Ozone Trends 1995 – 2024



● 3 Yr Average — 1997 Standard — 2008 Standard — 2015 Standard





Strategies that Reduce Ozone Levels

- ▶ Improvements to Vehicle Technology – No More Vapor Recovery Units at Gas Pumps
- ▶ Cleaner Burning Fuels – Reduced Sulfur Content, Reduced Vapor Pressure
- ▶ Vehicle Emissions Testing Programs
- ▶ Congestion Mitigation Air Quality (CMAQ) Funding – Congestion Reduction Projects

- ▶ Increased Pollution Offset Requirements for Industry and Power Plant Permits
- ▶ VOC Capture and Reduction in Printing Processes
- ▶ Low VOC Paint; Low Solvent/Solvent Free Substitutes
- ▶ Activated Carbon Filters to Capture VOCs at Source

- ▶ Refuel Vehicles after 6pm; Link Trips; Avoid Idling
- ▶ Adjust Thermostat up two degrees in Summer; Replace Old, Inefficient Appliances
- ▶ Use Water-based, low VOC Paint





Air Quality Connected Work at EWGCOG

- ▶ Air Quality Advisory Committee
- ▶ Ozone Data Sharing Project
- ▶ Transportation Air Quality Conformity Determination for TIP/LRTP
- ▶ Congestion Mitigation Air Quality (CMAQ) funding program
- ▶ CMAQ Performance Management Measures
- ▶ Natural Hazard Mitigation Planning
 - ▶ Adjusting to changing patterns - wind, precipitation, extreme heat, drought
 - ▶ Extreme heat - cooling centers
- ▶ Climate Pollution Reduction Grant
 - ▶ Increase temperatures and heat waves = more days with unhealthy air



Questions



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