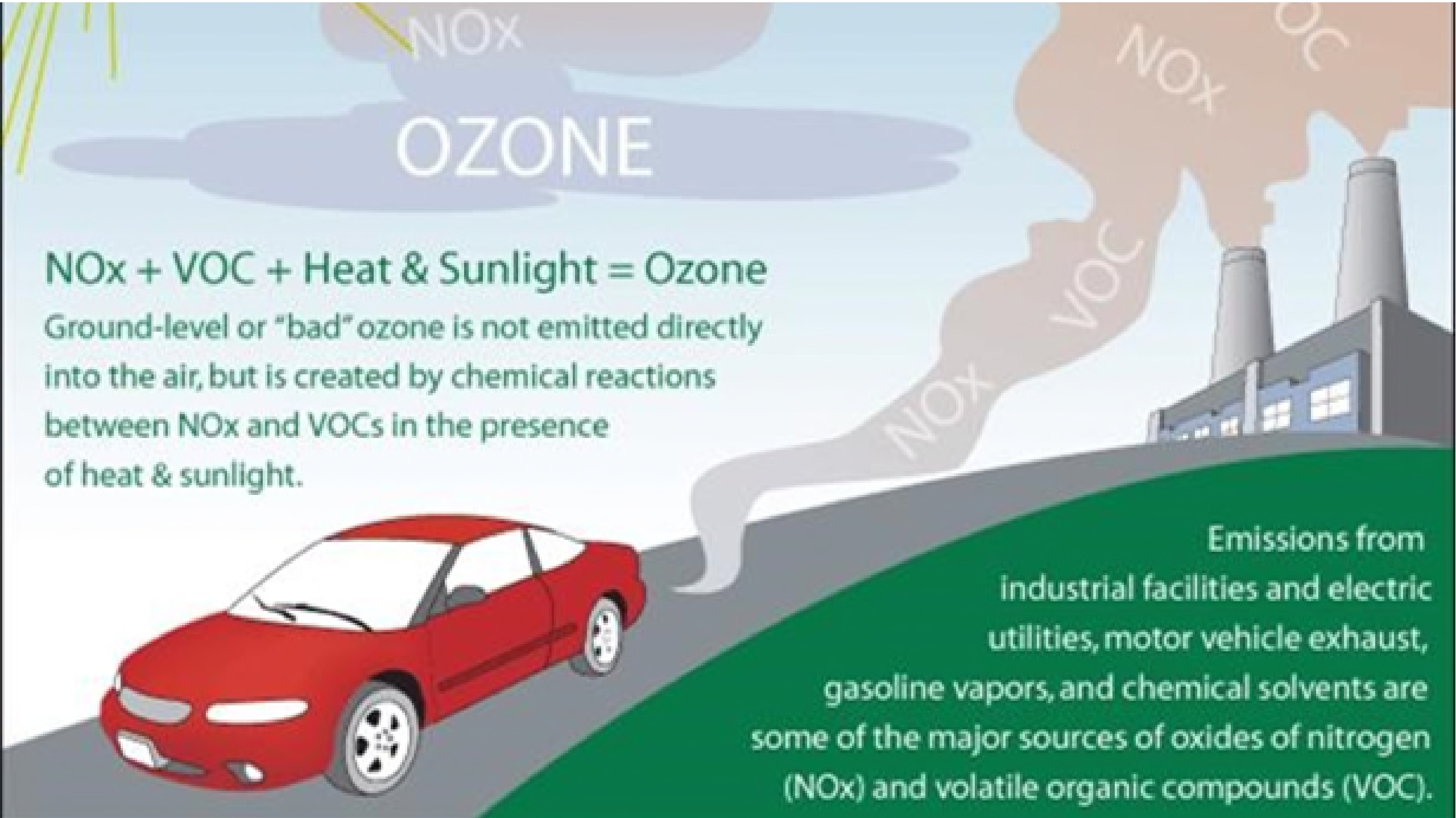
# SB165 Air Quality Improvements

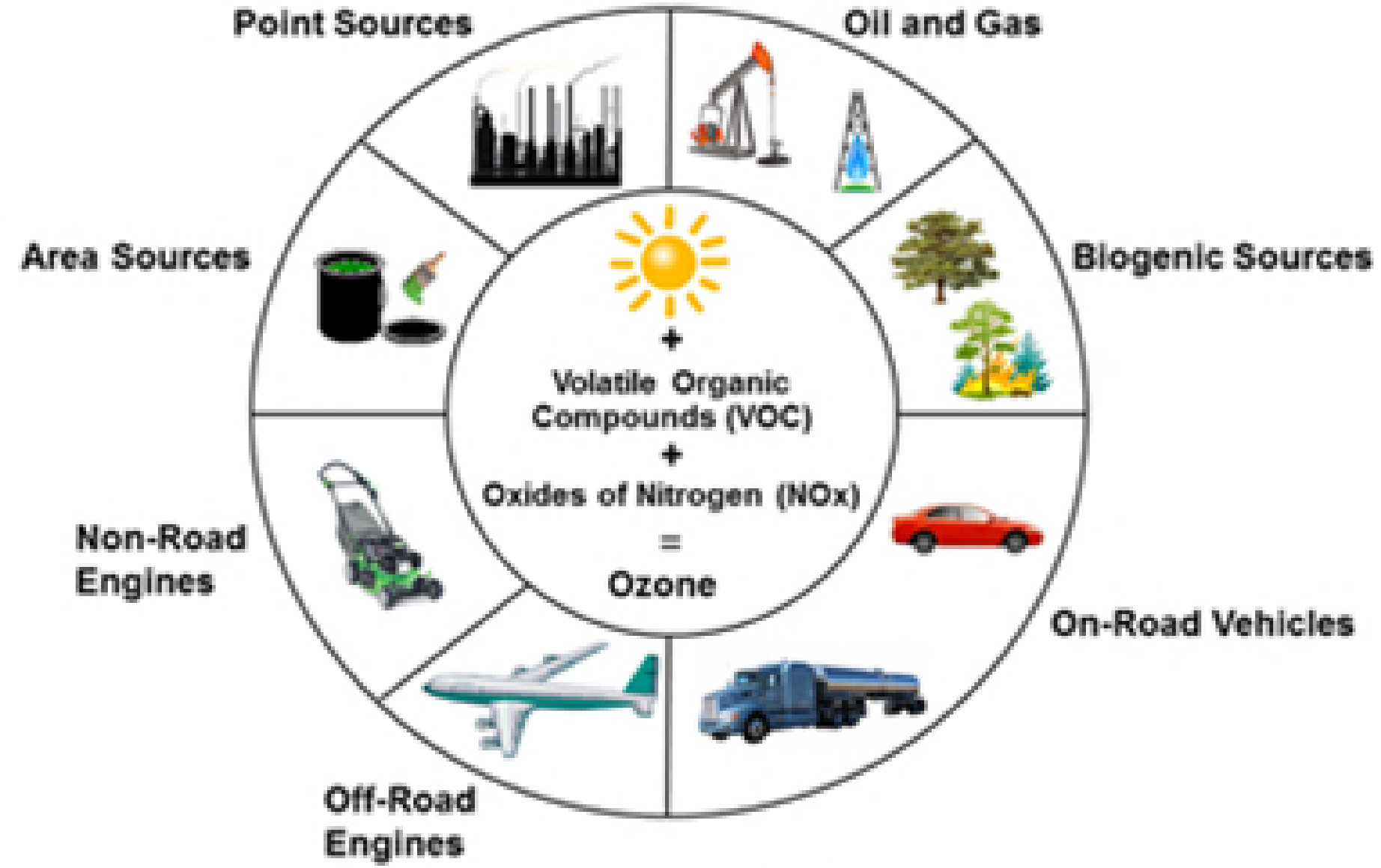
2024 Legislative Session

Senators Priola and Cutter

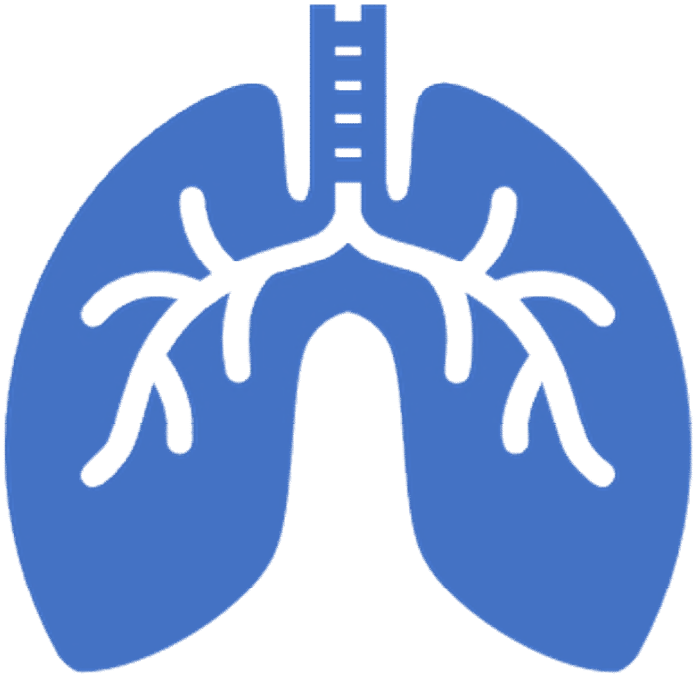
Representative Rutinel and Garcia


NOx
OZONE
NOx + VOC + Heat & Sunlight = Ozone
Ground-level or "bad" ozone is not emitted directly into the air, but is created by chemical reactions between NOx and VOCs in the presence of heat & sunlight.
NOx
VOC
NOx
VOC
Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of oxides of nitrogen (NOx) and volatile organic compounds (VOC).

# 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.



# Ozone Health Impacts

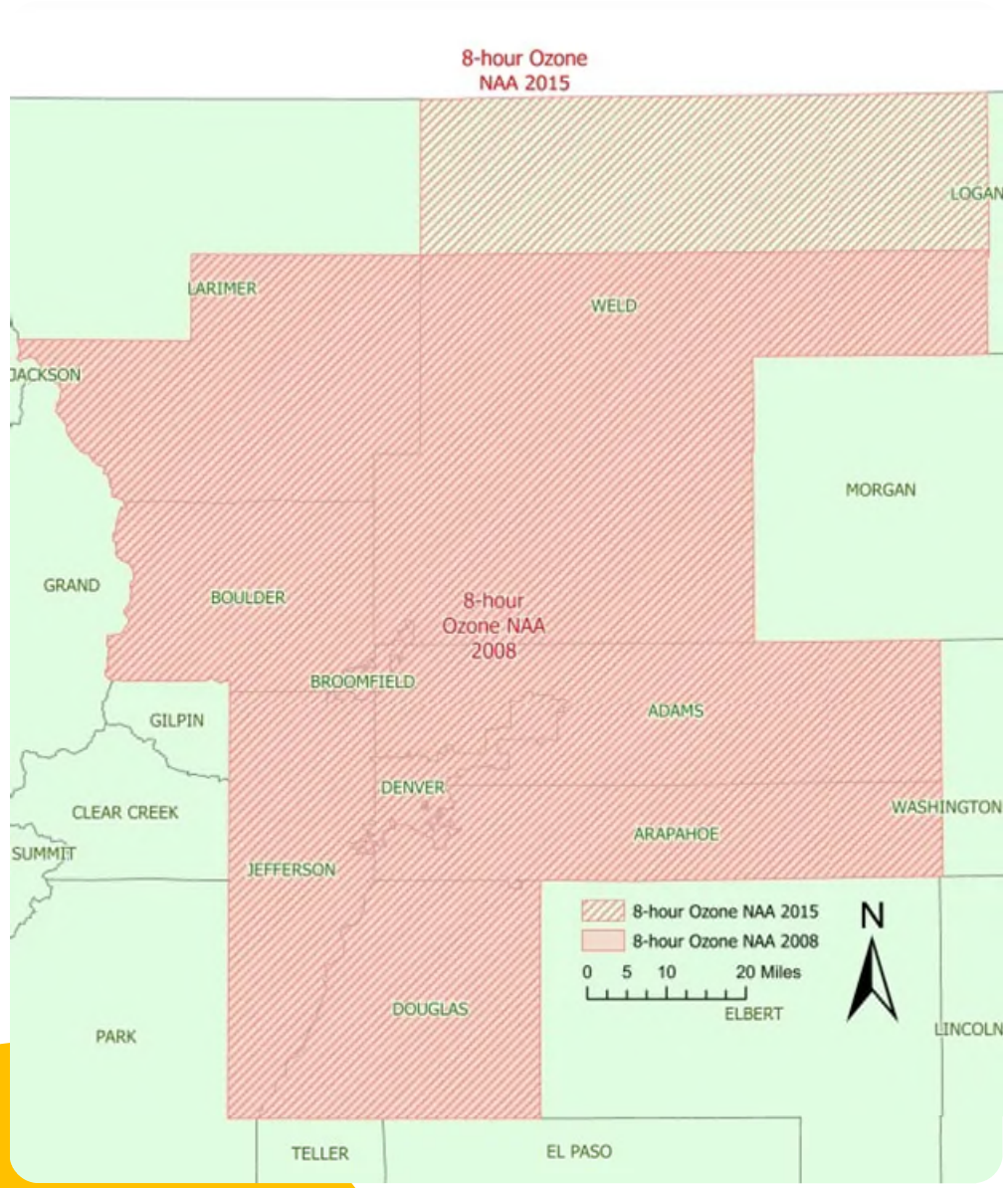
- Ground level ozone has harrowing effects on human health, especially to high-risk populations (children, older adults, asthmatics, and outdoor workers and recreationists).
- Prolonged exposure can impair the development of children's lungs and increase the risk of development or exacerbation of asthma.
- Even low levels of ozone exposure can result in respiratory symptoms such as coughing and exacerbation of asthma.
- All 9 of the counties in the nonattainment area received an F rating from the American Lung Association in 2023.
    - 714,000 people in Denver Metro and Fort Collins suffer from lung or cardiac disease

# Ozone Health And Economic Costs to Colorado

Total health costs to Colorado from ozone estimated to be $353 million.*

By 2026, the *total economic damages* from the oil and gas sector in total damages for Colorado will be between $480 million and $1 billion. These include health costs and other harm to our economy from sick days, loss of agricultural yields, etc…**

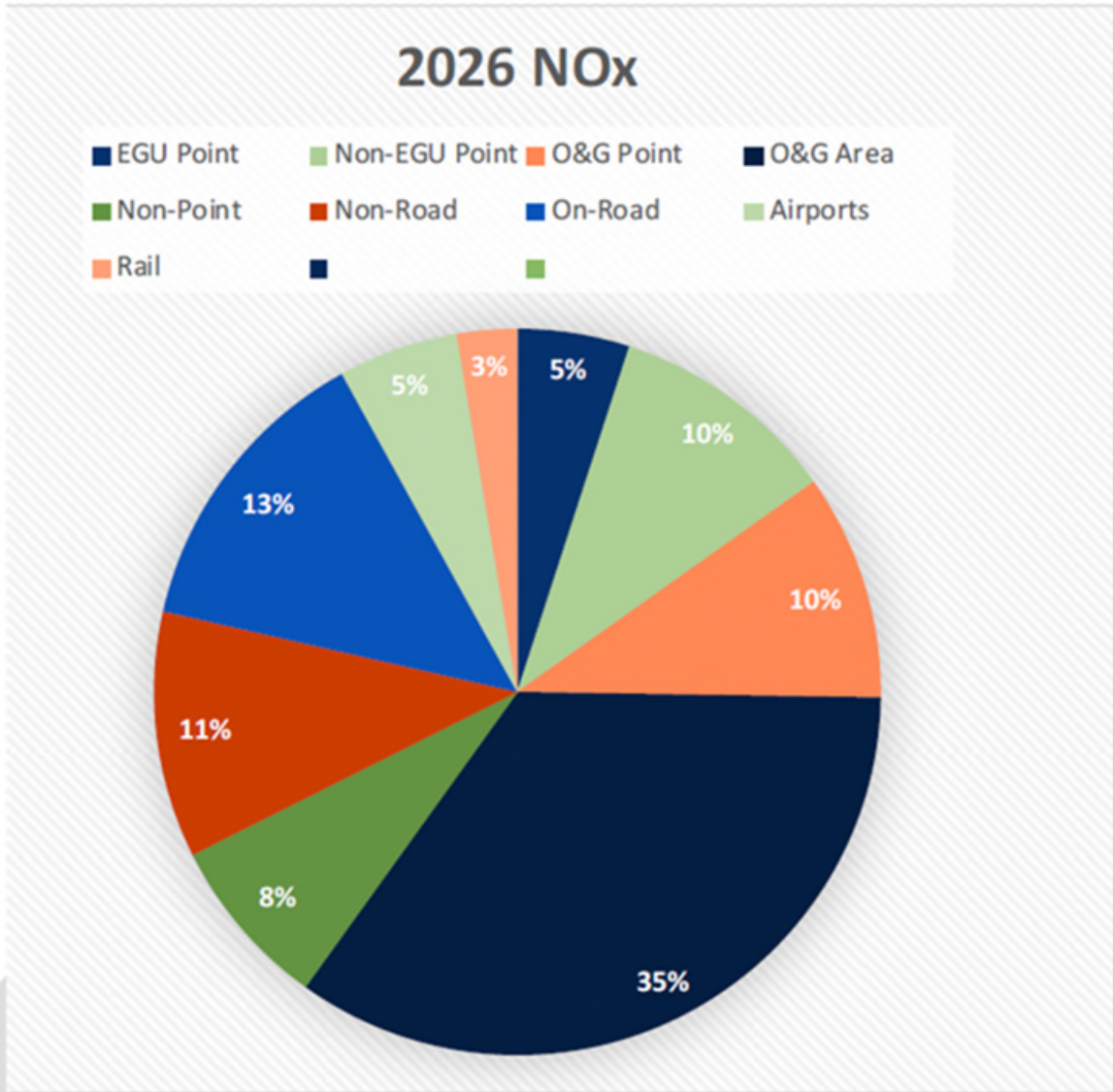
The Colorado Fiscal Institute found that air pollution in Adams County alone costs Colorado up to $35 million in health costs related to asthma, lost days of work and school, increased ER visits and premature death.**




# 8-Hour Ozone Nonattainment Areas 2008 and 2015 Boundaries

- For over a decade, areas of Colorado have failed to meet federal, health-based limits for ozone pollution, causing significant health impacts.
- Efforts to date have not brought the region back into attainment.

# Oil and Gas, On-Road & Off-Road Engines Modeled to Remain Significant Sources of Ozone Precursors In 2026



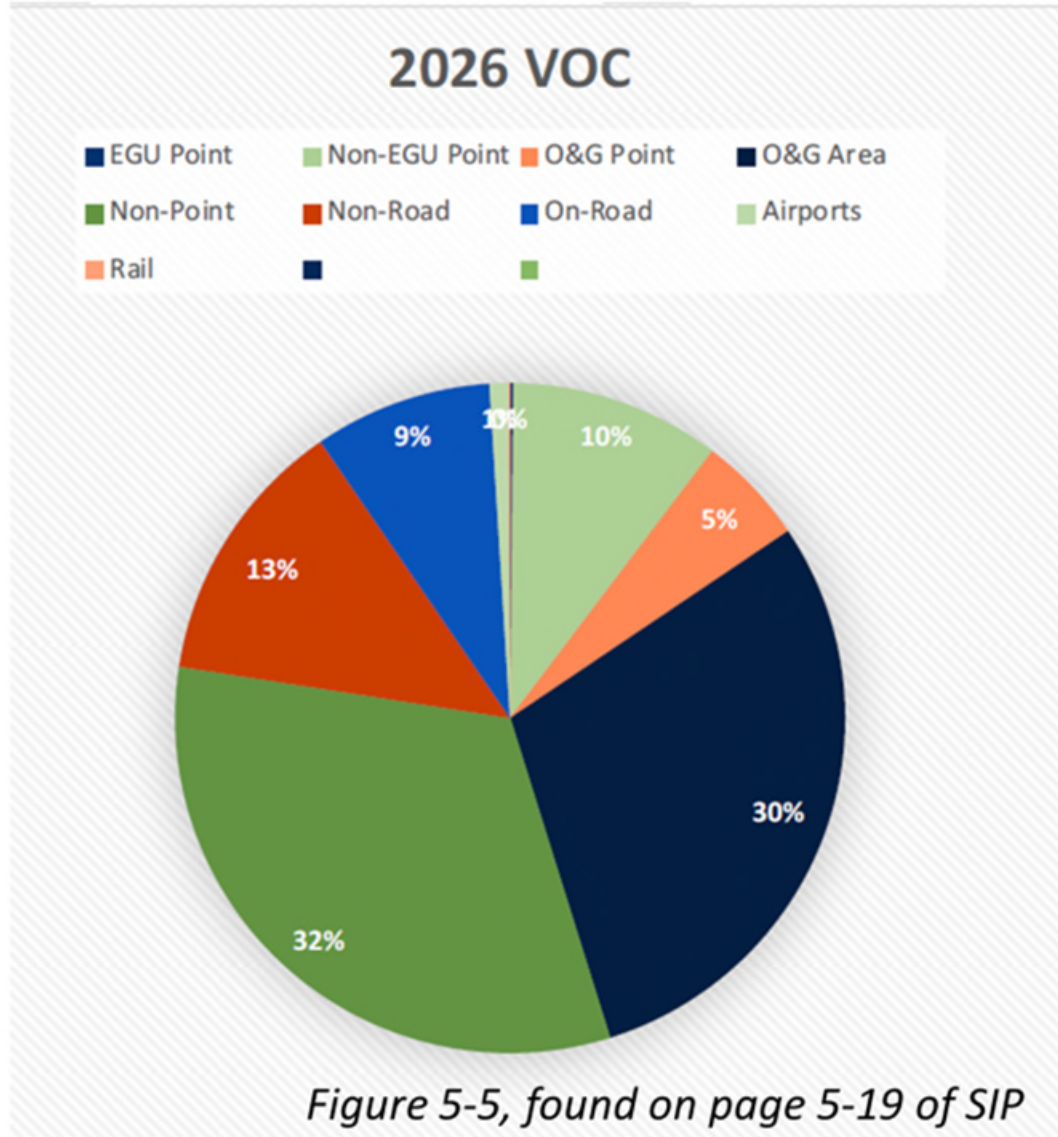




*Figure 5-5, found on page 5-19 of SIP*

# SB165 Concepts

*All emission reduction measures only apply to the ozone nonattainment area

1. Oil and gas drilling seasonal pause during high ozone season (June – August)
2. Oil and gas emissions database
3. Codify Governor's NOx emissions reduction directive
4. Additional requirements for the motor vehicle emission budgets for NOx and VOCs developed under the ozone state implementation plans for on-road and off-road engines.
5. Indirect Source Rules Rulemaking in 2025 to reduce emissions from truck traffic and mobile sources.

# Oil & Gas Measures

- Oil and gas emissions database
  - This is an underlying tool to help strengthen enforcement and other air quality policies
  - APCD has an oil and gas emissions database called Oil and Natural Gas Annual Emission Inventory Reporting (“ONGAEIR”) which is currently running two years behind.  ECMC has a database for cumulative air quality impacts that is riddled with errors and is not accessible to the public.
- Oil and gas drilling seasonal pause
  - Would require a pause on oil and gas pre-production activities during ozone season (June through August). Allows use of electric rigs.
- Codify Governor’s NOx emissions reduction proposal
  - The Governor proposed that oil and gas sector reduce NOx emissions by 30% by 2025 and 50% reduction by 2030 from a 2017 baseline.

# Transportation Reduction Measures

Additional requirements for the motor vehicle emission budgets for NOx and VOC developed under the ozone state implementation plans for on-road and off-road engines separately to decline starting in 2030 and every five years thereafter.