

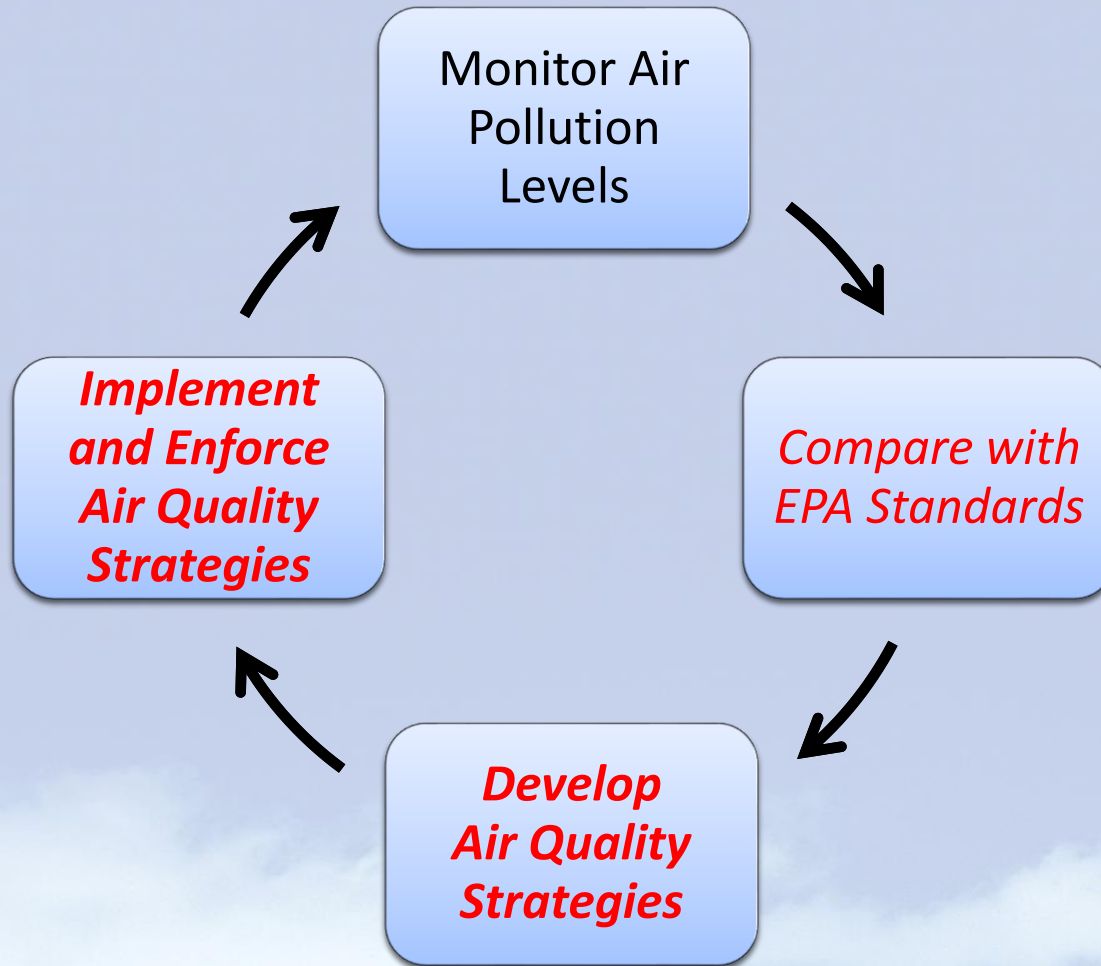
Air Quality in the Truckee Meadows



Accomplishments & Challenges

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Washoe County Health District
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Air Quality Management Process



National Ambient Air Quality Standards

Pollutant	Averaging Time	Level	Design Value
PM2.5	24-hour	35 $\mu\text{g}/\text{m}^3$	32 $\mu\text{g}/\text{m}^3$
	Annual	12 $\mu\text{g}/\text{m}^3$	10 $\mu\text{g}/\text{m}^3$
PM10	24-hour	150 $\mu\text{g}/\text{m}^3$	0.0 expected exceedances
Ozone	8-hour	75 ppb	71 ppb
Carbon Monoxide	1-hour	35 ppm	3.4 ppm
	8-hour	9 ppm	2.7 ppm
Nitrogen Dioxide	1-hour	100 ppb	54 ppb
	Annual	53 ppb	14 ppb
Sulfur Dioxide	1-hour	75 ppb	6 ppb
Lead	Rolling 3-month	0.15 $\mu\text{g}/\text{m}^3$	n/a

What does Non-Attainment mean?

- Our air is harmful to breathe, especially for the young, elderly, and people with chronic lung diseases
- Requires AQM agencies to develop a plan to achieve the standard
- Can limit/delay/stop economic development and expansion

Developing Air Quality Strategies

- Identify sources that contribute to ozone
- Identify programs and technology that can reduce emissions from those sources
- Develop, promote, and implement these programs and technology

Carbon Monoxide (CO)

8-hour CO NAAQS Designations:

- 1978 Non-Attainment
- 1991 Moderate Non-Attainment
- 2008 Attainment/Maintenance

Control Strategies:

Vehicle Smog Checks, Oxygenated Fuels Program,
Solid Fuel Burning Restrictions (Wood Stove Program)

PM10

24-hour NAAQS Designations:

- 1978 Non-Attainment for TSP
- 1987 Moderate Non-Attainment for PM10
- 2001 Serious Non-Attainment
- 2011 Attaining NAAQS based on clean data finding
- **2016 Attainment/Maintenance Plan for PM10**

Control Strategies:

Dust Control Regulations, Street Sanding/Sweeping,
Woodstoves Regulations, Green-Yellow-Red Burn Code

Ozone

Ozone NAAQS Designations:

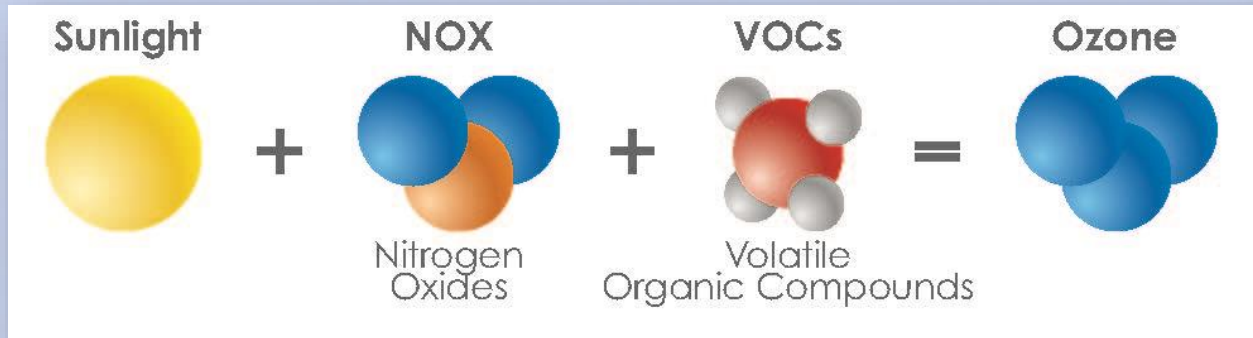
- 1991 Marginal Non-Attainment 1-hr NAAQS
- 2008 Attainment 8-hr NAAQS (1-hr rescinded)
- 2015 NAAQS revision - 70 ppb

(Current Design Value **71** ppb)

Control Strategies:

- Existing Programs and Regulations
- Voluntary Emission Reductions

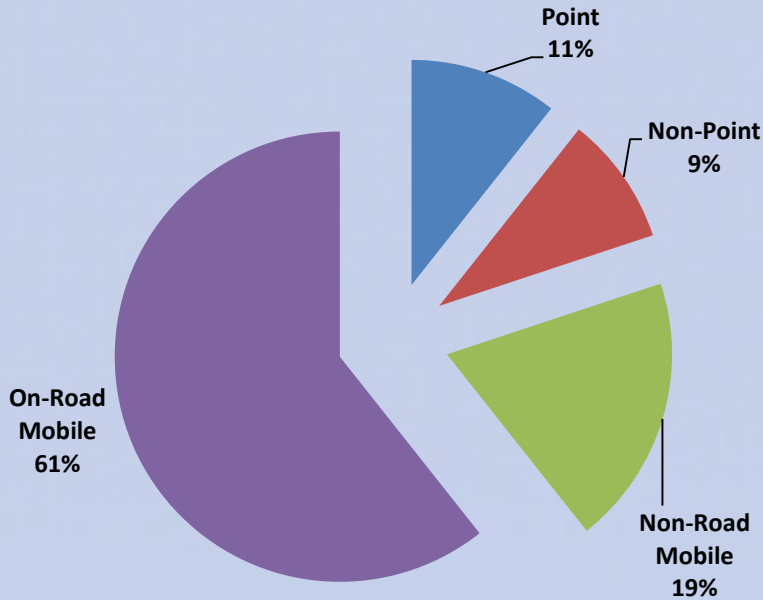
How Does Ozone Form?



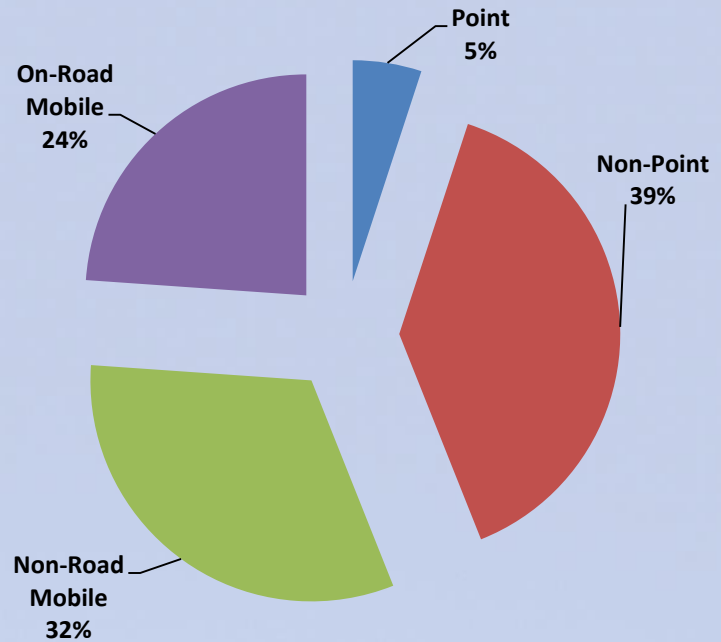
- Ultraviolet Radiation: sunlight
- NO_x: combustion sources such as cars, trucks, trains, construction equipment, engines, generators, boilers
- VOC: combustion sources, gasoline storage and dispensing, solvents

Sources of NOx & VOCs

NOx Emissions (85,927 lbs/day)



VOC Emissions (71,113 lbs/day)



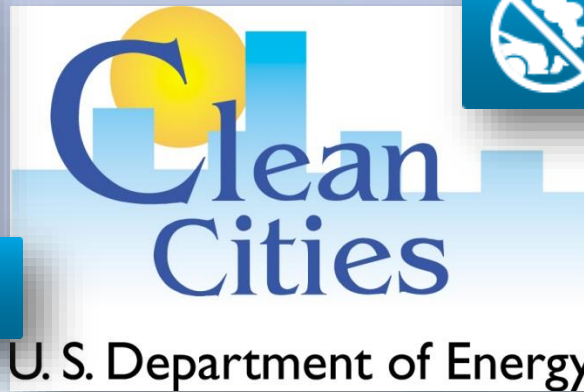
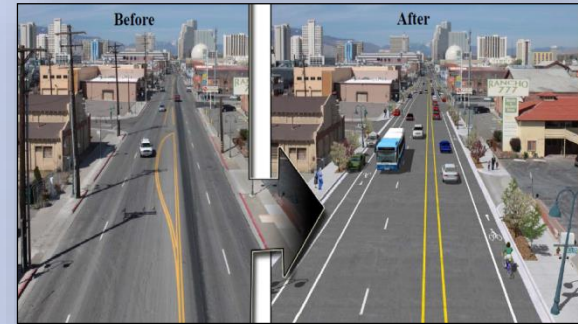
Air Quality Strategies

- Current strategies
 - Federal tailpipe and fuel standards
 - Local AQM rules for stationary engines, gas stations, and other NO_x/VOC sources
- Voluntary Strategies – **Ozone Advance Program**
 - Reduce Vehicle Miles Traveled
 - Reduce and/or Eliminate Tailpipe Emissions
 - Idle Reduction Campaign
 - Smart growth and partnerships
 - Built Environment

Ozone Designation Timeline

Voluntary Strategies	Now
Initial Recommendation	2016
EPA Initial Designations	2017
Attainment	2020

4th/Prater RAPID Transit Project



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