Ozone Advance Progress Report

Daniel Inouye, Planning Branch Chief Washoe County Health District, Air Quality Management Division Washoe County Planning Commission November 5, 2019





Reno NWS

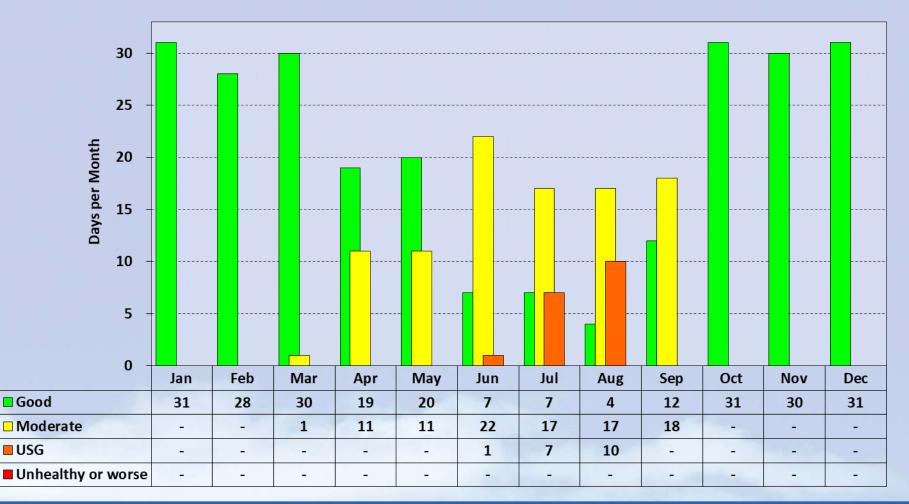
National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	Level	Design Value (2018)
Ozone	8-hour	0.070 ppm	0.071 ppm*
PM _{2.5}	24-hour Annual	35 mg/m ³ 12 mg/m ³	25 mg/m3 7.6 mg/m3
PM ₁₀	24-hour	150 mg/m ³	0.0 expected exceedances
Carbon Monoxide	8-hour 1-hour	9 ppm 35 ppm	2.2 ppm 2.7 ppm
Nitrogen Dioxide	1-hour Annual	100 ppb 53 ppb	48 ppb 12 ppb
Sulfur Dioxide	1-hour	75 ppb	5 ppb
Lead	3-month	0.15 mg/m ³	n/a





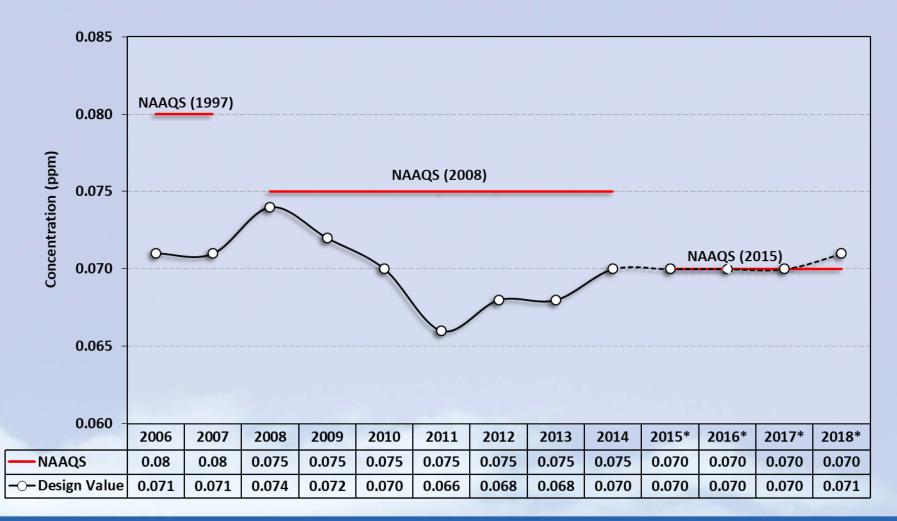
Ozone (2018)







Ozone Trend (2006-18)



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Keep it Clean.

How did we get to 100% of the NAAQS?

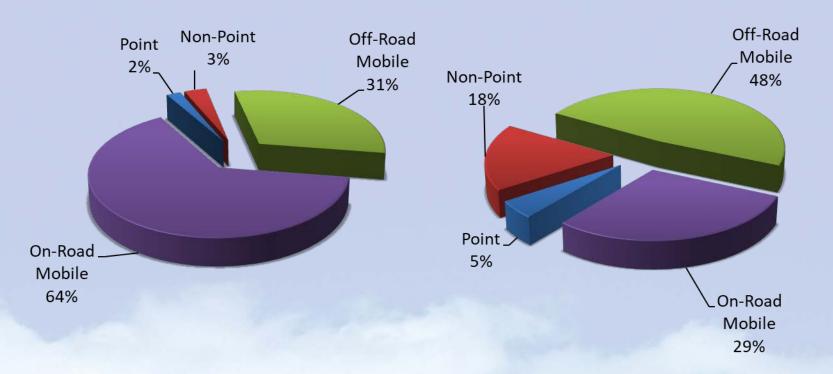
- EPA strengthens Ozone NAAQS (97, 08, 15)
- Economic Recovery and Growth (11 today)
 Population, Employment, VMT, Ozone
- WC Health participates in Ozone Advance (16)
- Resolutions supporting Ozone Advance (16)





Ozone = NOx + VOC + Sunlight

NOx (71,194 lbs/day) **VOC** (70,245 lbs/day)







Health District's Approach

- Incorporate Ozone Advance goals into:
 - Region-wide plans
 - Local plans
 - Other long-term plans
 - Priorities
- Top-Down support
- Goals target Technology, Behavior, and Built Environment





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Ozone Advance's 5 Goals

- 1. Reduce impacts from on-road motor vehicles
 - a) Trips, VMT, Tailpipe Emissions. . . not LOS
- 2. Reduce impacts from off-road motor vehicles
- 3. Reduce impacts from Urban Heat Island
- 4. Increase efficiency of buildings
- 5. Educate and empower champions to make good decisions for a Healthy Community





Top-Down Support

- Adopted Resolutions
 - District Board of Health
 - BCC
 - City of Reno
 - City of Sparks
 - RTC

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- Regional Planning Governing Board
- Jurisdictions cover all of Washoe County

 especially Reno/Sparks area





BCC Resolution of Support (April 2016)

- Encourage plans, policies, and codes that:
 - Minimize motor vehicle trips and VMT
 - Support active transportation and transit
 - Reduce per capita
 - Energy and water usage
 - Waste material to landfills
 - Reduce stormwater runoff
 - Increase tree canopy

RESOLUTION		
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	ADDITIES IN 12 th and April 2016.	





Connections Between Development and Air Quality

- Transportation
 - Largest category of ozone precursors
 - Reduce number and length of trips
 - Smart Trips (employee trip reduction)
 - Active transportation (ped and bike)
 - Transit
 - Reduce per mile emission rates
 - Cleaner technology such as Electric Vehicles
- Energy

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- Conservation and efficiency
 - Avoided emissions



Connections Between Development and Air Quality

Schools

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- Central location
 - Reduces need for bus routes
 - Multimodal transportation options and connectivity
- Urban Heat Island
 - Increases energy usage for comfort cooling
 - Increases heat vulnerability
- Construction Impacts
 - Portion of second largest category of ozone precursors



Example: Co-Benefits of Tree Canopies

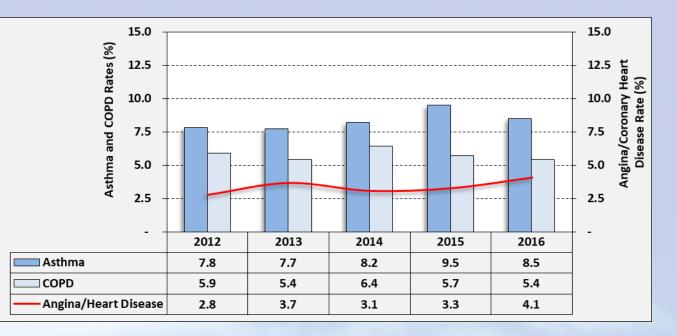
- Acts as a cool corridor/island
 - Reduces energy use and heat vulnerability
- Walking/biking becomes a more attractive option
 - Reduces vehicle trips and congestion
- Improves stormwater management
 - Reduces amount and temperature of runoff
- Lengthens pavement life
 - Reduces maintenance costs





What Does Long-Term "Non-Attainment" Mean in the Future?

- <u>Environmental Health</u>: Poor air quality
- <u>Public Health</u>: Higher rates of chronic diseases such as asthma, COPD, and diabetes



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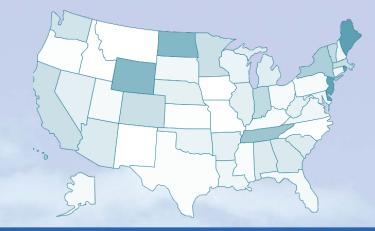


What Does Long-Term "Non-Attainment" Mean in the Future?

- <u>Economic Health</u>: Economy can grow, but growth must be connected to improved air quality
 - Clean Air Act requires progressively more stringent requirements until the NAAQS is met
 - Additional pollution control equipment for industry
 - Regional Transportation Plan revision
 - Transportation Conformity, MVEB . . . and fewer VMT
 - Emission offsets up to 1.5 : 1
 - Federal Implementation Plan
 - Loss of federal highway dollars
 - Adjacent counties and states become more attractive for new and expanding businesses

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What can the Planning Commission do?

• Recognize . . .

- The environmental, public health, and economic impacts of not meeting the ozone standard
- A collaborative effort is needed by regional partners such as Washoe County and the Health District to meet the Ozone standard

• Encourage . . .

- "Better than Business as Usual" projects
 - Smart trips programs, Increased tree canopy, Cool roofs, . . .
- Ordinances, codes, and policies that support Ozone Advance





Takeaways

- "Business as Usual" = 100% of ozone standard
- Ozone = Vehicle Trips, VMT, and Fleet Mix
- Washoe County and PC can encourage . . .
 - "Better than Business as Usual" projects
 - Strategies that support meeting the Ozone standard
- Supporting Ozone Advance also supports . . .
 - WC Master Plan; WC Energy and Sustainability Strategy; Regional Plan; a Healthy Community; and many more plans. . .

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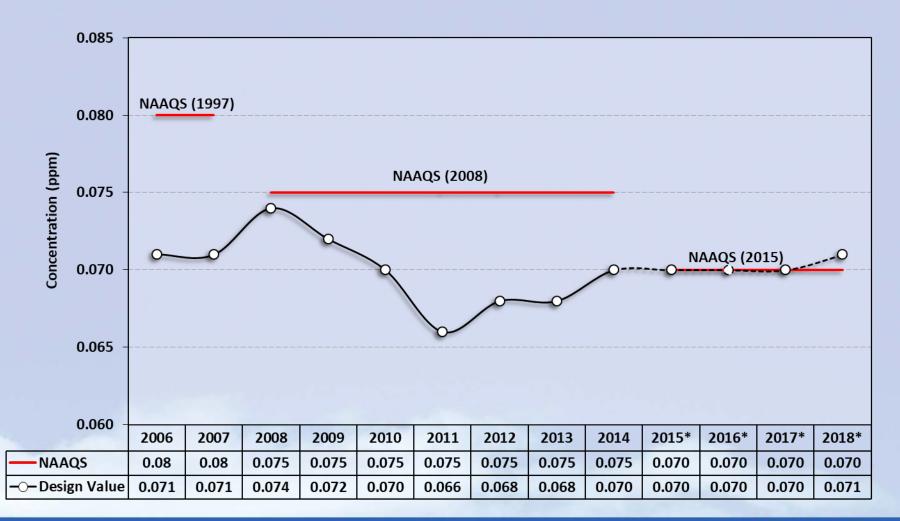
#KeepItClean @WashoeCountyAQ

*** 2014 EPA Gregg Cooke Visionary Program Award ***





Ozone Trend (2006-18)



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