#### **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

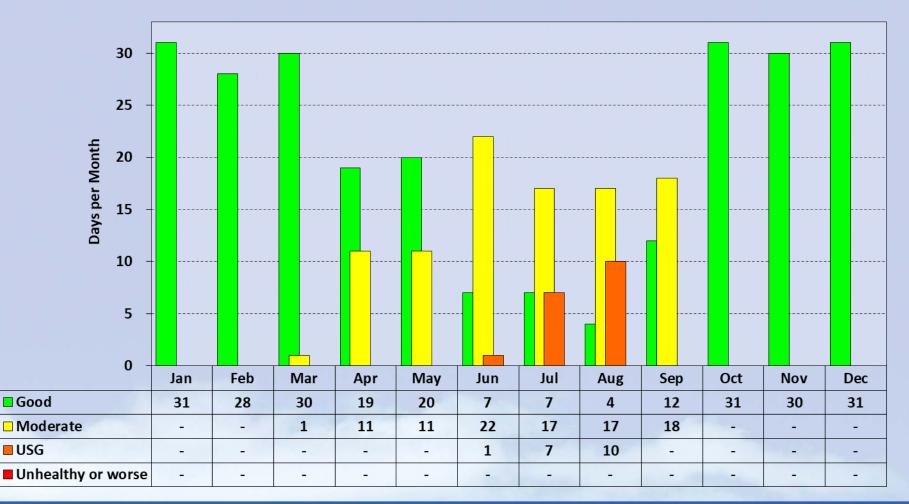
# National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	Level	Design Value (2018)
Ozone	8-hour	0.070 ppm	0.071 ppm*
PM <sub>2.5</sub>	24-hour Annual	35 mg/m <sup>3</sup> 12 mg/m <sup>3</sup>	25 mg/m3 7.6 mg/m3
PM <sub>10</sub>	24-hour	150 mg/m <sup>3</sup>	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 <sup>3</sup>	n/a





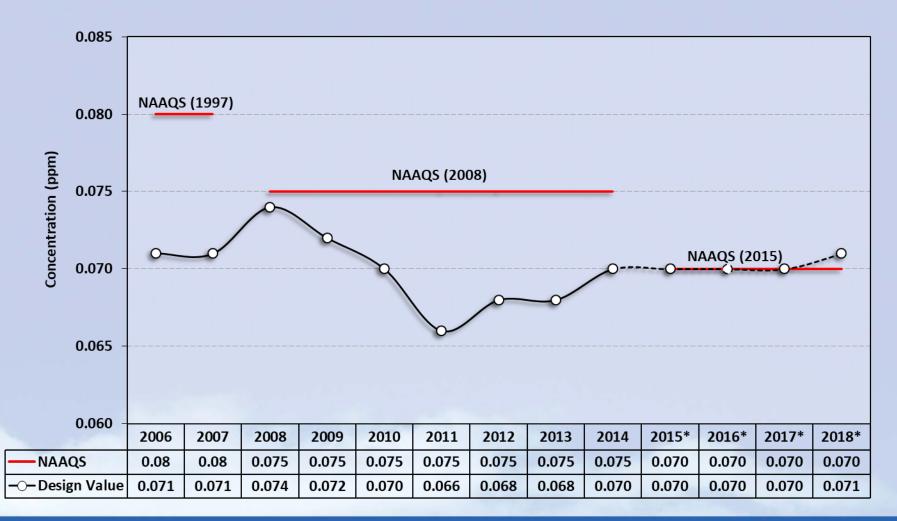
# Ozone (2018)







## Ozone Trend (2006-18)



WASHOF COUN

ENHANCING QUALITY OF LIFE

Keep it Clean.

#### How did we get to 100% of the NAAQS?

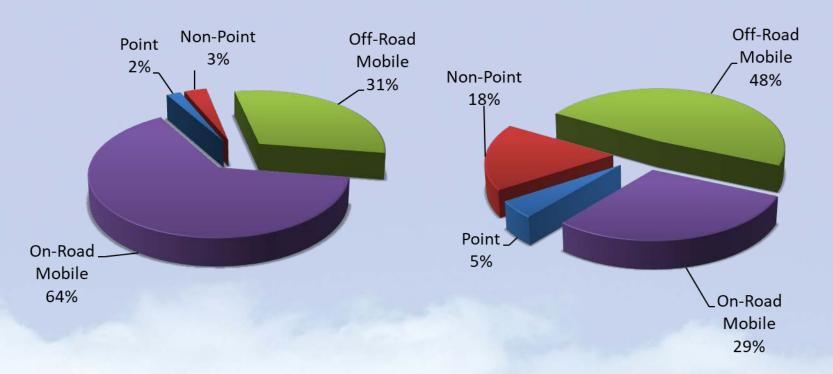
- EPA strengthens Ozone NAAQS (97, 08, 15)
- Economic Recovery and Growth (11 today)
   Population, Employment, VMT, Ozone
- WC Health participates in Ozone Advance (16)
- Resolutions supporting Ozone Advance (16)





#### 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





F Vulte



# 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

RESOLUTION		
RUSOLUTION WHITEAM, to Class Advance/Pagene Is a validately that groupes the same atlances of wales WHITEAM, to Class Advance/Pagene Is a validately that groupes the same atlances of the advances white the same atlance of the	<ul> <li>NOW, TETELETORE, IN IT REMOVEND,</li> <li>Wang, Caung, Jano Y, Ling MD, Sanko L, Sank</li></ul>	
WHEREAS, assumes to improve al quelty lensfly plants heads, for non-incoment, est assumable forentypoint, and WHEREAS, elses as its monofield to a heading community, and WHEREAS, assumed (Name, Assume Program will sequire a solubiostice effort by all of the Plants District partners.)		
	E Re Here	

- 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		
WHEREAR, for Outor Advance Program is a valuatery local approach to came attainment whose	NOW, THEREFORE, DE IT RESOLVED, The Webse Courty Board of Commissioners consults to support the following measures as part of the	
pepers to memory and pendial includes to solid pendial Court for the solution of the bala- base throads balance of A court pender (ACO) (47 for memory and WERERA, an action promotion of the court penders are personalized and an action in the solution of the Acoustic Memory and Acoustic Penders and WERERA, function penders are solved as the solution of the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and the Acoustic Memory and Acoustic Memory and the Acoustic Memory WERERA, function penders and the Acoustic Acoustic Acoustic Memory and Acoustic Acoustic WERERA, function penders and the Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Memory and Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic Acoustic	A (2015) Oane Advance Import: Homes III, Steppen March (Stock and Reginal plane the stoce acoust levels holding Channelly (Hack Importance Proc Channelly (Hack Importance Proc Reginal Thompstellar Profess Marcel S. Discorage annihility (Inst., pdfice, advance Marcheller Washer Chang the Import advance Marcheller and Advance Change Marcheller Marcel S. Stranger annihility (Inst., pdfice, advance Marcheller Marcel Stranger annihility (Inst., pdfice, advance Change Marcheller Marcel Stranger advance Marcheller advance Marceller Marcel Stranger advance Marceller Marcel Marcel Marceller Marcel Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marcel Marceller Marceller Marce	
WEEKAX, shides, the shide, will character and strate with making sequences the Meson or a greatest duk from represent to many a shide as at the Magnet entrymy of strates process melanism, and WEEKAX, more which as at the Magnet Sequence of Action Magnetic Section Magnetic Section Magnetic	Refere per spin series main and index to lead the bound of the source of the series of the series of the source of	
	ADDITIES IN 12 <sup>th</sup> 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

Keep

lean.

- Conservation and efficiency
  - Avoided emissions



# Connections Between Development and Air Quality

Schools

Keep

ean

- 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

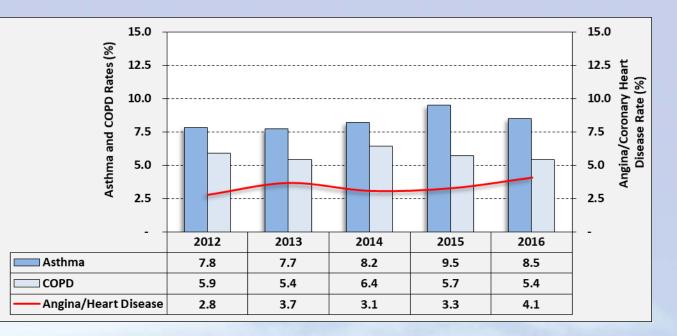
- Acts as a cool corridor/island
  - Reduces energy use and heat vulnerability
- Walking/biking becomes a more attractive option
  - Reduces vehicle trips and congestion
- Improves stormwater management
  - Reduces amount and temperature of runoff
- Lengthens pavement life
  - Reduces maintenance costs





# 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



ENHANCING QUALITY OF LIFE

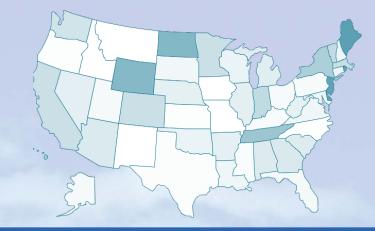


# What Does Long-Term "Non-Attainment" Mean in the Future?

- <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

Keep

ean





#### 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. . .

ANCING QUALITY OF







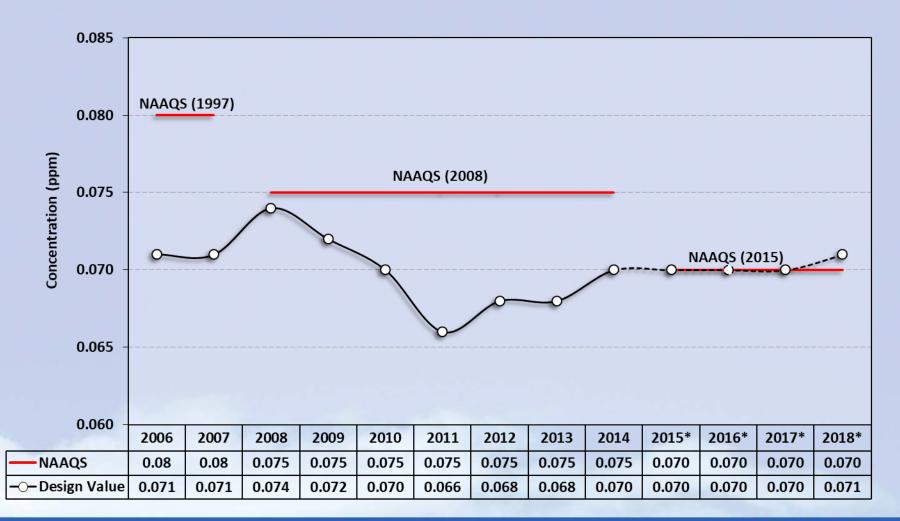
#### #KeepItClean @WashoeCountyAQ

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





## Ozone Trend (2006-18)



WASHOE COUN

ENHANCING QUALITY OF LIFE

