Nevada Electrification Bootcamp

December 9, 2020
Air pollution remains a major danger to the health of children and adults.

- Health risks from Ozone Pollution
- Particle Pollution
- Premature death
- May cause developmental harm
- May cause reproductive harm

Health risks from:

- Asthma attack
- Lung cancer
- Wheezing and coughing
- Shortness of breath
- Cardiovascular harm
- Susceptibility to infections
- Lung tissue redness, swelling
## Populations at Risk due to Unhealthy Air

### Nevada Populations At Risk

<table>
<thead>
<tr>
<th>Population Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Pop</td>
<td>3,034,392</td>
</tr>
<tr>
<td>Under 18</td>
<td>688,997</td>
</tr>
<tr>
<td>65 and Over</td>
<td>476,181</td>
</tr>
<tr>
<td>Pediatric Asthma</td>
<td>47,960</td>
</tr>
<tr>
<td>Adult Asthma</td>
<td>186,824</td>
</tr>
<tr>
<td>COPD</td>
<td>168,506</td>
</tr>
<tr>
<td>Lung Cancer</td>
<td>1,536</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>213,331</td>
</tr>
<tr>
<td>Ever smoked</td>
<td>971,161</td>
</tr>
<tr>
<td>Poverty</td>
<td>391,347</td>
</tr>
<tr>
<td>People of Color</td>
<td>1,558,015</td>
</tr>
</tbody>
</table>

### State of the Air 2020

Americans Living in Counties with 3 Failing Grades: Ozone Days, Particle Days, Annual Particle Levels

- White: 14,329,923
- People of Color: 6,894,881

[Image: healthy air for all communities]
Top Ten
Most polluted cities in the U.S.

<table>
<thead>
<tr>
<th>US Rank</th>
<th>Unhealthy Ozone Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Los Angeles-Long Beach, CA</td>
</tr>
<tr>
<td>2</td>
<td>Visalia, CA</td>
</tr>
<tr>
<td>3</td>
<td>Bakersfield, CA</td>
</tr>
<tr>
<td>4</td>
<td>Fresno-Madera-Hanford, CA</td>
</tr>
<tr>
<td>5</td>
<td>Sacramento-Roseville, CA</td>
</tr>
<tr>
<td>6</td>
<td>San Diego-Ch. Vista-Carlsbad, CA</td>
</tr>
<tr>
<td>7</td>
<td>Phoenix-Mesa, AZ</td>
</tr>
<tr>
<td>8</td>
<td>San Jose-San Francisco-Oak., CA</td>
</tr>
<tr>
<td>9</td>
<td>Las Vegas-Henderson, NV</td>
</tr>
<tr>
<td>10</td>
<td>Denver-Aurora, CO</td>
</tr>
</tbody>
</table>

Compared with last year, many locations saw increases in ozone and/or particle pollution:
All Nevada counties w/data saw increases in unhealthy ozone days
All Nevada counties w/data saw more unhealthy particle days
Mixed results on annual particle levels; all counties receive a passing grade

Too many Nevadans experience unhealthy air days during the year
2.9 million residents live in counties with failing grades for ozone and/or particle days

Ozone and Particle Pollution impacts are seen in almost all counties in the State
No “A” grades in the state

Climate change is making it harder to protect human health.
(2016-2018) 3 of 5 hottest years ever recorded impacting ozone formation
(2016-2018) Historic Western wildfires driving particle emissions increases
Reno-Carson City-Fernley, NV
(Carson City, Douglas, Lyon, Storey, Washoe Counties)

Success.
Few unhealthy particle days overall over the history of *State of the Air*

Challenge.
Extreme heat and wildfires impacting progress *State of the Air* 2020
100 percent Zero Emission Vehicle Sales by Category

National scenario focused on deployment of zero-emission technologies across the transportation sector, with sales in ten classes of vehicles ramping up to 100 percent.

**2025-29**
- School Buses
- Transit Buses
- Airport Shuttles

**2040**
- Passenger Cars
- Delivery Vans
- Refuse Trucks
- Short Haul Trucks

**2045**
- Long Haul Trucks
  - Single Unit
  - Combination
  - Port Trucks
Health Benefits of Avoided Emissions in 2050

6,300 Premature Deaths Avoided

93,300 Asthma Attacks Avoided

416,000 Lost Work Days Avoided

The benefits are clear.
State-Level Results due to emission reductions in 2050

Annual Nevada Health Benefits
$745 Million

Annual Las Vegas Health Benefits
$615 Million
State Policy Recommendations

*Use Clean Air Act authority* to adopt the California zero-emission standards for light, medium- & heavy-duty vehicles.

*Invest in publicly available charging infrastructure* along major highways and roads to ensure both personal and commercial charging opportunities exist.

*Pursue fully electric public fleets* and support zero-emission infrastructure including in all public buildings and garages.

*Support accelerated fleet turnover through incentive programs* targeting older vehicles, consumer purchase decisions via point-of-purchase rebates and non-financial incentives.
Resources

American Lung Association
State Of The Air 2020

- www.lung.org/sota
- State-specific information
- Rankings and grades
- Health effects information

The Road to Clean Air
Benefits of a Nationwide Transition to Electric Vehicles

- www.lung.org/ev
- Regional Fact Sheets
- Full Report
- Technical Report

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