Air quality in the San Joaquin Valley
Valley Air District

- Regional agency responsible for air quality in 8 counties
  - San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare & the valley air basin portion of Kern
- 15 member Governing Board
- Regulates stationary sources
- Provides grant funding
- Responsible for meeting EPA & CARB mandates to improve public health
The District’s Mission

The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality management strategies.
Valley Challenges Unmatched

- Surrounding mountains and meteorology create ideal conditions for air pollution formation and retention
- Chronic poverty and unemployment rates
- High rate of population growth
  I-5 and Hwy 99 (major transportation arteries) run all the way through Valley
Ozone

- Main component of summertime ‘smog’
- Odorless, colorless gas resulting from chemicals cooking in sunlight and heat
- Made up of nitrogen oxides (NOx) and volatile organic compounds (VOCs)
- Produced by internal-combustion engines (mobile sources), industrial processes, agriculture, consumer products (lawnmowers, paints and solvents, etc)
- Vehicle use accounts for up to 80 percent of smog problem
Particulate Matter

PM10
- Fall problem, mostly dust, larger particles
- Also includes PM2.5

PM2.5
- Winter problem, emissions from burning, more dangerous than larger particles
- In winter, wood burning can produce up to 12 tons of PM per day throughout the Valley.
- Triggers heart attacks
- Aggravates asthma, bronchitis
- Susceptibility to respiratory infections
- Strong correlation between PM levels, hospital admissions and deaths
Sources of Air Pollution

ANNUAL NOx EMISSIONS

- Heavy Duty Diesel Trucks: 39%
- Fuel Combustion at Stationary Sources: 11%
- Trains: 5%
- Farm Equipment: 18%
- Off-Road Mobile: 10%
- Other On-Road Mobile: 11%
- Other Sources: 6%
ANNUAL PM2.5 EMISSIONS

- Road Dust: 15%
- Fugitive Windblown Dust: 13%
- Heavy Duty Diesel Trucks: 12%
- Other Mobile Sources: 2%
- Other Sources: 5%
- Fireplaces & Wood stoves: 6%
- Cooking Including Charbroiling: 7%
- Agricultural Waste Burning & Forest Management: 18%
- Farming Operations: 22%
Pollution Transport

- Bay Area, Sacramento, Los Angeles, Asia
- 25% to 5% of pollution in the Valley
- Increasingly important as goals become tighter

Example of summer ozone transport
Progress to Date

• 80% reduction in emissions from Valley businesses
• Reached attainment of the PM10 Standard in 2005
• First and only region in nation to go from “Extreme” classification to attaining the 1-hour Ozone Standard
• Historic progress possible through investment and sacrifice by businesses and residents
• 2018 PM2.5 Plan demonstrates attainment by 2025 deadline
COUNTY DAYS OVER 24-HOUR PM2.5 STANDARDS (NOV-FEB)

2006 Standard (35 µg/m³)

1997 Standard (65 µg/m³)
COUNTY DAYS OVER FEDERAL 1-HOUR OZONE STANDARD

COUNTY DAYS

'02  '04  '06  '08  '10  '12  '14  '16  '18
COUNTY DAYS OVER FEDERAL 8-HOUR OZONE STANDARD

- 2015 Standard (70ppb)
- 2008 Standard (75ppb)
- 1997 Standard (84ppb)
Receive current air quality information

• **RAAN** – Real-Time Air Advisory Network
  - Online or smartphone access to real time, hourly air-quality information in your area, 24 hours a day
  - Access to actual concentrations of ozone and PM2.5
  - Outdoor activity recommendations based on five different levels

• Access RAAN
  - [www.myraan.com](http://www.myraan.com)
  - “Valley Air” app
<table>
<thead>
<tr>
<th>ROAR Level</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL 1</td>
<td>Outdoor activity OK for all</td>
</tr>
<tr>
<td>LEVEL 2</td>
<td>Sensitive individuals should consider reducing prolonged and/or vigorous outdoor activities.</td>
</tr>
<tr>
<td>LEVEL 3</td>
<td>Sensitive individuals should exercise indoors or avoid vigorous activities.</td>
</tr>
<tr>
<td>LEVEL 4</td>
<td>Sensitive individuals should exercise indoors. Everyone should avoid prolonged or vigorous outdoor activities.</td>
</tr>
<tr>
<td>LEVEL 5</td>
<td>Everyone should avoid outdoor activity.</td>
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</tbody>
</table>

Valley Air App
Grants and Incentives

- Business
- Public agencies
- Residents
- Technology

Valley Air District has issued more than $2 billion in grant funding resulting in 120,000 tons of emission reductions.
What you can do

- Reduce vehicle emissions by carpooling, riding the bus, walking or riding your bike
- Avoid vehicle idling
- Seek ways to reduce energy at home and work
- Check Before You Burn, or refrain from burning

- Use air-friendly lawn equipment
- Consider switching to an electric vehicle
- Keep gasoline vehicles well-tuned
- Take advantage of the many Air District grant programs: valleyair.org/grants/
Need more information?

Contact Outreach and Communications

public.education@valleyair.org

Fresno office (559) 230-6000
Modesto office (209) 557-6400
Bakersfield office (661) 392-5500

For information on District rules and programs visit:

www.valleyair.org
www.healthyairliving.com

Follow us on social media

Use the Valley Air App for the latest air quality info.