

Update on Arvin / Lamont Community Air Monitoring

Arvin / Lamont CSC Meeting

February 28, 2024

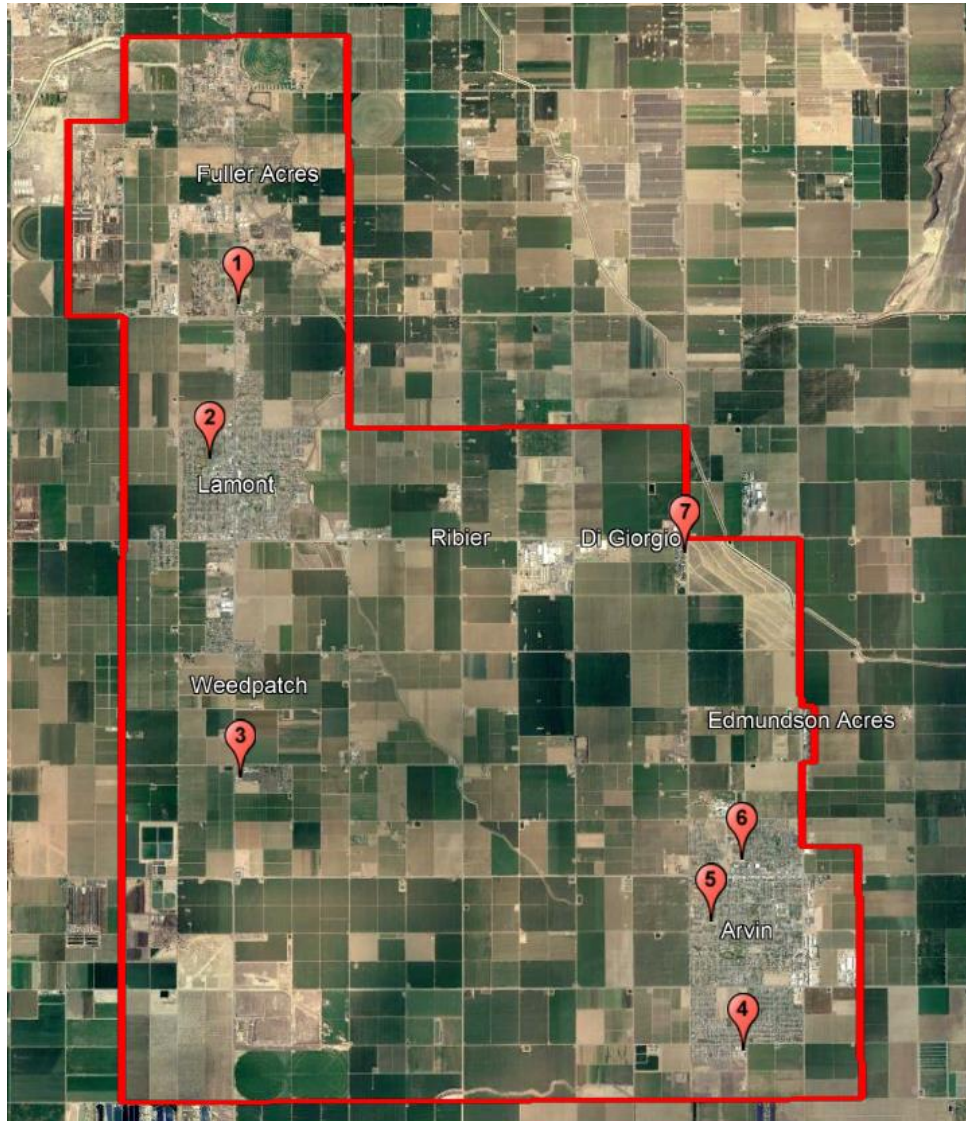
Air Monitoring Update

Status of Community Air Monitoring Plan Implementation

Review Air Monitoring Data Collected

Questions, Comments, And Recommendations

CAMP Implementation Status



#	Location	Monitoring	Done
1	Mountain View Middle School	PM2.5, BTEX, H2S, SO2	Yes
2	Alicante Elementary	PM2.5, BTEX, H2S, SO2, NOx, Black Carbon	In progress
3	Sunset Middle School	PM2.5	Yes
4	El Camino Real Elementary School	PM2.5	Yes
5	Bear Mountain Elementary School	PM2.5	Yes
6	Arvin Community Services District	PM2.5, H2S, SO2, NOx, Ozone, CO, Black Carbon, Toxics	Yes
7	Di Giorgio & Comanche	PM2.5	In progress

Community Air Monitoring Platforms



Community Air Monitoring Platforms (cont'd)



Ongoing Community Air Monitoring

- District continuing to conduct localized air monitoring in the Arvin/Lamont AB 617 community
- Looking for an acceptable location to deploy PM2.5 monitor near Di Giorgio and Comanche
- Working with Lamont School District to deploy air monitor at Alicante Elementary School
 - Contracts have been submitted and awaiting electrical infrastructure to be installed
- Air monitoring van available to monitor pollutants in areas of interest
- Lab analysis of air samples for PM2.5 and VOC speciation being conducted at Arvin CSD trailer site.

Air Monitoring Update Summary

For 2023, PM2.5 levels at all sites below annual PM2.5 standard

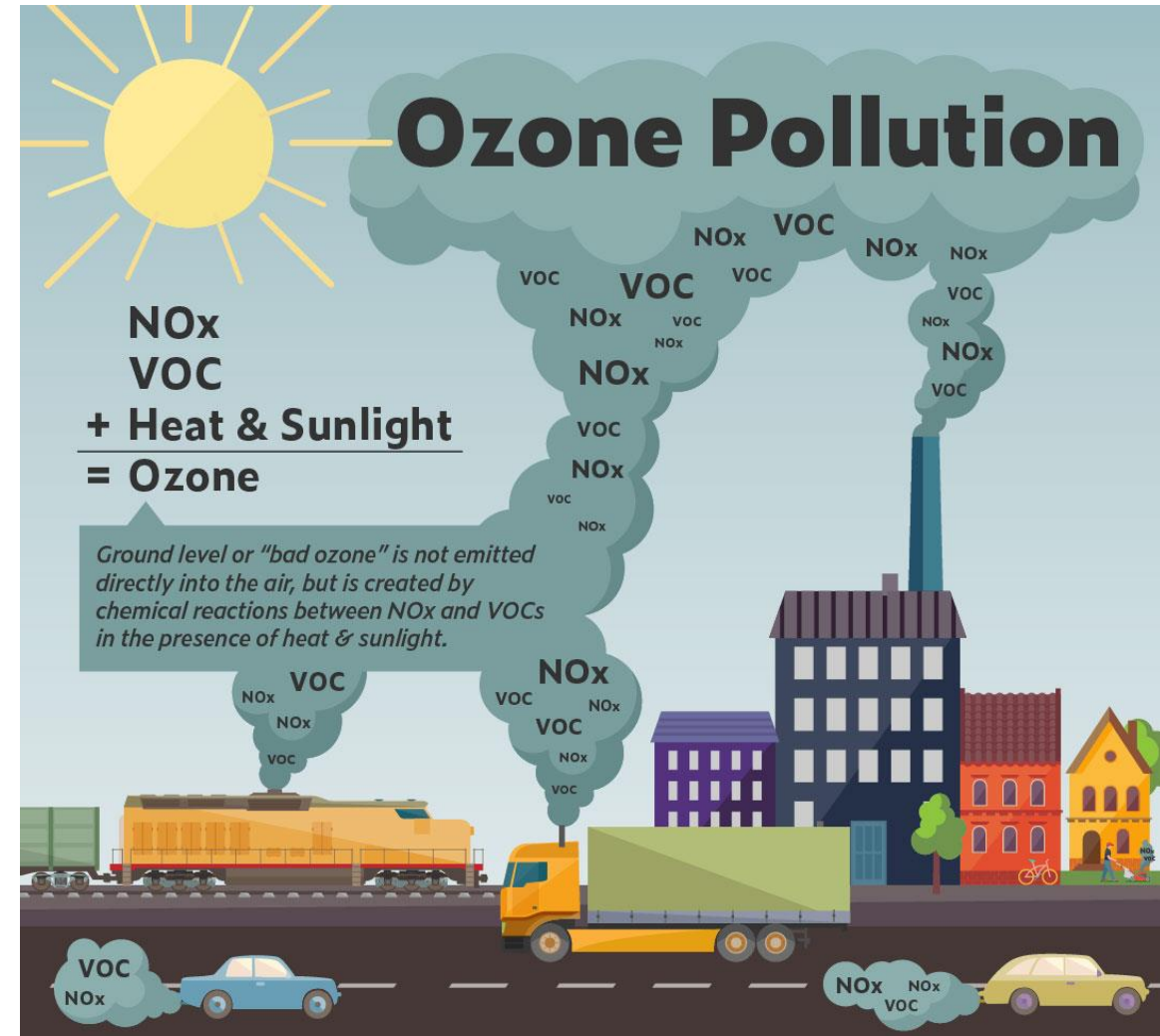
In 4th quarter, PM2.5 levels typically rise throughout valley

In 4th quarter of 2023, PM2.5 levels lower than 2022 due to less wildfire impacts, less stagnant air, and continued valleywide emission reduction efforts

Air monitoring data available online at your community portal

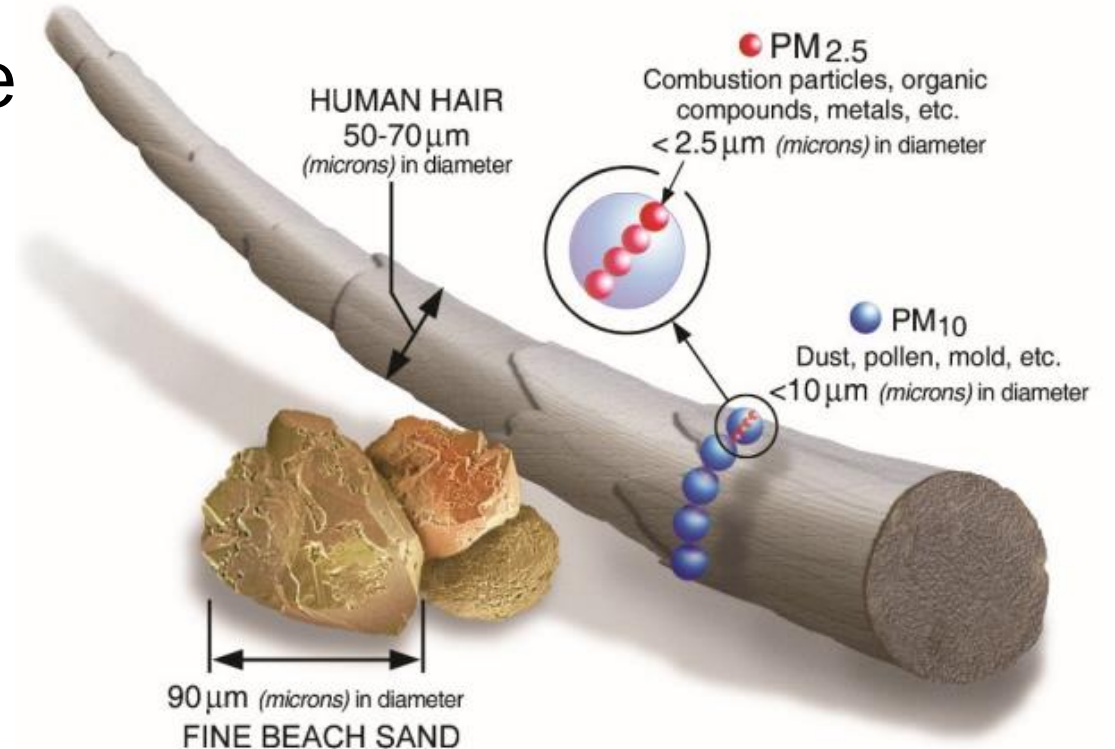
Summer Air Pollution: Ozone

- Ozone primary pollutant during summer
- Formed when sunlight and heat mix with nitrogen oxides (NOx) and volatile organic compounds (VOCs)
- NOx and VOCs created by cars, trucks, trains, and other petroleum based transportation as well as factories

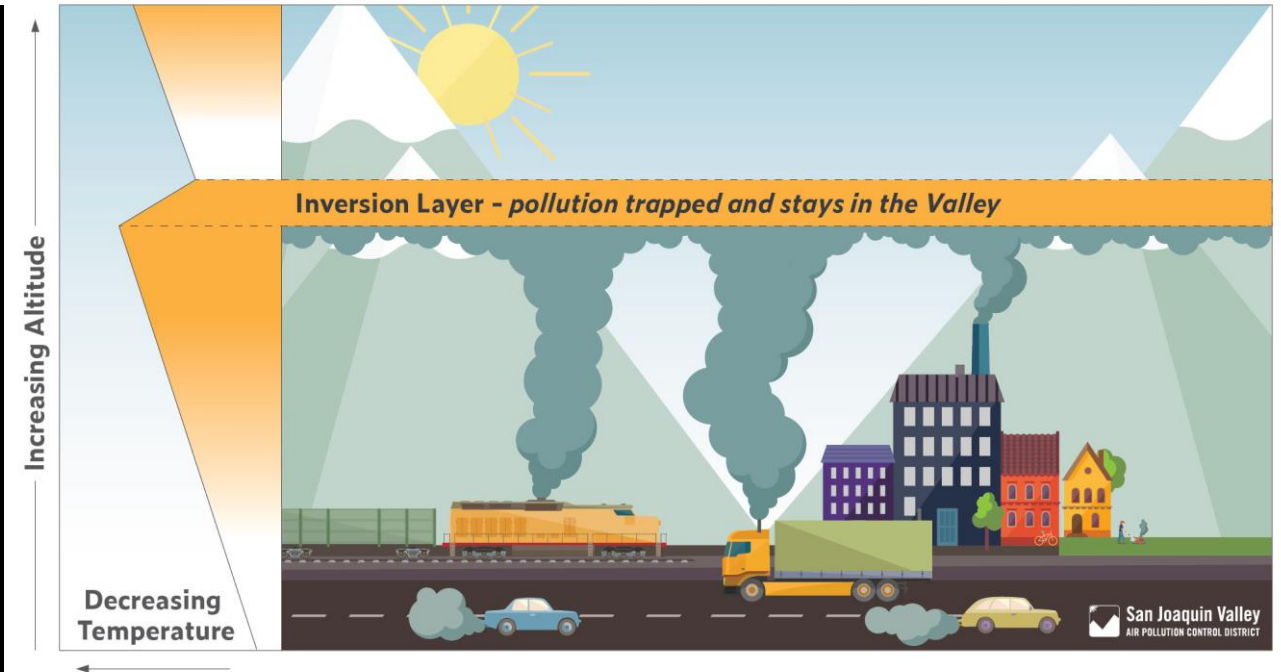
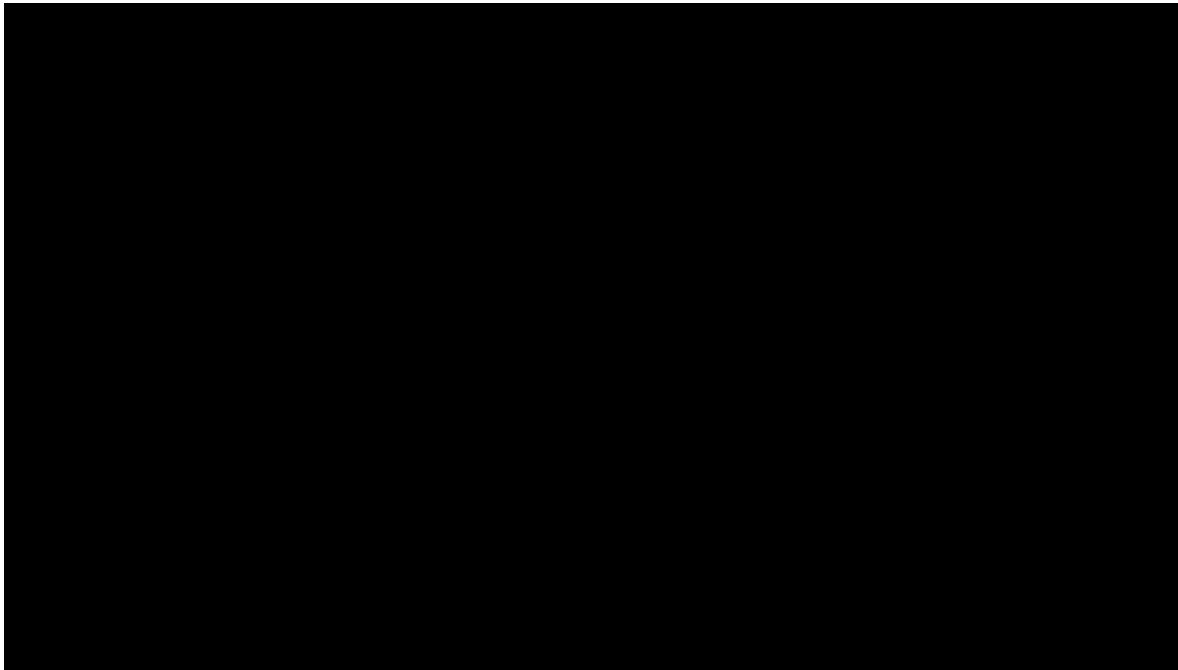


Winter Air Pollution: PM 2.5

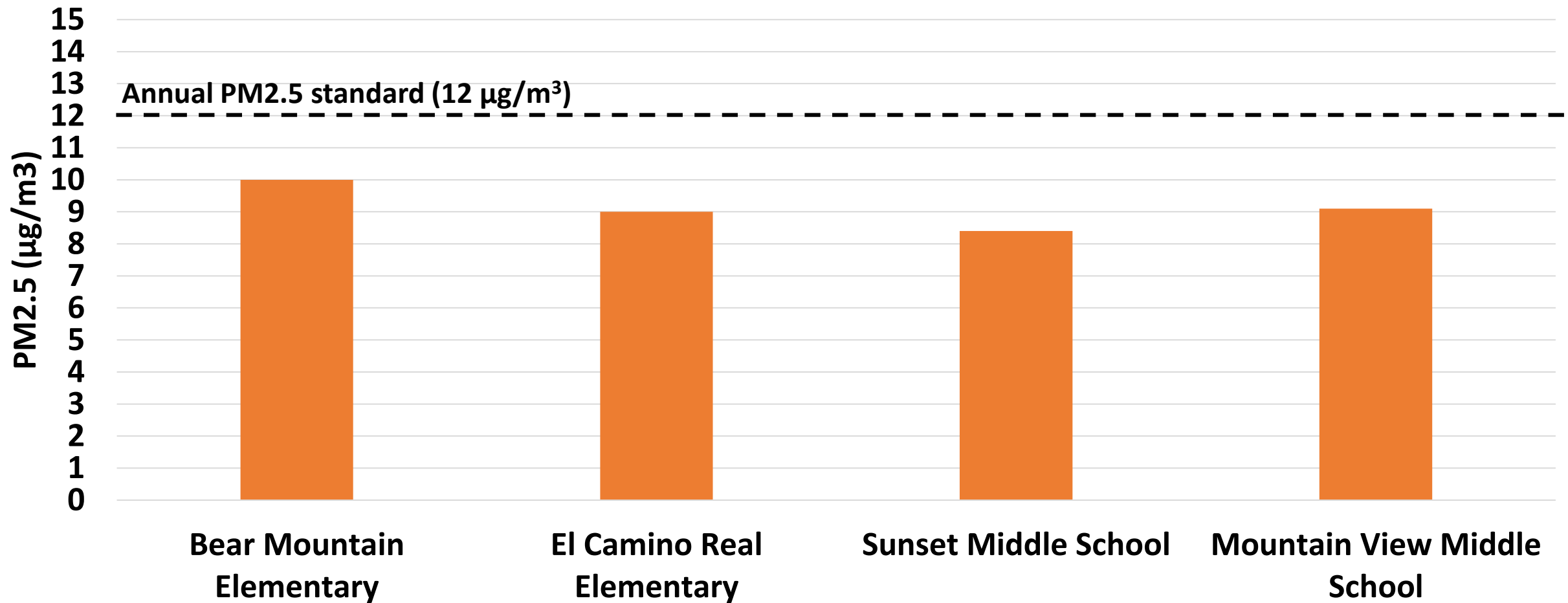
- PM2.5 is primary pollutant during winter
- Can be emitted directly, like smoke from fireplaces
- Can be formed in the atmosphere when certain compounds are present, like NO_x from trucks
- PM levels worse when inversion layer, or lid, sits over Valley



What is an Inversion Layer?

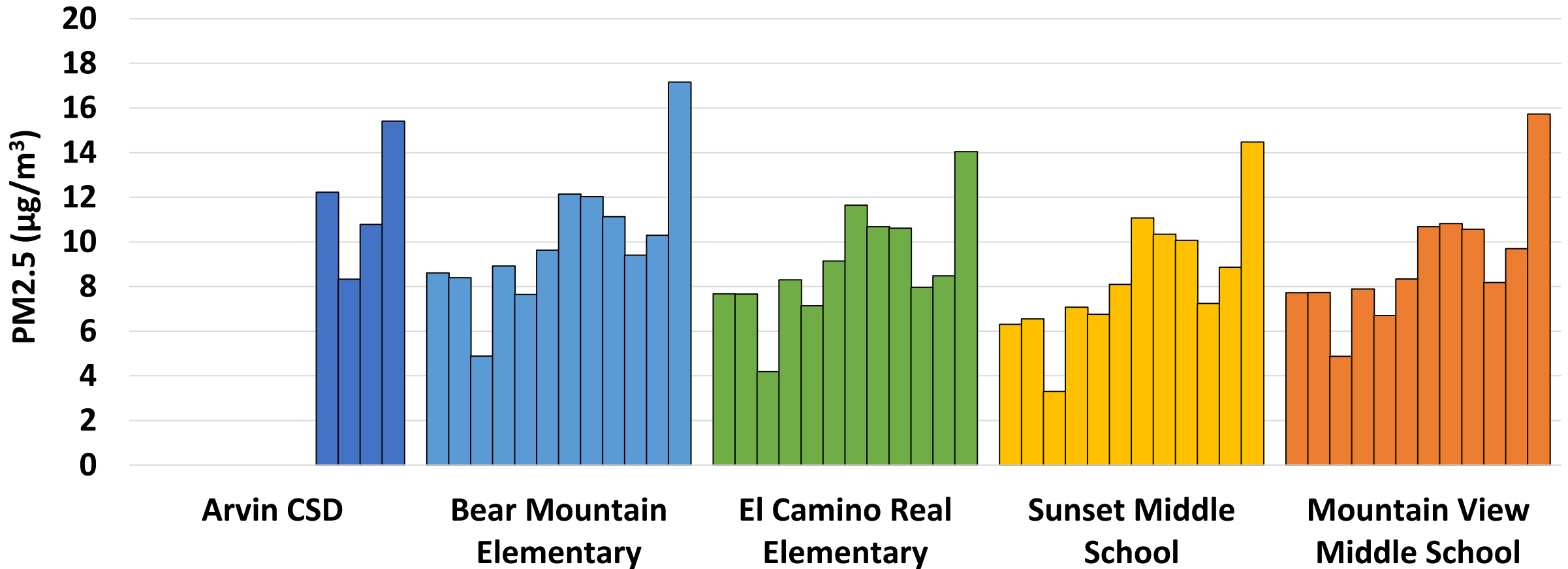


2023 Annual PM2.5 Average



Sites deployed for the entirety of 2023 are all below annual PM2.5 standard

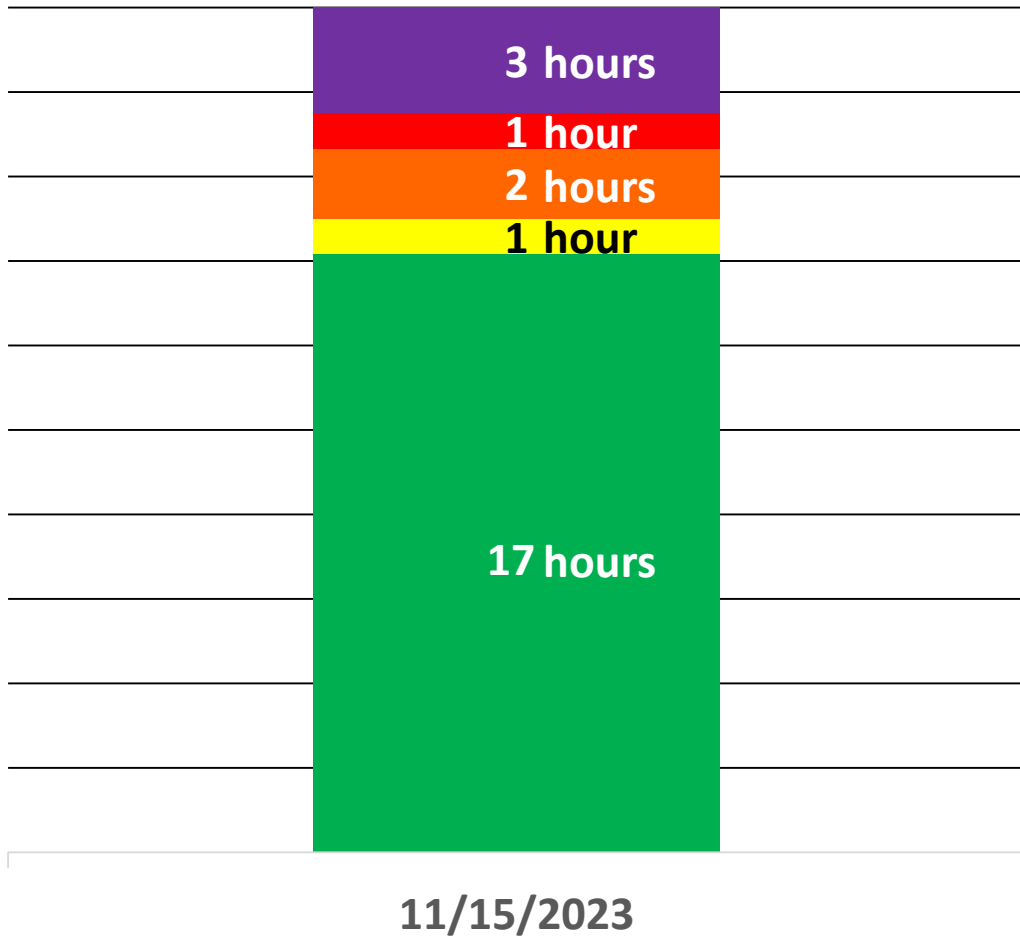
2023 PM2.5 Monthly Averages



**each bar in the chart represents the monthly average PM2.5, from January to December*

PM2.5 levels impacted by summer wildfires and winter stagnant conditions

Hourly PM2.5 Air Quality

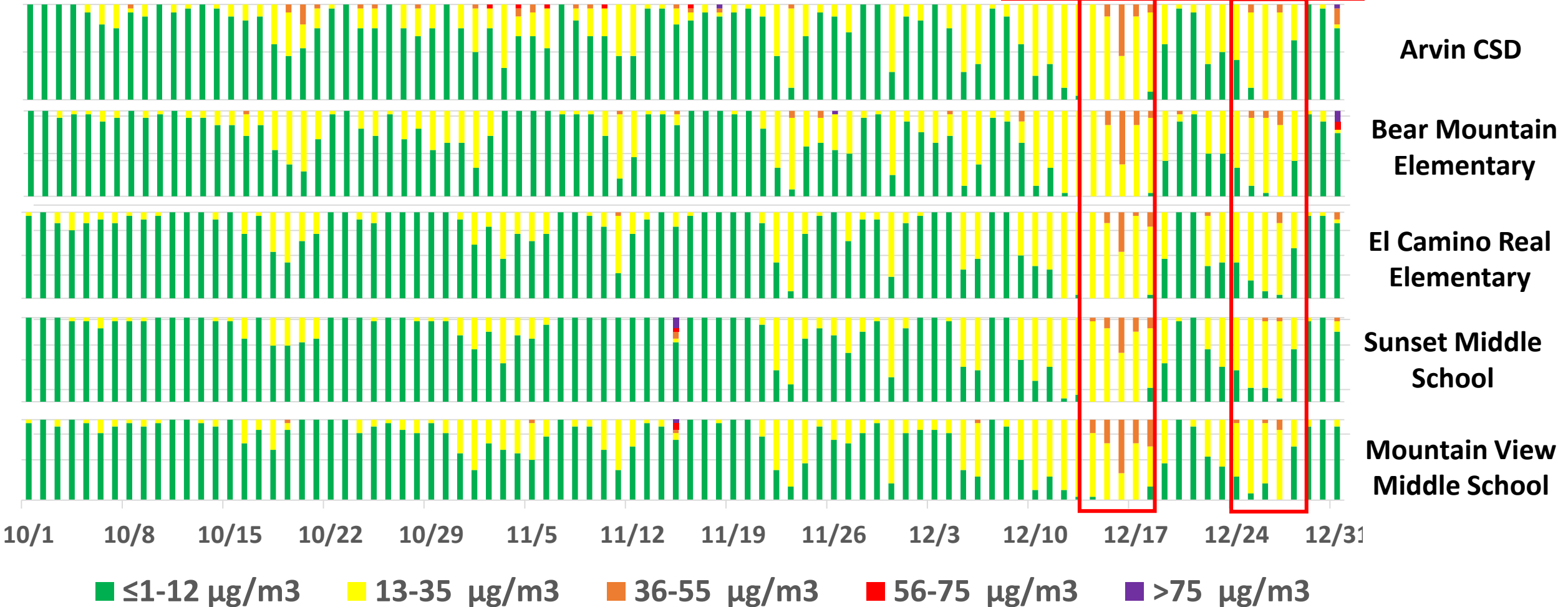


ROAR Level	Guidelines	PM2.5 Range (µg/m ³)	ROAR Level
LEVEL 1	Outdoor activity OK for all	1-12	ROAR Level 1
LEVEL 2	Sensitive individuals should consider reducing prolonged and/or vigorous outdoor activities.	13-35	ROAR Level 2
LEVEL 3	Sensitive individuals should exercise indoors or avoid vigorous activities.	36-55	ROAR Level 3
LEVEL 4	Sensitive individuals should exercise indoors. Everyone should avoid prolonged or vigorous outdoor activities.	56-75	ROAR Level 4
LEVEL 5	Everyone should avoid outdoor activity.	>75	ROAR Level 5

PM2.5 levels can vary throughout day.

Hourly PM2.5 Air Quality (4th Quarter)

Days of Stagnant Air



Majority of the 4th quarter had good air quality (Green Level 1).
December's colder weather resulted in higher readings due to stagnant air.

4th Quarter Average PM2.5 Comparison

	<u>2022</u> Quarter 4 Average PM2.5 (µg/m ³)	<u>2023</u> Quarter 4 Average PM2.5 (µg/m ³)
Arvin/Lamont Community Monitors		
Mountain View Elementary	14.4	11.4
Sunset Middle School	Not Fully Deployed	10.3
El Camino Real Elementary	14.0	10.3
Bear Mountain Elementary	14.8	12.4
Arvin CSD	Not Fully Deployed	11.6
Kings & Kern Nearby Regulatory Monitors		
Bakersfield-California	17.4	16.3
Corcoran	19.6	13.1

In 4th quarter of 2023, PM2.5 levels lower than 2022 due to less wildfire impacts, less stagnant air, and continued valleywide emission reduction efforts

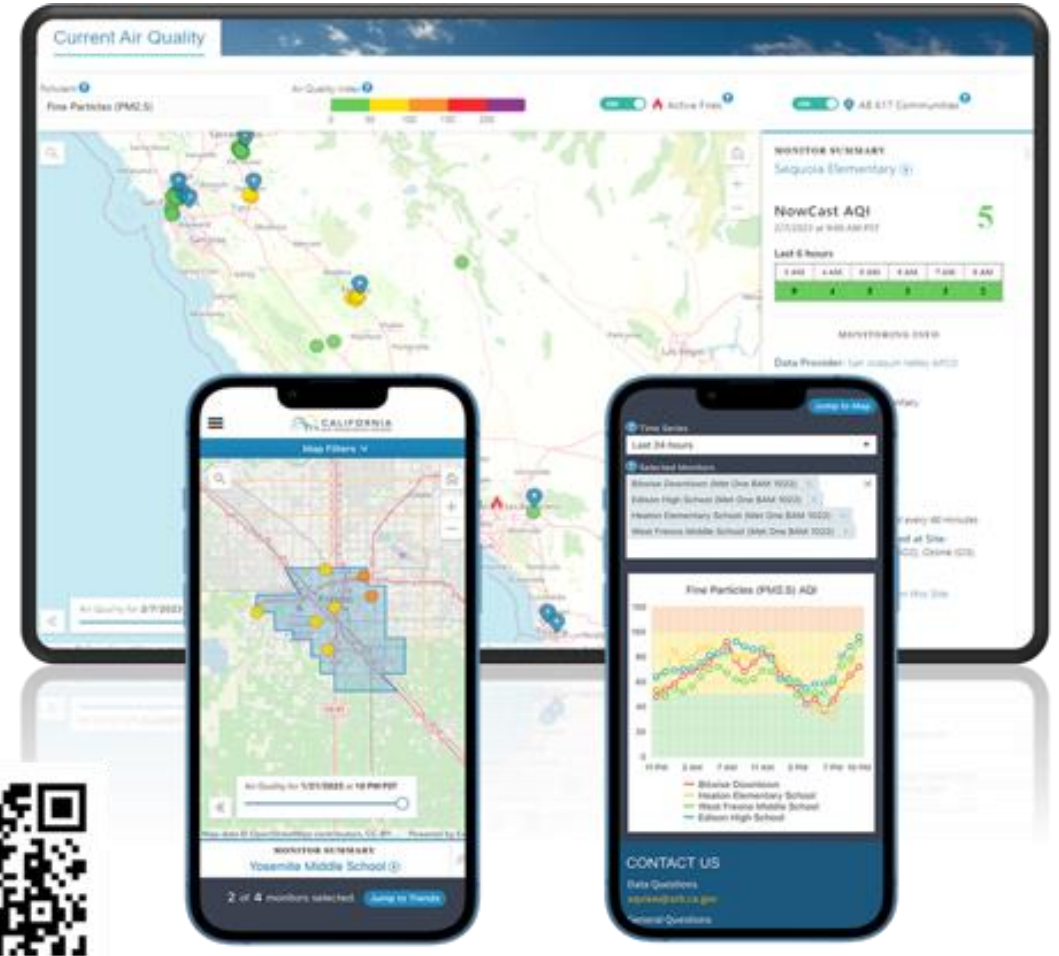
Community Air Quality Data

- District AB 617 webpage at: <http://community.valleyair.org/community-air-monitoring>
 - Real-time community air monitoring data
 - Quarterly reports
 - Weekly air monitoring updates
- CARB's statewide air quality data portal (AQview) displays and provides community air monitoring data from AB 617 communities
 - AQview website located at: <https://aqview.arb.ca.gov/>
 - Air quality data from Valley AB 617 communities available at this website
 - Development ongoing, new features to be added

AQview Map is Now Live!

CARB AQview Goals:

- Provide latest up-to-date information on AB 617 communities and community air monitoring efforts
- Provide single platform to view and access air quality data from different networks
- Provide simple, intuitive, and mobile-friendly interfaces for viewing real-time exposure
- Can be accessed at <https://aqview.arb.ca.gov/>



Comments/Questions?