

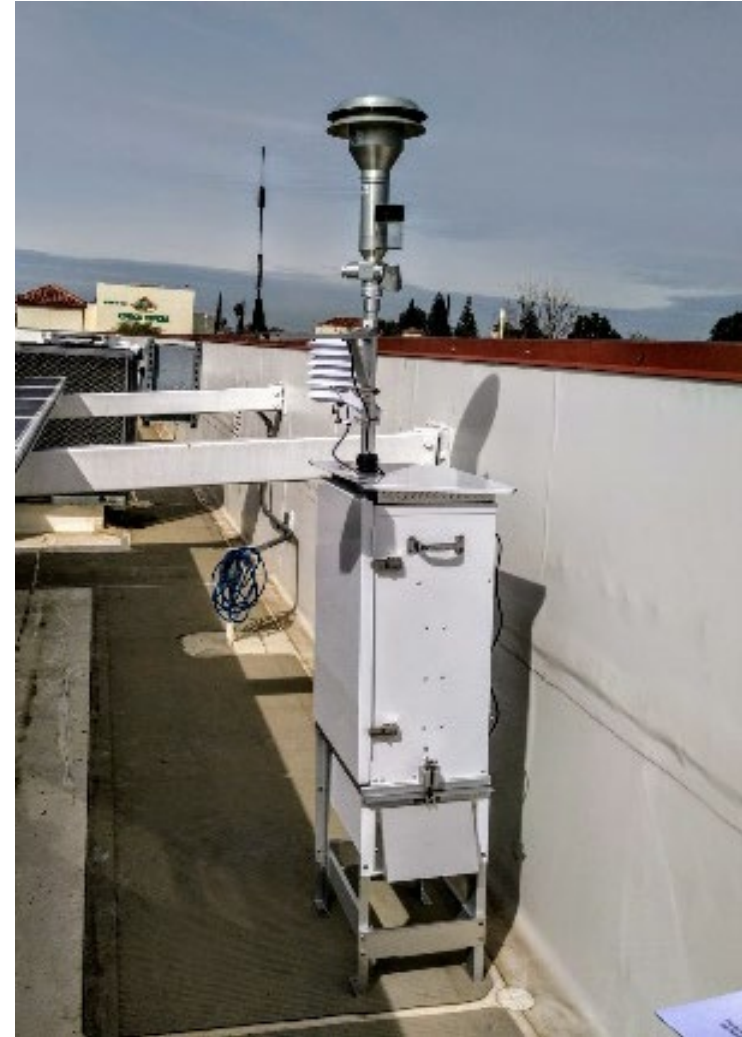
# Arvin/Lamont Community Air Monitoring Plan Development & Progress

February 16, 2022

# PM2.5 Monitor

## How much PM2.5 is in the air?

- Provides real-time hourly PM2.5 concentration measurements
  - Measurements displayed on website each hour for community to see



# PM2.5 Laboratory Analysis

## What type of source emitted or created PM2.5?

- Collected samples sent to laboratory for analysis to determine contribution of various species to overall measured PM2.5 concentration
- Speciation results can help determine which sources may be contributing to overall PM2.5 pollution
  - Measurements displayed each month after analysis is complete



# VOC Laboratory Analysis

## What type of source emitted VOCs?

- Collected samples sent to third-party laboratory for analysis to determine various specific VOC detected in atmosphere
- Capable of isolating 86 different VOCs from each air sample
  - Measurements displayed each month after analysis is complete



# Air Monitoring Trailer

- Usually combined with VOC and PM Sampling for lab analysis
- Provides real-time measurement of the following:



PM2.5



Black Carbon



BTEX



SO2



H2S



NO2



Ozone



# Compact Multi-Pollutant Air Monitoring System

- Combined placed on trailer
- Provides real-time measurement of the following:



PM2.5



Black Carbon



BTEX and Total VOC



SO2



H2S



NO2



Ozone



# Air Monitoring Van

Provides real-time measurement of the following:



PM2.5



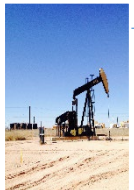
Black Carbon



BTEX



SO2



H2S



NO2



Ozone



CO



# Summary of Monitoring Options

	Real Time Reporting	High-Quality Data	PM2.5	NOx	VOC	Diesel PM	Other Toxics	Estimated Cost
PM 2.5 Monitor	★	★	★					\$25,000
Compact System	★	★	★	★	Total VOCs	★	BTEX	\$220,000
Large Trailer	★	★	★	★	VOC Species	★	BTEX & Additional Toxics	\$400,000
Air Monitoring Van*		★	★	★		★		\$500,000
Low Cost Air Sensors	★		★					\$250
VOC & PM2.5 Speciation		★	PM 2.5 Species		VOC Species			\$50,000 + \$65,000/yr



# Section A

## Proposed Location

- Mountain View Middle School

## Top Community Concerns

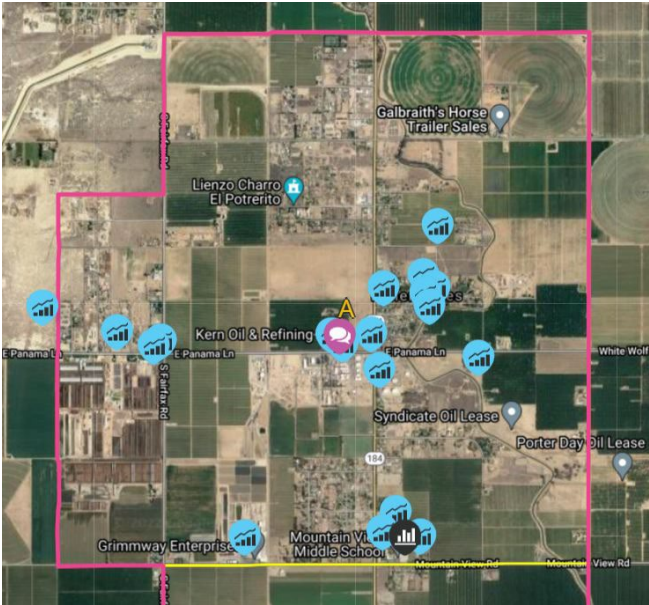
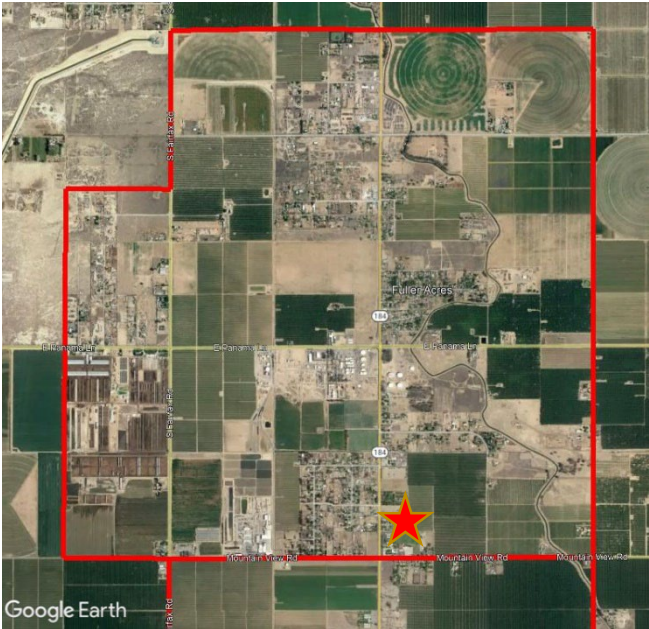
- Refinery emissions
- Heavy duty diesel truck traffic
- Dust
- Stationary source emissions (industrial, dairies, etc.)

## Existing & Proposed Monitoring Equipment

- Existing Compact Multi-Pollutant Monitor System (real-time SO2, H2S, & BTEX)
- Add Real-time PM2.5

## Site Status

- Upon CSC support, District can deploy PM2.5 monitor once delivered



# Section B

## Proposed Location

- Alicante Elementary or Bear Mountain Recreation

## Top Community Concerns

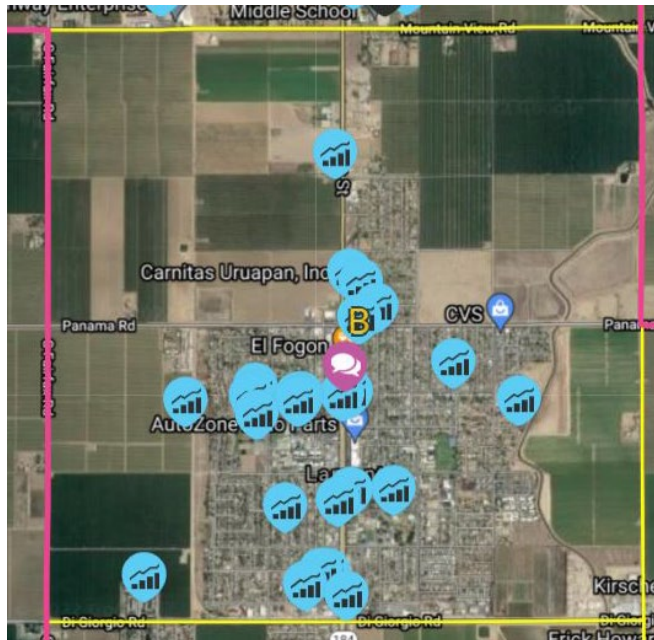
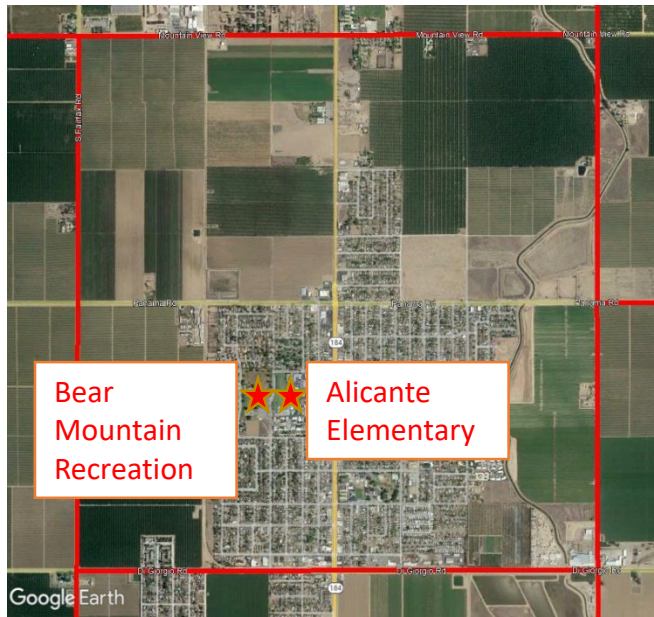
- Heavy duty diesel truck traffic
- Dust
- Pesticides
- Odors

## Proposed Monitoring Equipment

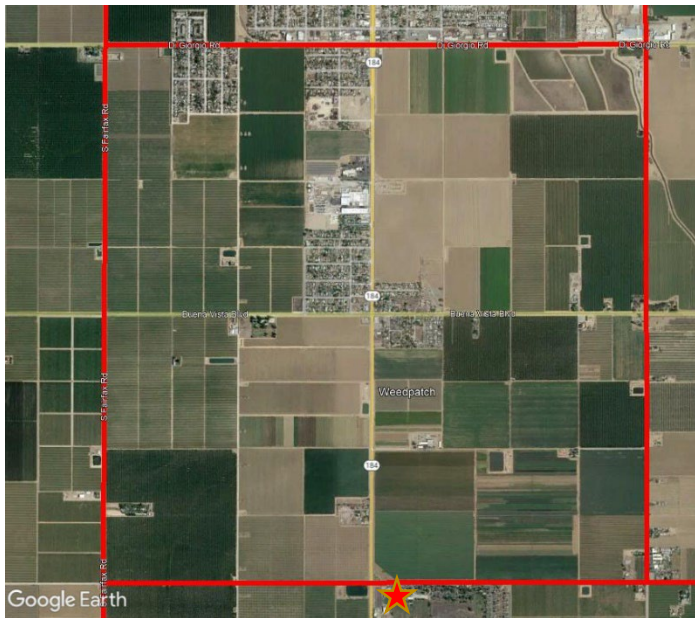
- Compact Multi-Pollutant Monitor System (real-time PM2.5, NO2, Ozone, SO2, H2S, & BTEX)
- Toxic VOC Speciation

## Site Status

- Performed a site walk with Lamont Elementary School District on monitor placement. Awaiting further updates for the site.



# Section C



## Proposed Location

- Sunset Middle School
- Potential additional location for real-time PM2.5 monitor

## Top Community Concerns

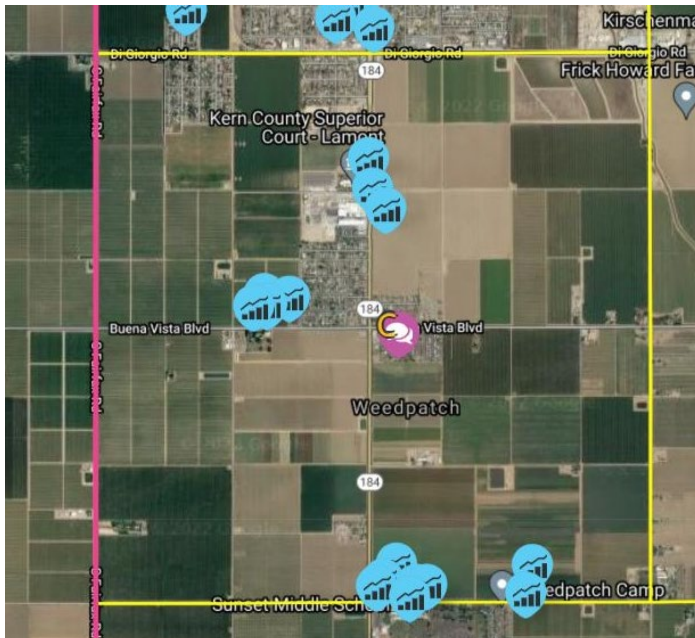
- Heavy duty diesel truck traffic
- Dust
- Pesticides

## Proposed Monitoring Equipment

- PM 2.5 Monitor (real-time PM2.5)

## Site Status

- Discussing with Vineland School District Management and Superintendent



# Section D

## Proposed Location

- Various Locations in the area

## Top Community Concerns

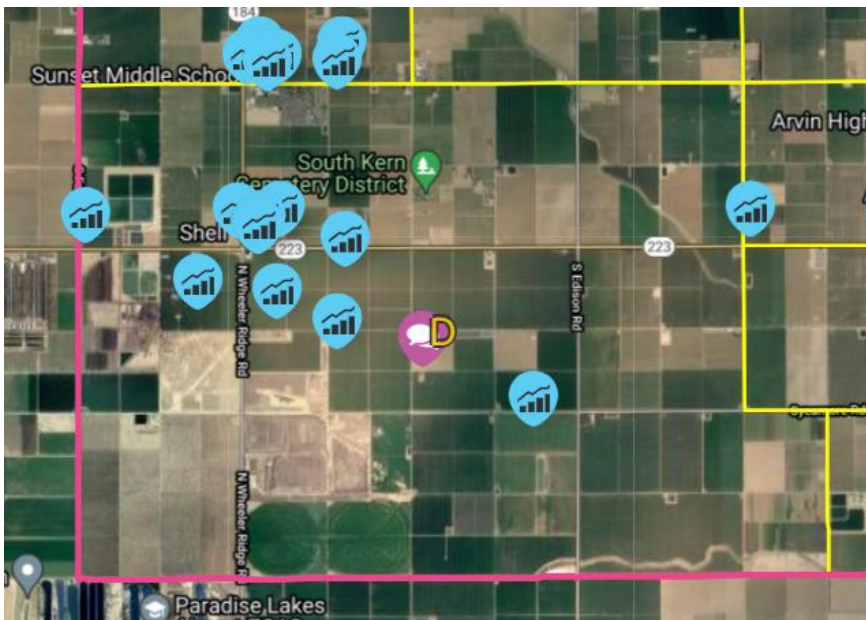
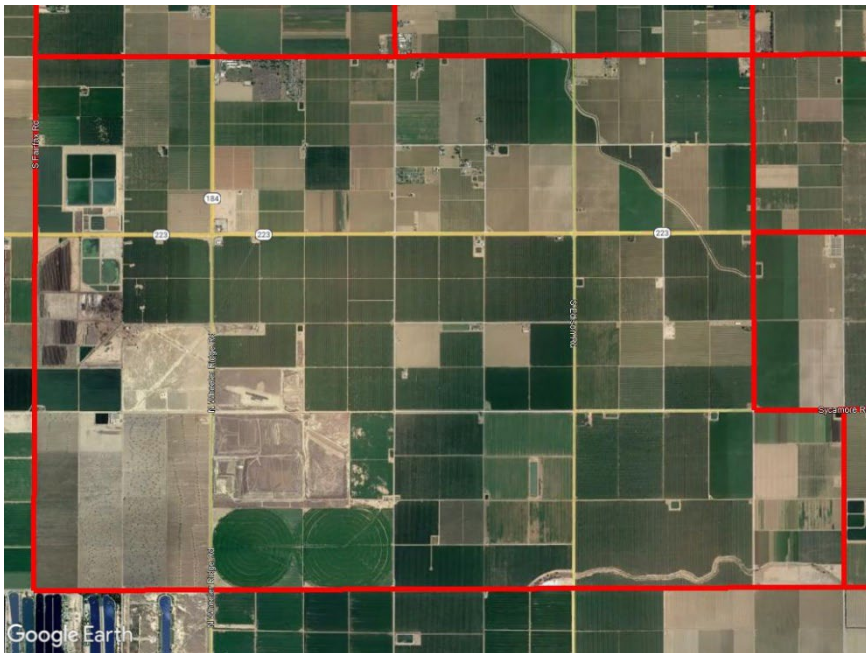
- Dust
- Pesticides
- Odors
- Irrigation ponds
- Oil and gas operations

## Proposed Monitoring Equipment

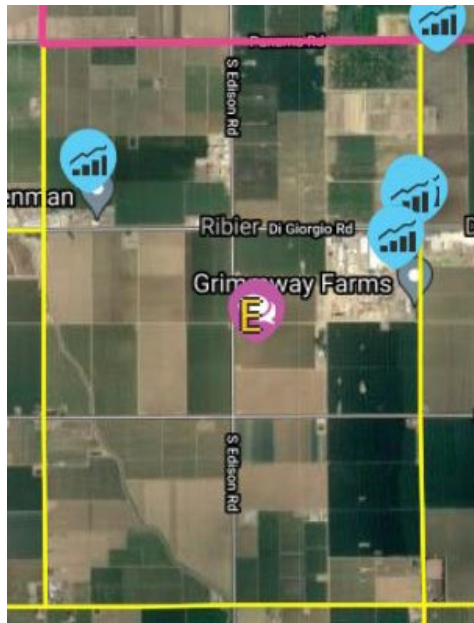
- Mobile Monitoring Van (real-time PM2.5, Ozone, NO2, CO, SO2, H2S, & BTEX)

## Site Status

- Van can start deployment once sites identified



# Section E



## Proposed Location

- Various Locations in the area

## Top Community Concerns

- Dust
- Pesticides
- Odors (work with community to identify source)

## Proposed Monitoring Equipment

- Mobile Monitoring Van (real-time PM2.5, Ozone, NO2, CO, SO2, H2S, & BTEX)

## Site Status

- Van can start deployment once sites identified

# Section F

## Proposed Location

- Near Di Giorgio Rd. & Comanche Dr.

## Top Community Concerns

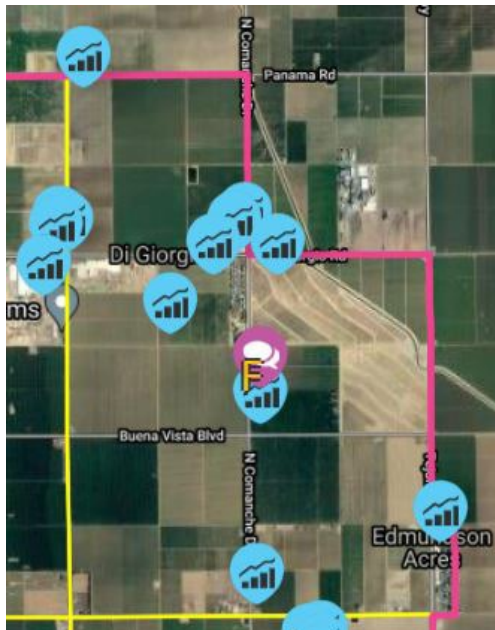
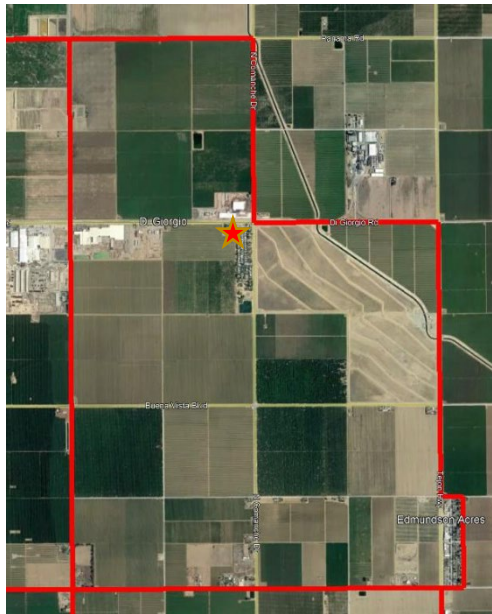
- PM2.5
- Heavy duty diesel truck traffic
- Open burning

## Proposed Monitoring Equipment

- PM 2.5 Monitor (real-time PM2.5)

## Site Status

- Looking for a site that will suite the monitor for this site.



# Section G



## Proposed Location

- Arvin High School **OR** Nearby City of Arvin site

## Top Community Concerns

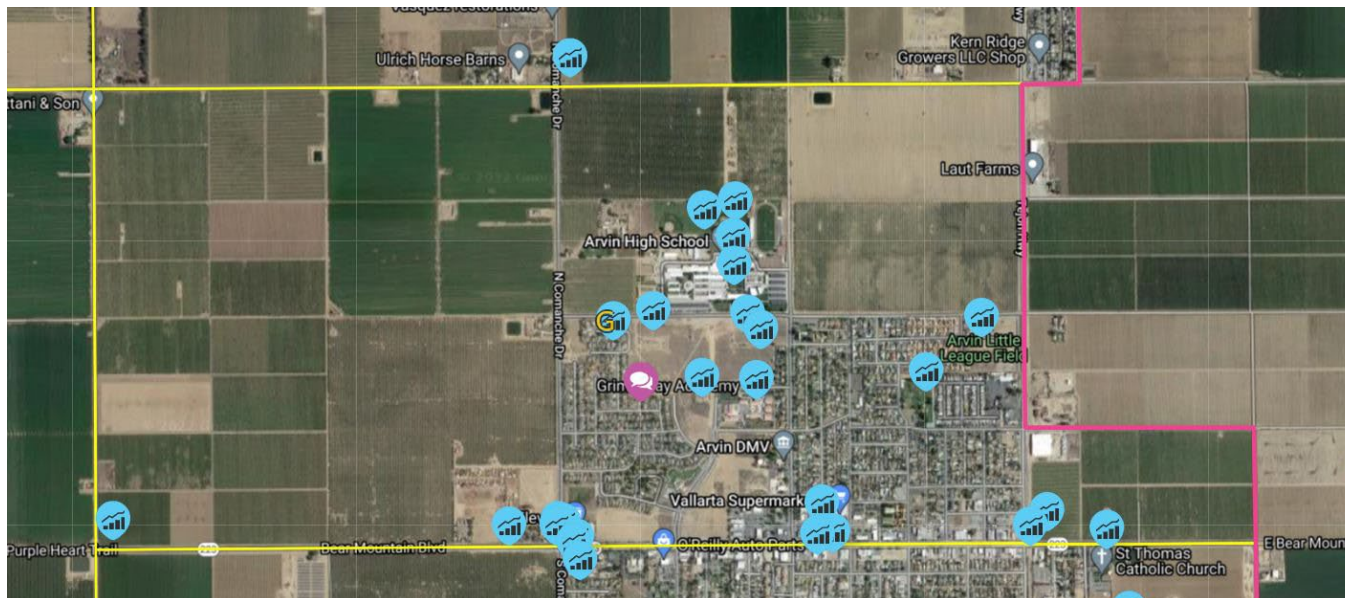
- Refinery Emissions
- Heavy duty diesel truck traffic
- Dust

## Proposed Monitoring Equipment

- Air Monitoring Trailer (real-time PM2.5, black carbon, ozone, NO/NO2, H2S, SO2, CO, BTEX)
- VOC and PM 2.5 Speciation

## Site Status

- Reached out to Kern High School District
- City of Arvin has offered their site if Arvin High School is unavailable.



# Section H

## Proposed Location

- Various Locations in the area with van
- Potential additional location for real-time PM2.5

## Top Community Concerns

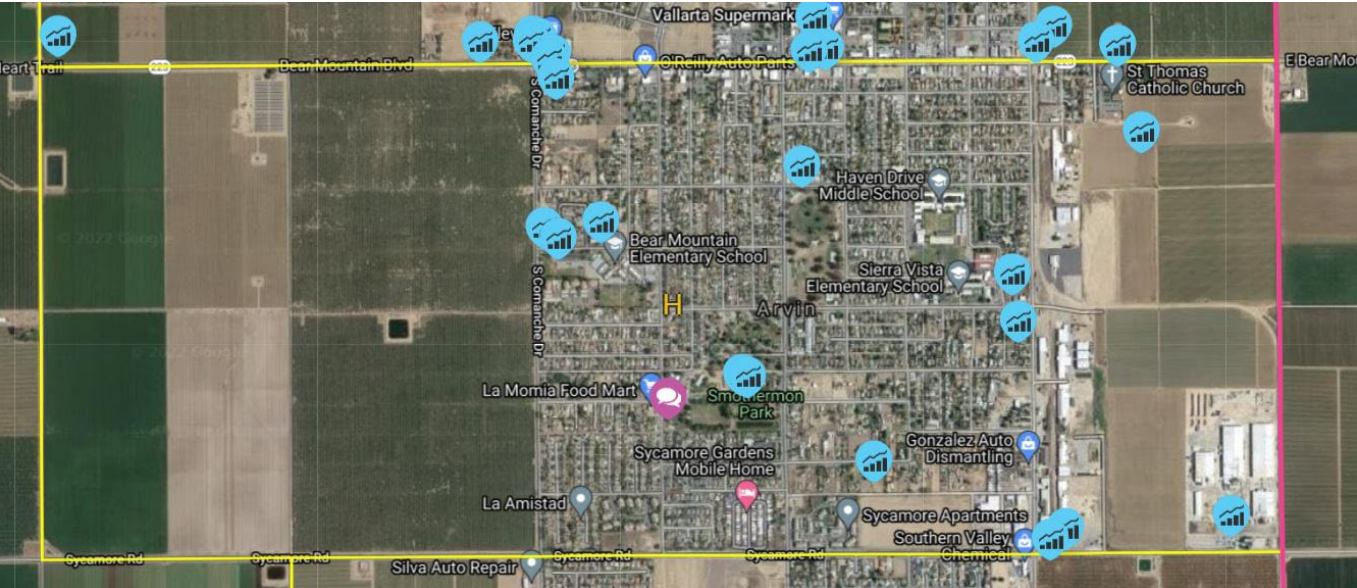
- Vehicle traffic
- Pesticide
- Oil and gas production

## Proposed Monitoring Equipment

- Mobile Monitoring Van (real-time PM2.5, Ozone, NO2, CO, SO2, H2S, & BTEX)

## Site Status

- Van can start deployment once sites identified





# Section I

## Proposed Location

- El Camino Real Elementary

## Top Community Concerns

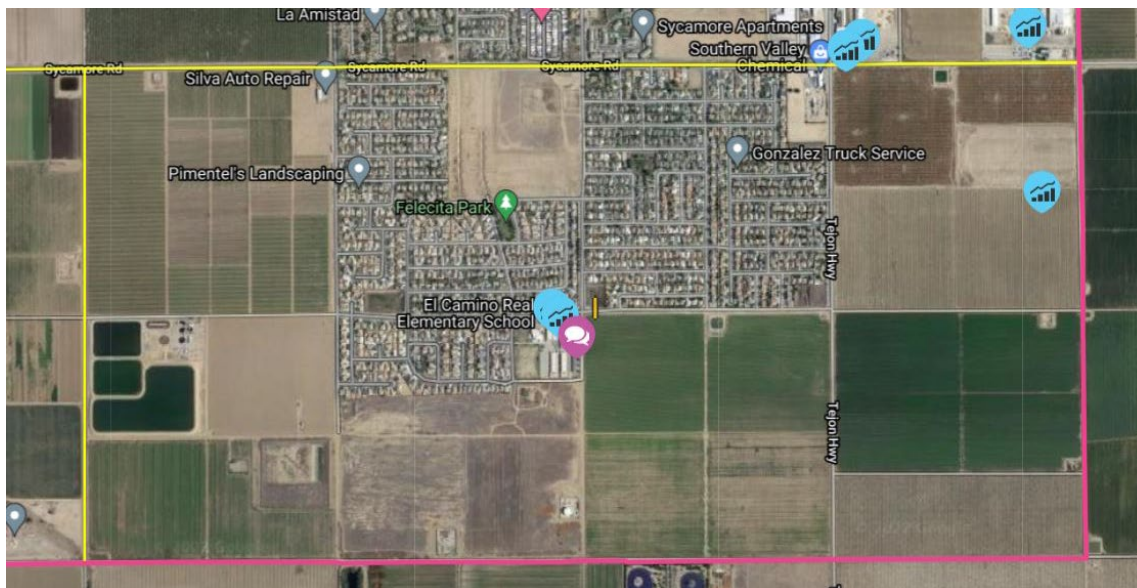
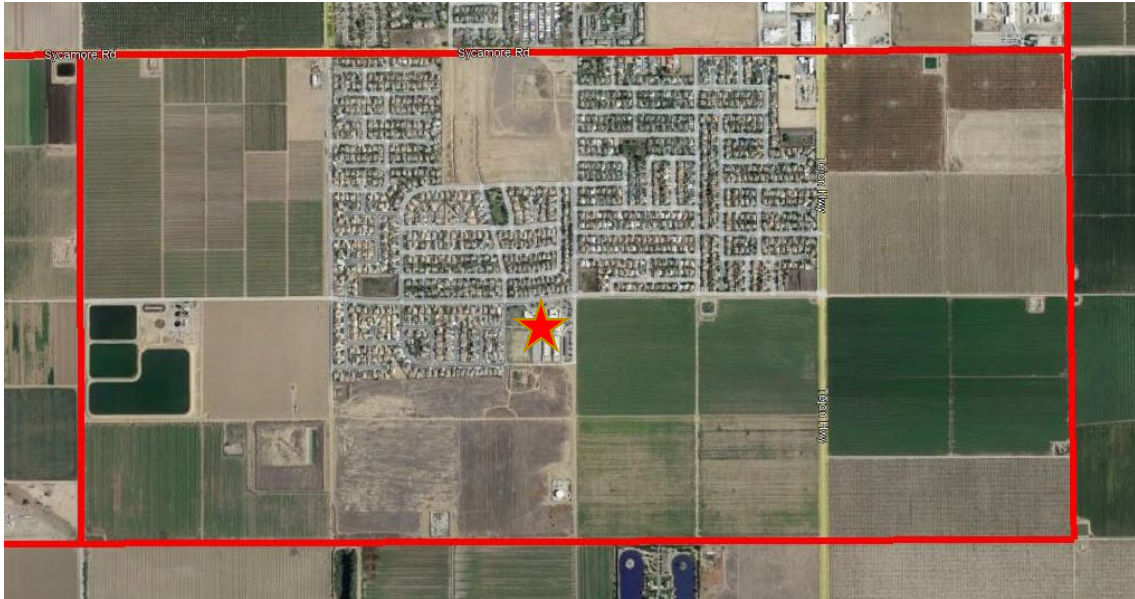
- Dust
- Vehicle traffic
- Pesticides

## Proposed Monitoring Equipment

- PM2.5 Monitor (real-time PM2.5)

## Site Status

- Discussing with Arvin School District Management and Superintendent



# Comments/Questions?