

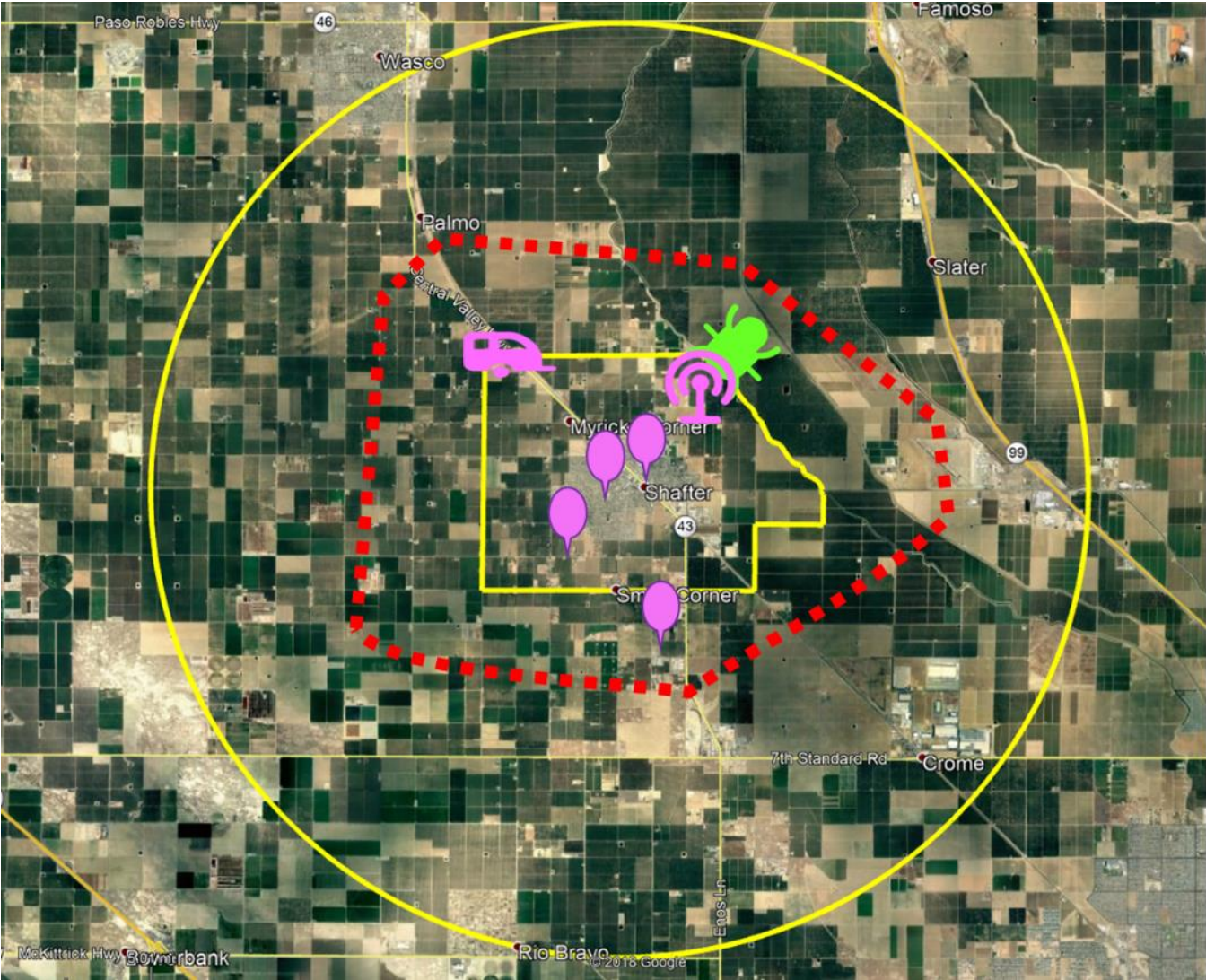
Shafter AB 617 Community Air Monitoring Update

Community Steering Committee Meeting
June 1, 2020


Ongoing Community Air Monitoring

- District continuing to conduct localized air monitoring in the Shafter community
- Working to deploy additional air monitoring platforms across the community, according to Community Steering Committee recommended network design
 - Due to lengthy administrative process in deploying additional equipment at schools, researching nearby alternative locations
- Air monitoring van actively being used to regularly monitor pollutants in areas of interest of the community and near recommended site locations for network design
- Intensive PM_{2.5} and VOC speciation sampling and laboratory analysis being conducted since late 2019

Community Air Monitoring Network Design



-  DPR Pesticide Monitoring
-  Stand-Alone PM2.5
-  Compact Air Monitoring System
-  Trailer
-  Mobile Monitoring Van

- Drive on a regular schedule throughout entire boundary all year
- Respond to community concerns
- 
- Recommended focus route

Community Air Monitoring Platforms



Community Air Monitoring Platforms (cont'd)



Community Air Monitoring Platforms (cont'd)



Online Sites in Shafter

Real-Time PM2.5

- PM2.5 at Shafter DMV (PM10 measurements through December 2019)
- PM2.5 at Grimmway Academy

VOC and PM2.5 Speciation

- Shafter DMV
- Measurements to continue here until the Farm Labor Center trailer is in place

Mobile Air Monitoring Van

- Regular measurements in community designated areas of interest and in community selected locations

Pending Sites in Shafter

Real-Time PM2.5

- **Golden Oak Elementary:**
Waiting on Richland School District, working on alternative locations

Compact Multi-Pollutant Air Monitoring System

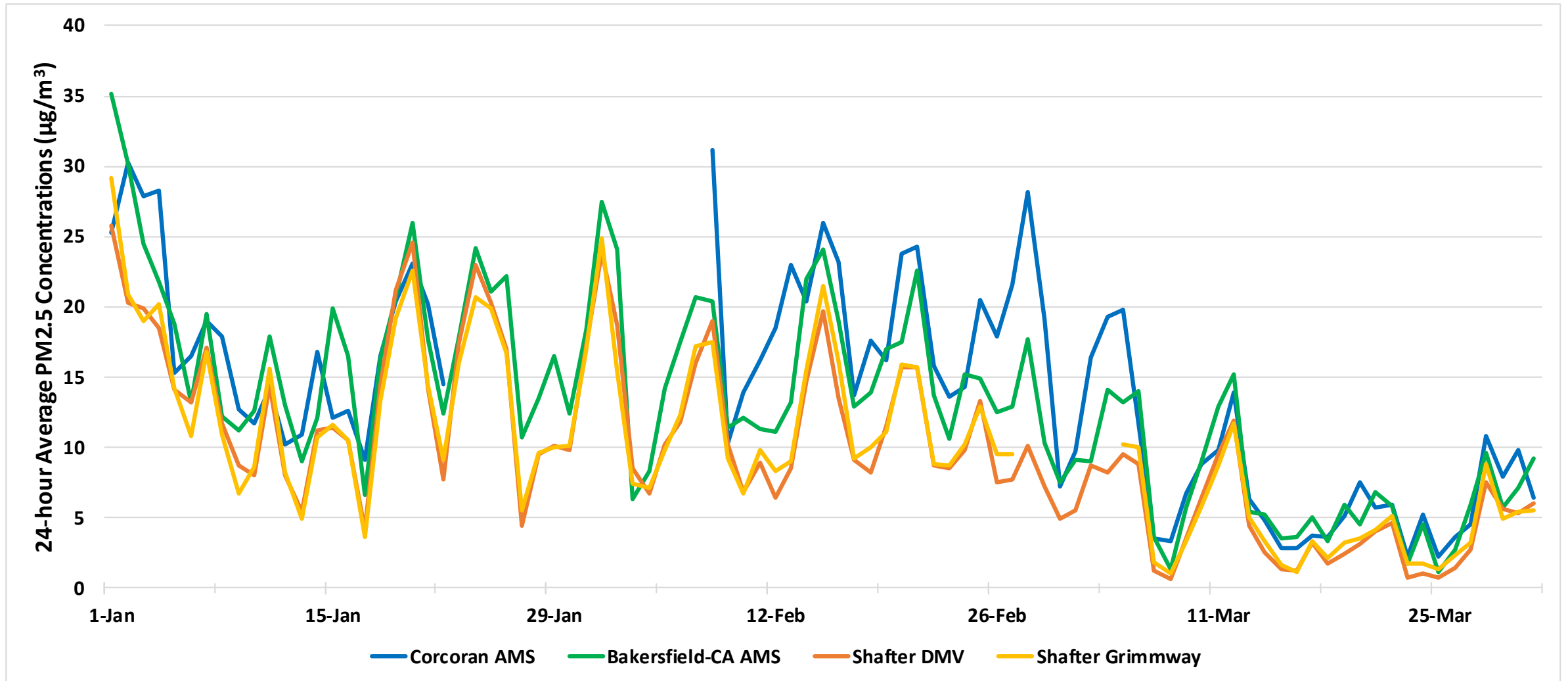
- **Sequoia Elementary School:**
Waiting on Richland School District, working on alternative locations

Air Monitoring Trailer

- **Farm Labor Center:**
Waiting on Kern Housing Authority, working on alternative locations

Daily Average PM2.5 Data Comparison

January 1 – March 31, 2020



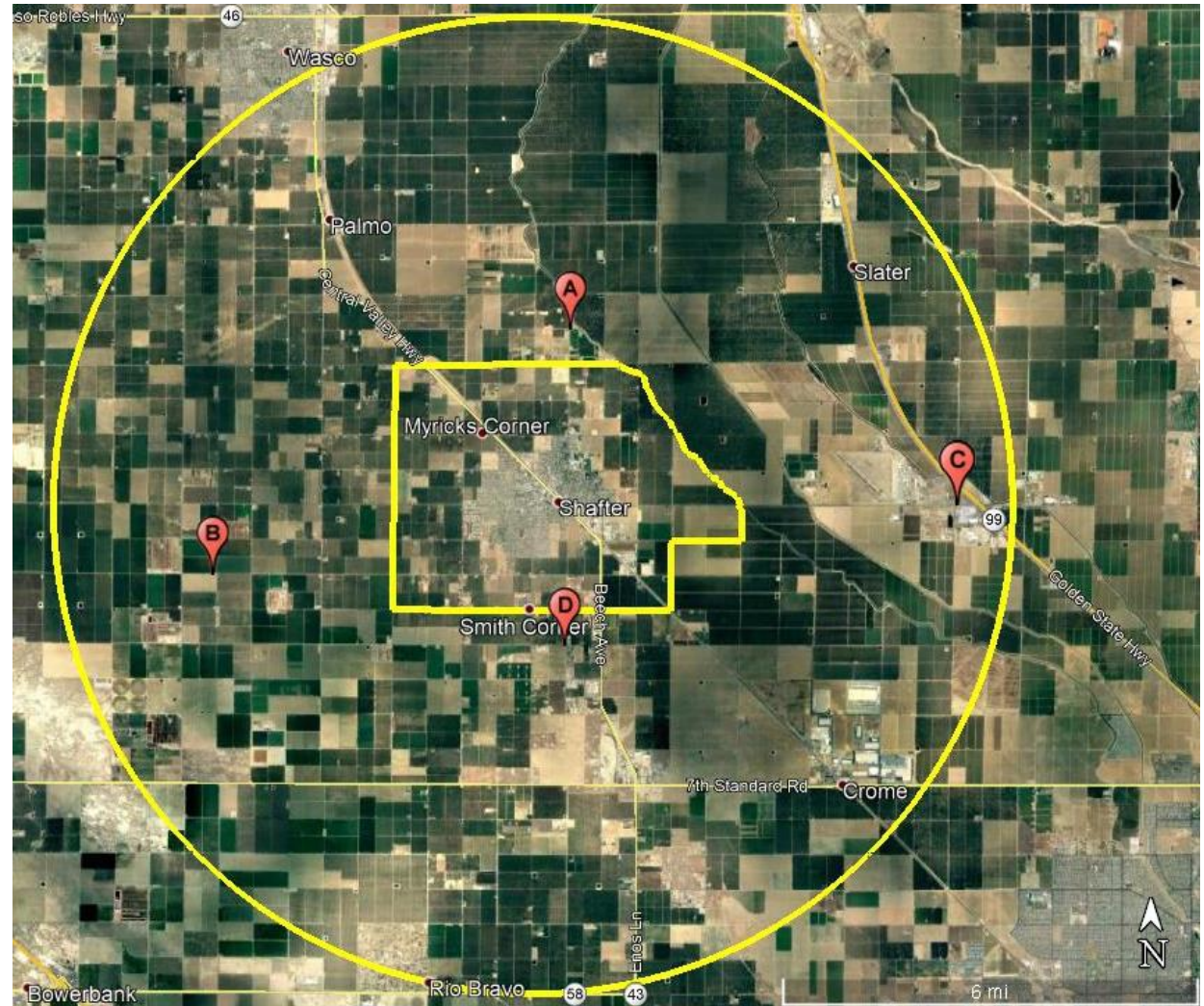
Comparison of Average PM2.5 January 1 – March 31, 2020

Site	Average PM2.5 Concentration ($\mu\text{g}/\text{m}^3$)
Shafter-DMV	10.0
Shafter-Grimmway	10.3
Bakersfield-California*	13.3
Corcoran*	13.9

*Nearest PM2.5 air monitoring sites to Shafter

Mobile Air Monitoring Van Activities

- Site A: North Shafter site among agricultural operations
- Site B: Centered among dairy operations
- Site C: Airport and Industrial area
- Site D: Mexican Colony

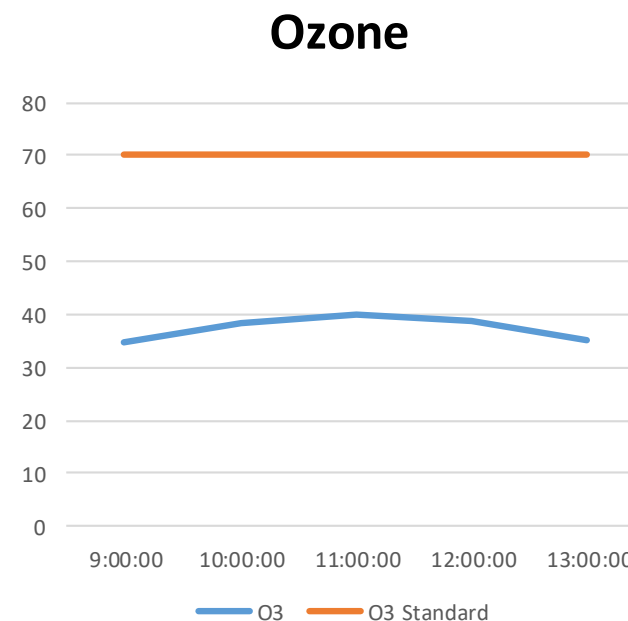
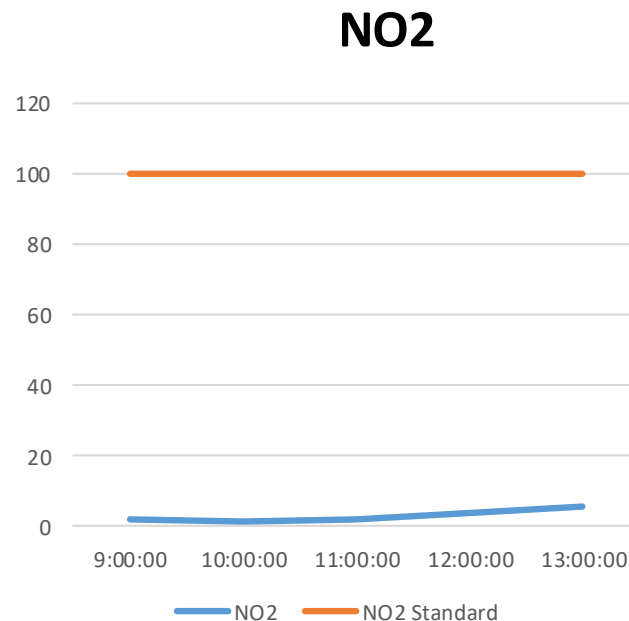
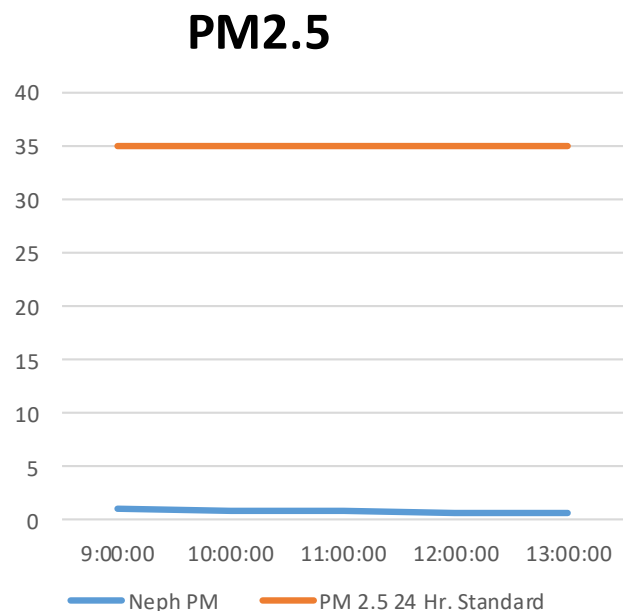


Mobile Air Monitoring Van Activities (cont'd)

- Short-term measurements taken in multiple locations on various days in January 2020
- The concentrations of pollutants measured for all locations were below federal standards during this period:
 - PM_{2.5} did not exceed 14.5 $\mu\text{g}/\text{m}^3$, below the federal 24-hr PM_{2.5} standard of 35 $\mu\text{g}/\text{m}^3$
 - Ozone did not exceed 35 ppb, below the federal 8-hr ozone standard of 70 ppb
 - CO did not exceed 0.3 ppm, below the federal 1-hr CO standard of 35 ppmv
 - NO₂ did not exceed 29.6 ppb, below the federal 1-hr NO₂ standard of 100 ppb
 - SO₂ did not exceed 1.9 ppb, below the federal 1-hr SO₂ standard of 75 ppb
 - VOC analyzers did not detect any measurable benzene, toluene, ethylbenzene, or xylene (BTEX) emissions at selected locations during this monitoring period
 - BTEX is a good indicator of VOC concentrations as a whole

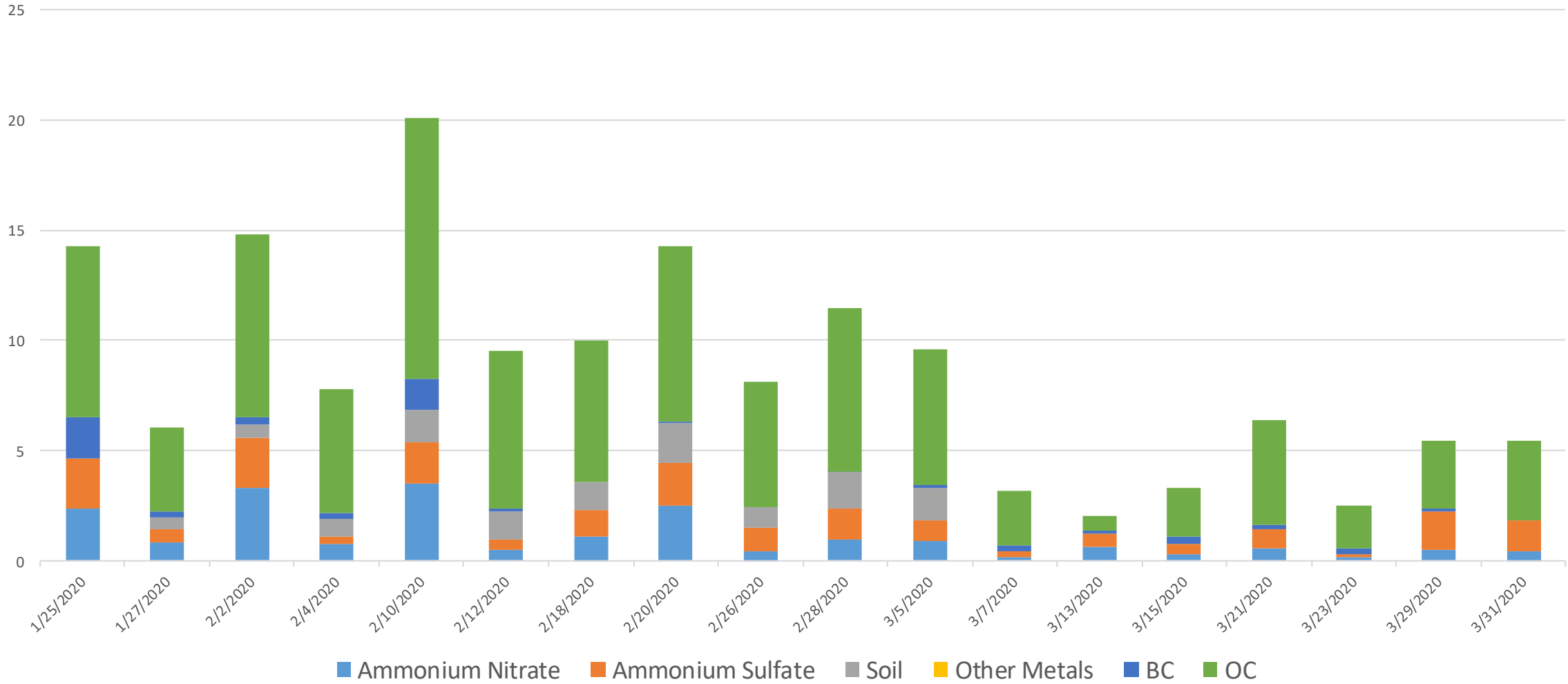
Mobile Air Monitoring Van Activities (cont'd)

- Multiple hour measurements taken at single locations in March 2020
 - Collected data allowed for better comparison with federal air quality standards
 - District focusing these efforts in areas identified in the Community Air Monitoring Plan
- Example: March 25 measurements at Mexican Colony



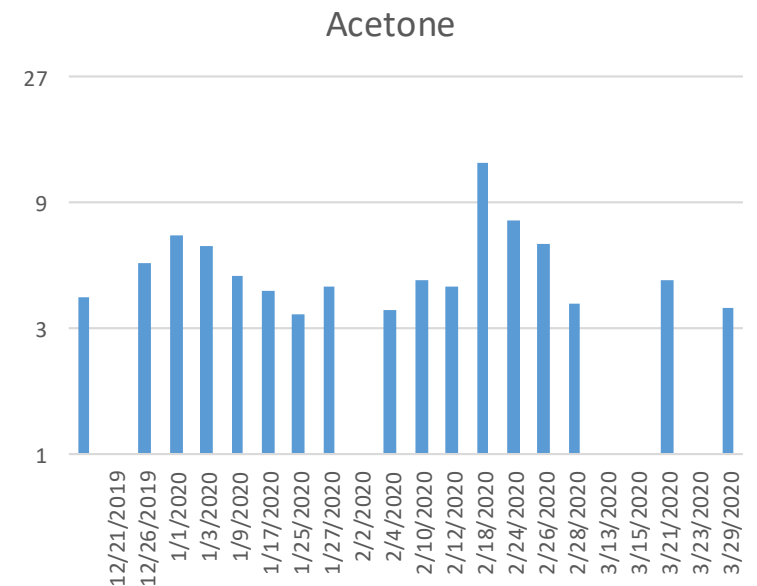
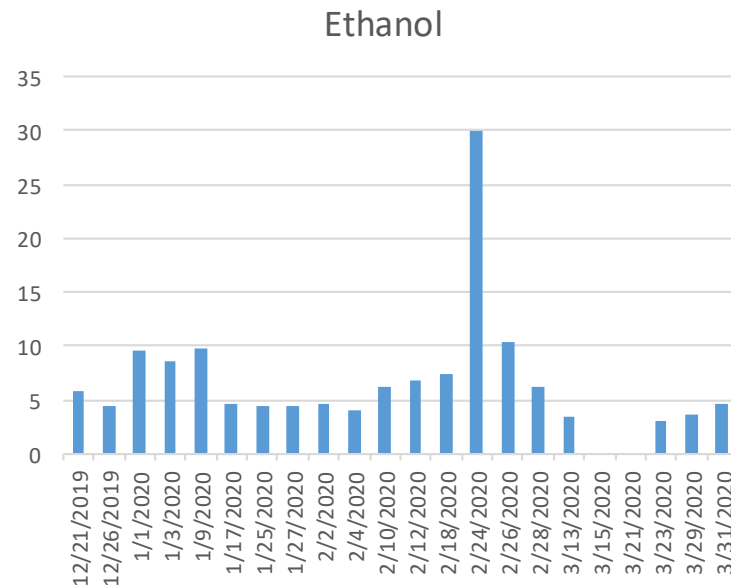
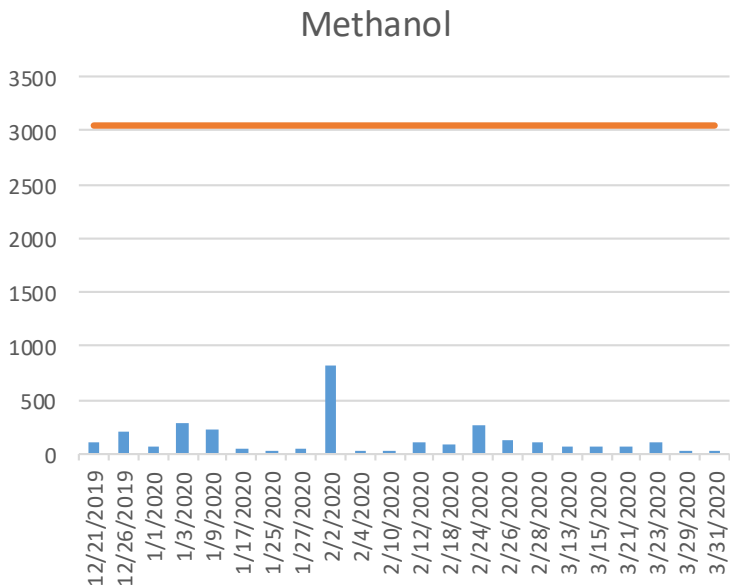
PM2.5 Speciation Analysis

Shafter DMV Site (January 2020 – March 2020)

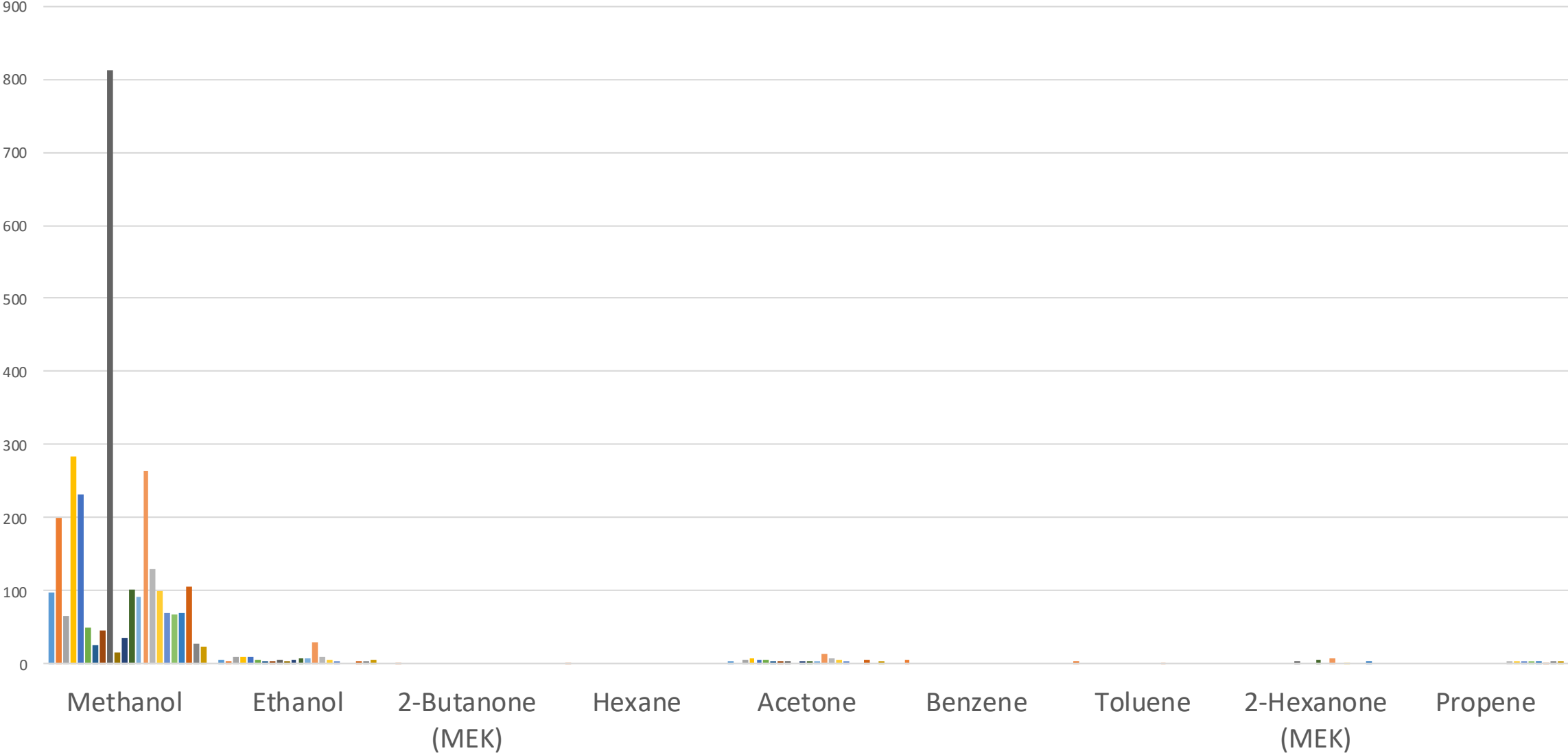


VOC Speciation Analysis

- VOC measurements and speciation laboratory analysis being conducted at Shafter DMV site since December 2019
- Laboratory analysis isolates concentrations of 68 VOC species
 - Results show trace or no detections of most VOC species
 - Focusing results on which species were detected in laboratory analysis



Detected VOC Species



Availability of Collected Community Air Quality Data

- Real-time community air monitoring data available on District AB 617 webpage at:
<http://community.valleyair.org/community-air-monitoring>
- CARB's statewide air quality data portal (AQview) displays and provides community air monitoring data from AB 617 communities
 - AQview website located at: <https://ww2.arb.ca.gov/es/community-air-quality-portal>
 - Air quality data from Valley AB 617 communities now available at this website
 - Monthly data will continue to be made available as air monitoring campaign continues
 - Development ongoing, new features to be added

Development and Availability of Ongoing Reports

- District in the process of delivering a comprehensive quarterly report summarizing air monitoring data collected
 - Quarterly reports will be posted to District AB 617 webpage
- Detailed reports of laboratory PM_{2.5} and VOC speciation analysis also to be posted on District AB 617 webpage
- Report summarizing collected air monitoring data from February 2019 through March 2020 will be available at:

<http://community.valleyair.org/selected-communities/shafter/air-monitoring/>

Comments/Questions?