

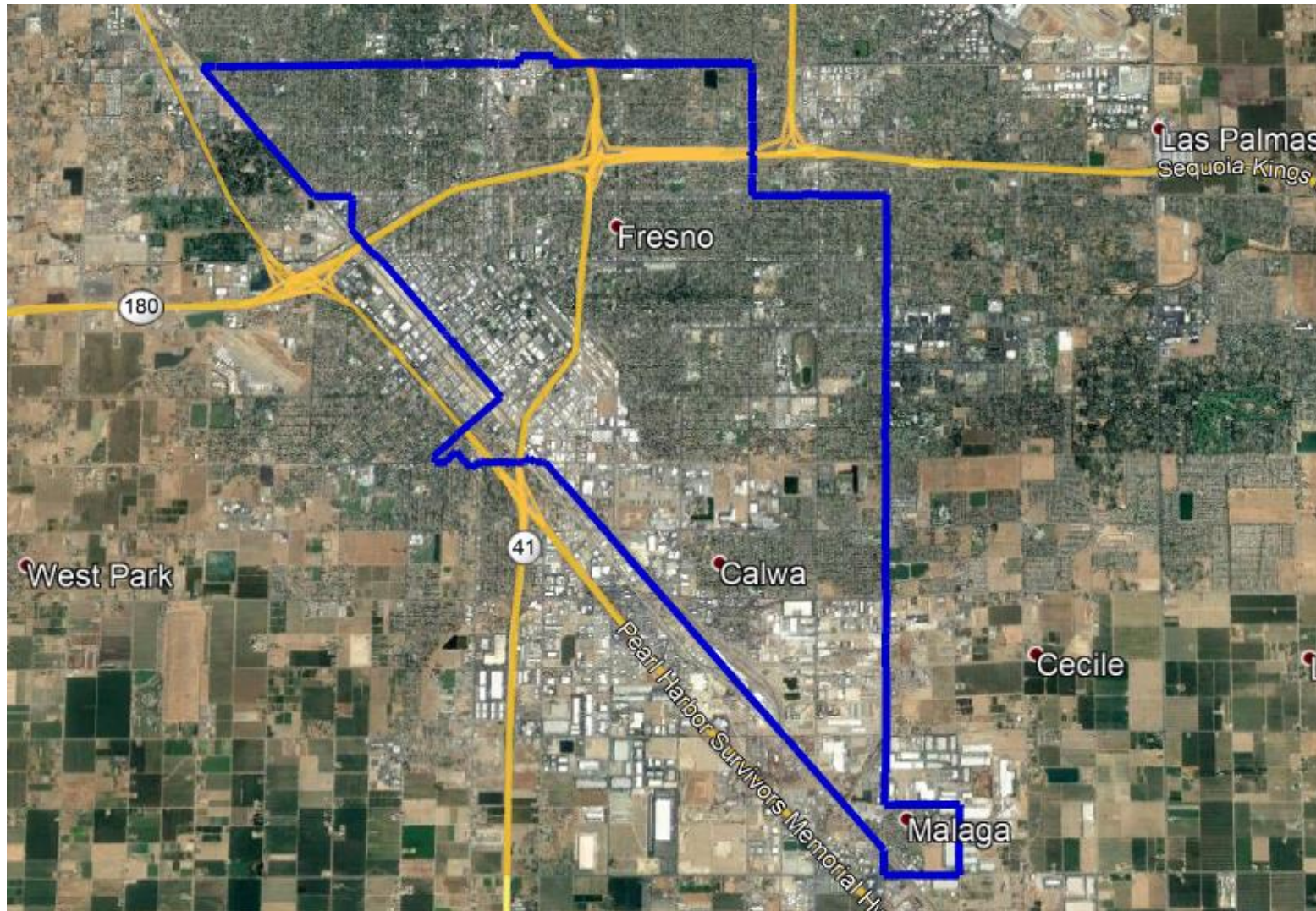
South Central Fresno Community Boundary Discussion

March 13, 2019

Jessica Olsen

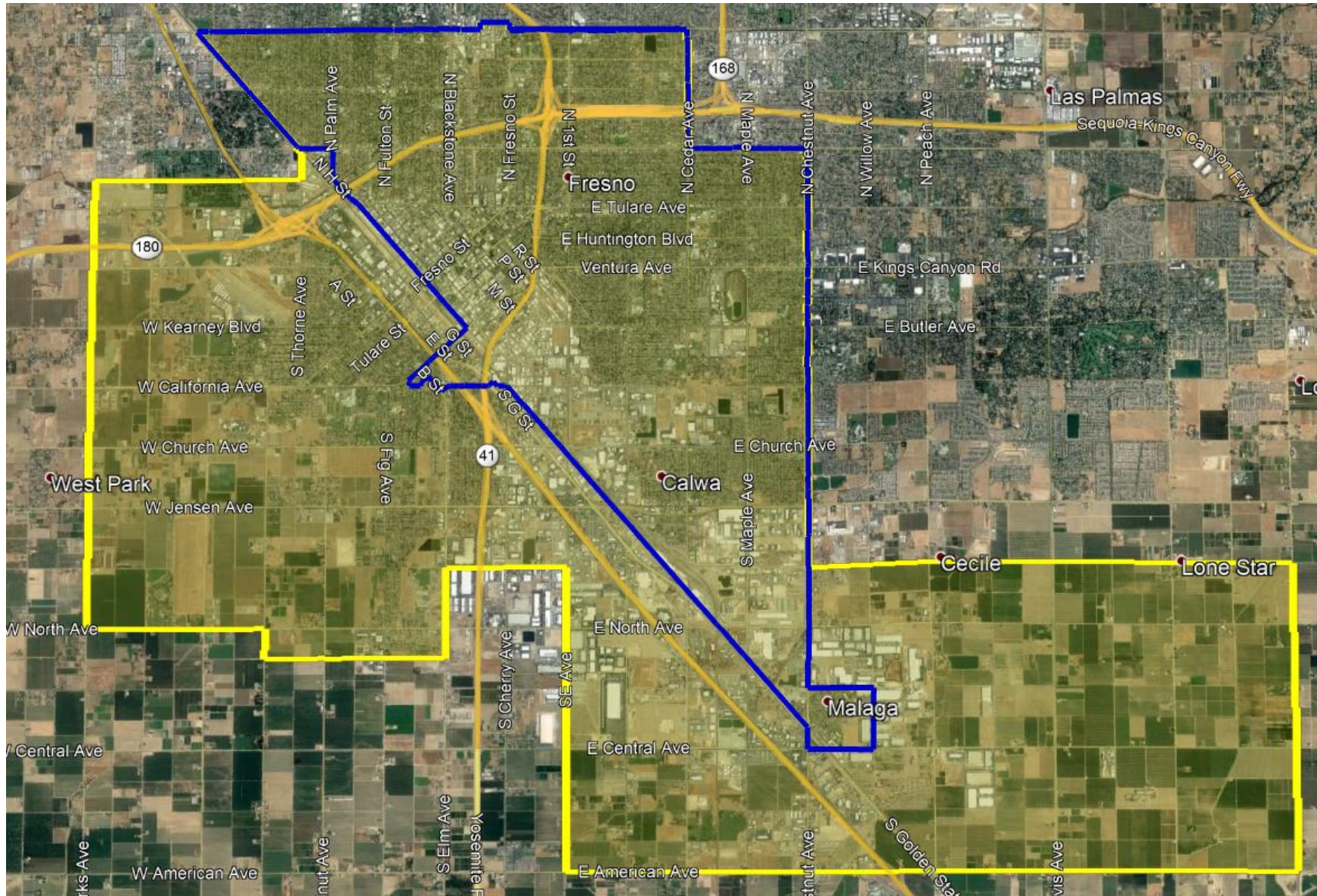
Program Manager, Air Quality Analysis, Modeling and Monitoring
San Joaquin Valley Air Pollution Control District

CARB's Community Selection



- CARB-approved selection of South Central Fresno Community was based on the following prioritization approach:
 - Numerous health indicators from CalEnviroScreen tool
 - Population-weighted exposure to diesel PM
 - Population-weighted exposure to high PM2.5 and Ozone (larger weight on PM2.5)
 - Socioeconomic factors
- Supported by Valley advocates with recommendation to also consider Daleville addition

Committee Recommendation from February



Blue – Original CARB-approved boundary:

- 14.4 square miles
- 97,041 population
- South Central Fresno, Calwa, Malaga

Yellow – Addition recommended by the Committee:

- 41.4 square miles
- 124,385 population
- Added South West Fresno, Malaga industrial area, Industrial Triangle, rural Fresno County

Guiding Principles for District/Steering Committee's Analysis of Boundary Adjustments

1. Fully acknowledge and consider committee's recommendations and concerns:
 - a. Committee's request to expand the boundary to include sources of emissions that are nearby, but are outside, the existing CARB-defined boundary
 - b. Committee's wishes to focus AB 617 resources on the most disadvantaged areas in and around Fresno

Guiding Principles for District/Steering Committee's Analysis of Boundary Adjustments

2. Acknowledge and honor CARB's decision with respect to original community selection and their Blueprint guidance on selecting community boundaries:
 - a. CARB's consideration of urban versus rural communities
 - b. CARB community selection and Blueprint community boundary guidance

Guiding Principles for District/Steering Committee's Analysis of Boundary Adjustments

3. Carefully consider impact of boundary changes on committee's responsibilities:
 - a. Recognize extremely short timeframe for completing tasks under AB 617
 - District must implement Air Quality Monitoring Plan by July 2019
 - District Board must adopt Community Emission Reduction Program by October 2019
 - b. Must provide for education of new committee members regarding AB 617, including informational materials provided to the committee, and discussion of activities and recommendations of the committee to date

Guiding Principles for District/Steering Committee's Analysis of Boundary Adjustments

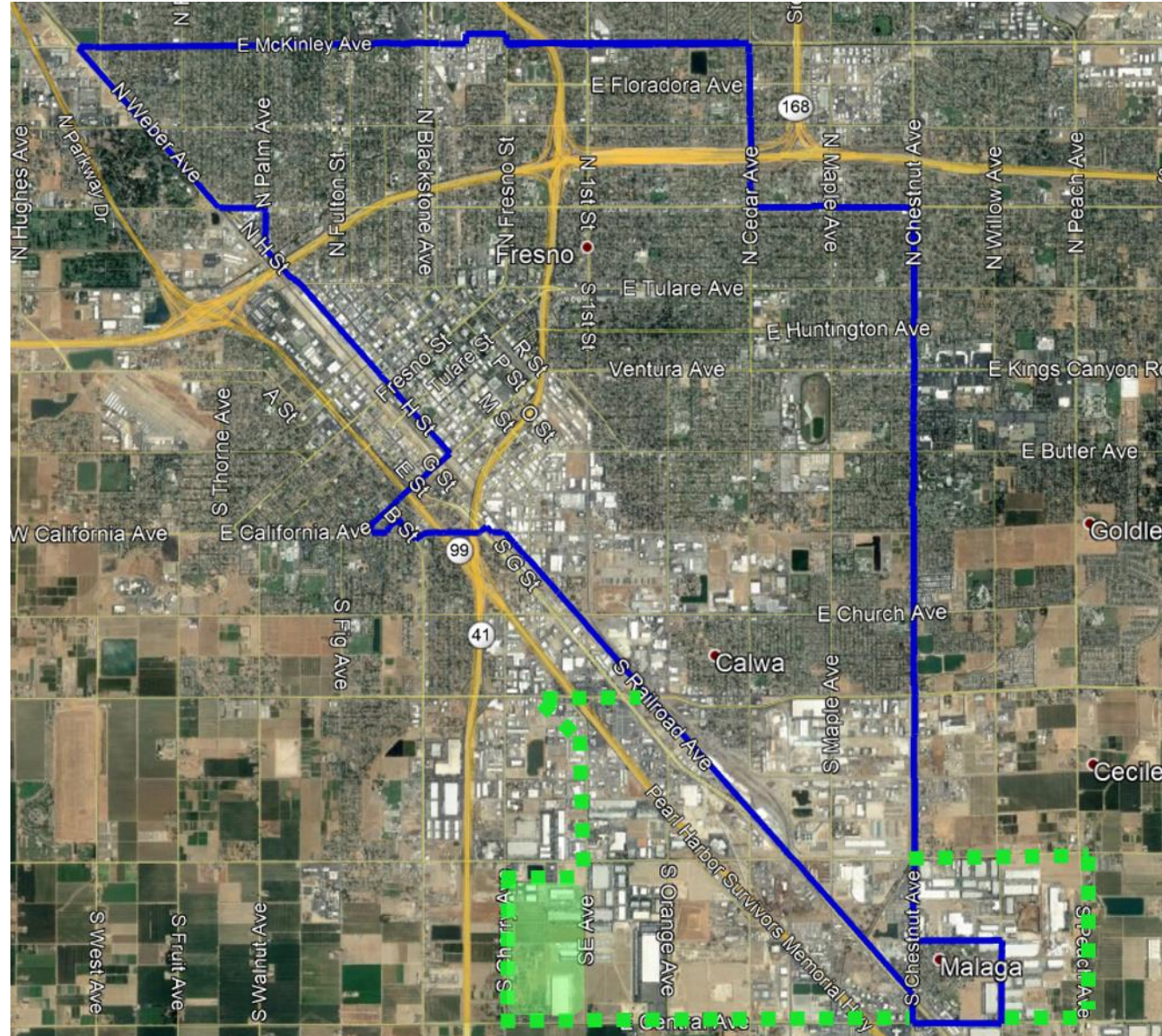
3. Carefully consider impact of boundary changes on committee's responsibilities:




- c. Committee membership must represent the community
 - Significant expansion of boundary will require reassessment of committee membership
 - Other considerations: size of committee, fairness of removing current active members, new application process, delays in moving forward
- d. Assure meaningful use of available resources
 - Monitoring resources are limited – spreading those resources over a greater area dilutes ability to gather information, attribute to sources
 - Emission reduction funding is limited – fewer investments in emissions reductions per square mile reduces community air quality benefit

Southwest Fresno Community

- Explore opportunities for ensuring SW Fresno Community is given strong consideration in next community selection process
- Commit to working with SW Fresno Community to leverage resources to examine and address air quality concerns as feasible given limited resources
 - District monitoring and other technical resources
 - District emission reduction incentive funding
 - Transformative Climate Community investments

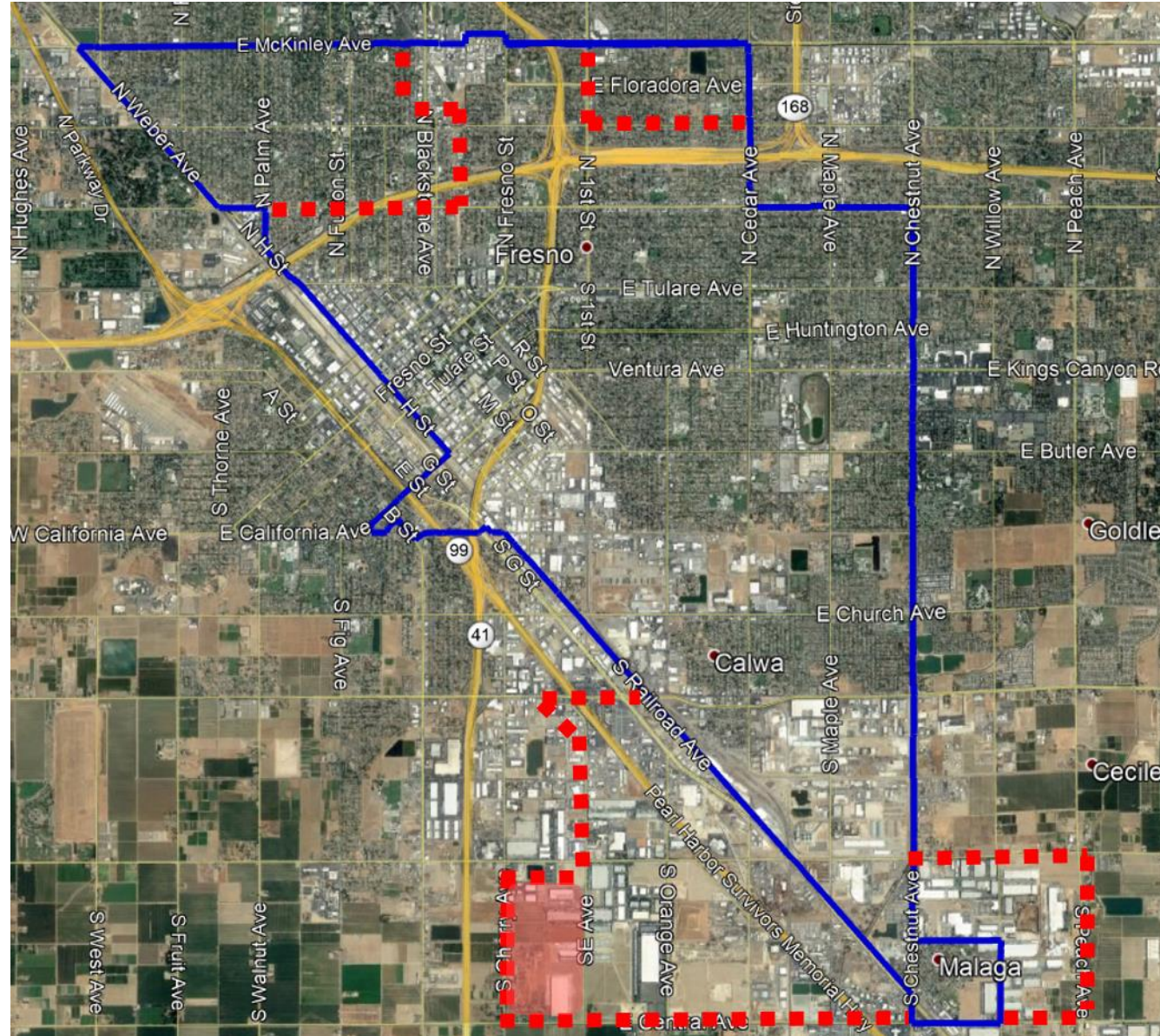
Potential Boundary Adjustment #1






-  CARB Original
Approved Boundary
 -  Boundary Adjustment
 -  Additional District
Recommendation

- Add Malaga industrial area, Industrial Triangle, Daleville (not included in Steering Committee recommendation)

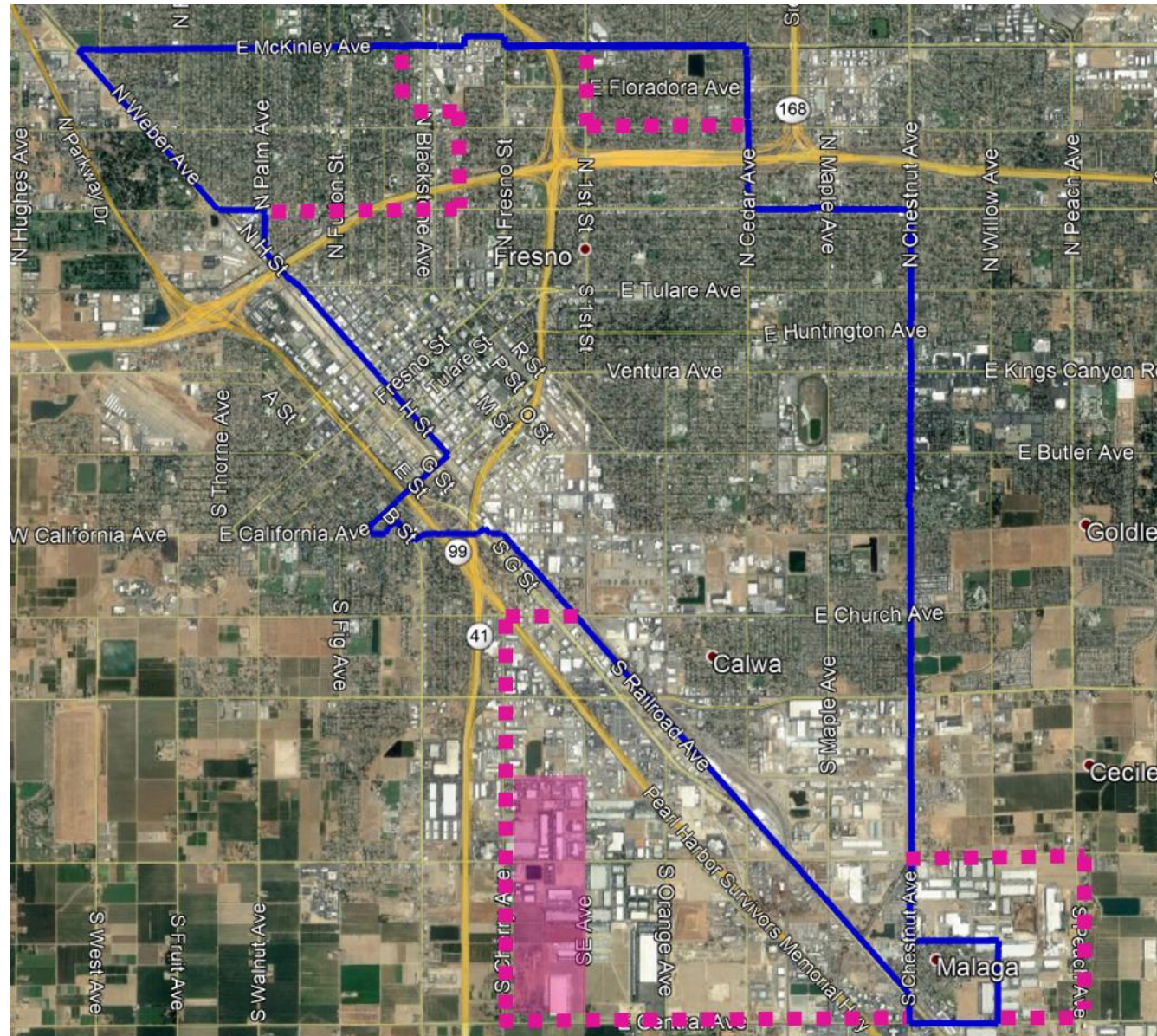
Potential Boundary Adjustment #2






-  CARB Original Approved Boundary
-  Boundary Adjustment
-  Additional District Recommendation

- Add Malaga industrial area, Industrial Triangle, Daleville (not included in Steering Committee recommendation)
- To accommodate additional areas, could remove census tracts not in top 5% of most disadvantaged

Potential Boundary Adjustment #3



-  CARB Original Approved Boundary
-  Boundary Adjustment
-  Additional District Recommendation

- Add Malaga industrial area, Industrial Triangle, Daleville out to Cherry Avenue (as recommended by Valley community advocates at CARB September hearing)
- To accommodate additional areas, could remove census tracts not in top 5% of most disadvantaged

Next Steps

- If Steering Committee reaches consensus on boundary adjustments within Guiding Principles:
 - District will immediately work with Steering Committee to recruit and bring up to speed new members
- If consensus is not reached today, or consensus is reached on a boundary adjustment outside those proposed
 - District will take all Committee comments and feedback into consideration and finalize boundary adjustments by next Friday, March 22 (will maximize opportunities within Guiding Principles and in consultation with CARB)
 - District will work with Steering Committee to recruit and bring up to speed new members
- If areas removed, current members who reside or represent businesses in removed areas can no longer be on committee (but welcome to continue participating as public members)

Development of South Central Fresno Community Air Monitoring Plan

March 13, 2019

Jon Klassen

Director of Strategies and Incentives

San Joaquin Valley Air Pollution Control District

Community Air Monitoring

- AB 617 includes requirements for air districts to deploy air monitoring in communities selected by CARB
 - Air monitoring for first-year communities to be in place by July 1, 2019
 - Supplements existing monitoring in/near selected community
 - May assist in developing community emission reduction programs
- District currently preparing platforms and equipment for community air monitoring in South Central Fresno
- Community access to monitoring information is being planned
- Additional local air monitoring networks will be planned and deployed in future years as subsequent communities are selected by CARB for AB 617 implementation

Preparation of Community Air Monitoring Plan

- District responsible for preparing community air monitoring plan
 - South Central Fresno Community Steering Committee will provide input in preparing plan
- CARB AB 617 Blueprint describes 14 elements that must be included in community air monitoring plans
 - Air monitoring plan elements designed to provide a process that results in action-oriented data to meet the needs of the community
 - Elements include details on quality control criteria, best practices, collaborative partnerships, data accuracy, and public access to collected data

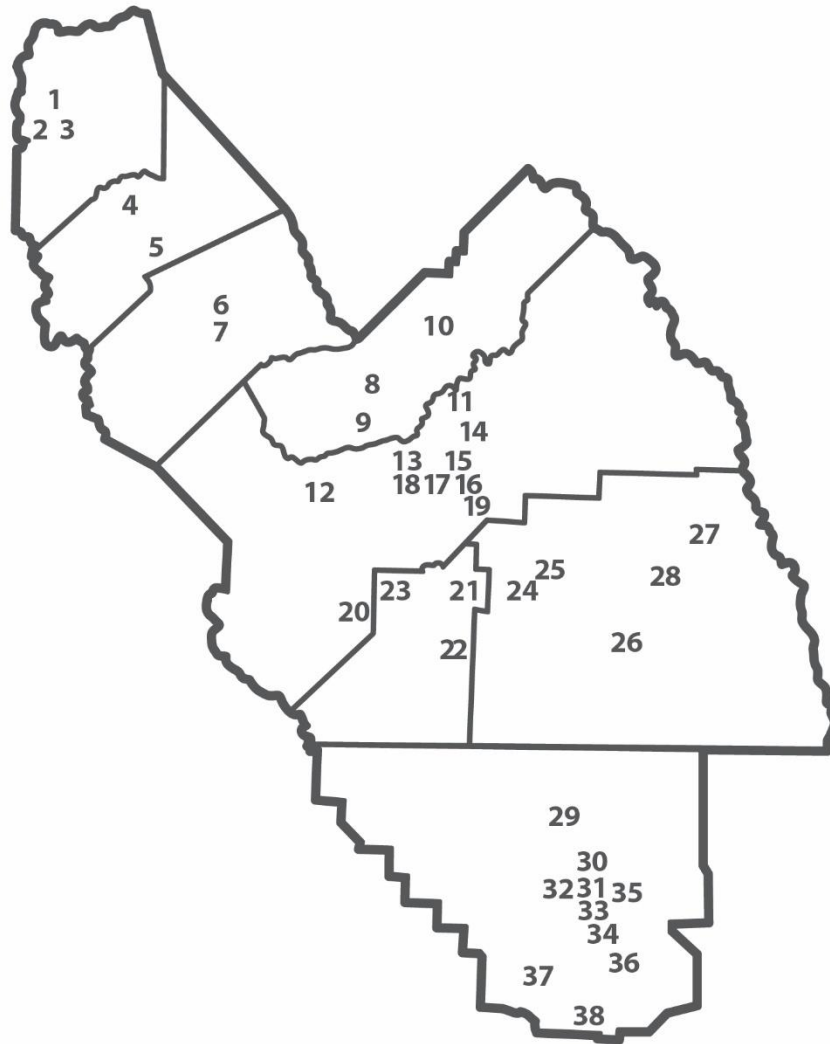
Community Air Monitoring Plan Elements

- CARB AB 617 Blueprint describes the following 14 elements for community air monitoring plans
 1. Community partnerships
 2. Community-specific purpose for air monitoring
 3. Scope of actions
 4. Air monitoring objectives
 5. Roles and responsibilities
 6. Data quality objectives
 7. Monitoring methods and equipment
 8. Monitoring areas
 9. Quality control procedures
 10. Data management
 11. Field measurements
 12. Evaluating effectiveness
 13. Analyze and interpret data
 14. Communicate results

Goals of Community Air Monitoring Plan

- Community air monitoring plan for South Central Fresno should define clear goals and objectives
- Plan should describe monitoring approach that is focused on matching the information need with the appropriate technologies and scientific process
- Developed community air monitoring plan should assist in guiding the air monitoring goals for South Central Fresno
 - Collected data will allow for community-level air quality analysis and evaluation of long term trends
- Collected data may assist with ongoing development and implementation of South Central Fresno community emission reduction program

Air Monitoring Sites in Operation



As of July 2018



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

SAN JOAQUIN COUNTY

- 1 Stockton-Hazelton: G, M, P, F, T
- ★ 2 Tracy-Airport: G, M, P, F
- ★ 3 Manteca: P, F, M

STANISLAUS COUNTY

- 4 Modesto-14th St: G, M, P, F
- ★ 5 Turlock: G, M, P, F

MERCED COUNTY

- ★ 6 Merced-M St: P, F
- ★ 7 Merced-Coffee: G, F, M

MADERA COUNTY

- ★ 8 Madera City: G, P, F, M
- ★ 9 Madera-Pump Yard: G, M

Other¹:

- Chukchansi Indians
- ▲ 10 Picayune Rancheria: G, F, P, M

FRESNO COUNTY

Other¹:

- Monache Tribe/Foothill Yokut Indians
- ▲ 11 Table Mountain AMS⁺: G, F, P, M
- ★ 12 Tranquillity: G, F, M
- ★ 13 Fresno-Sky Park: G, M
- ★ 14 Clovis: G, M, P, F
- 15 Fresno-Garland: G, M, P, F, T, N, L
- ★ 16 Fresno-Pacific: F
- ★ 17 Fresno-Drummond: G, P, M
- ★ 18 Fresno-Foundry Park Ave: G, M
- ★ 19 Parlier: G, M
- ★ 20 Huron: F, M

KINGS COUNTY

- ★ 21 Hanford: G, F, M, P
- ★ 22 Corcoran: F, M, P
- Other¹:**
Tachi Yokut Tribe
- ▲ 23 Santa Rosa Rancheria: G, M, P

TULARE COUNTY

- ★ 24 Visalia Airport: M
- 25 Visalia-Church St: G, F, M, P
- ★ 26 Porterville: G, F, M
- Other²:**
▲ 27 Lower Kaweah: A, G, M
▲ 28 Ash Mountain: A, G, M, F

KERN COUNTY

- 29 Shafter: G, M
- 30 Oildale: G, M, P
- ★ 31 Bakersfield-Golden/M St: F, P
- 32 Bakersfield-Calif Ave: A, G, M, P, F, T
- ★ 33 Bakersfield-Muni: G, M
- 34 Bakersfield-Airport (Planz): F
- 35 Edison: G, M
- 36 Arvin-Di-Giorgio: G, M
- ★ 37 Maricopa: G, M
- ★ 38 Lebec: F, M

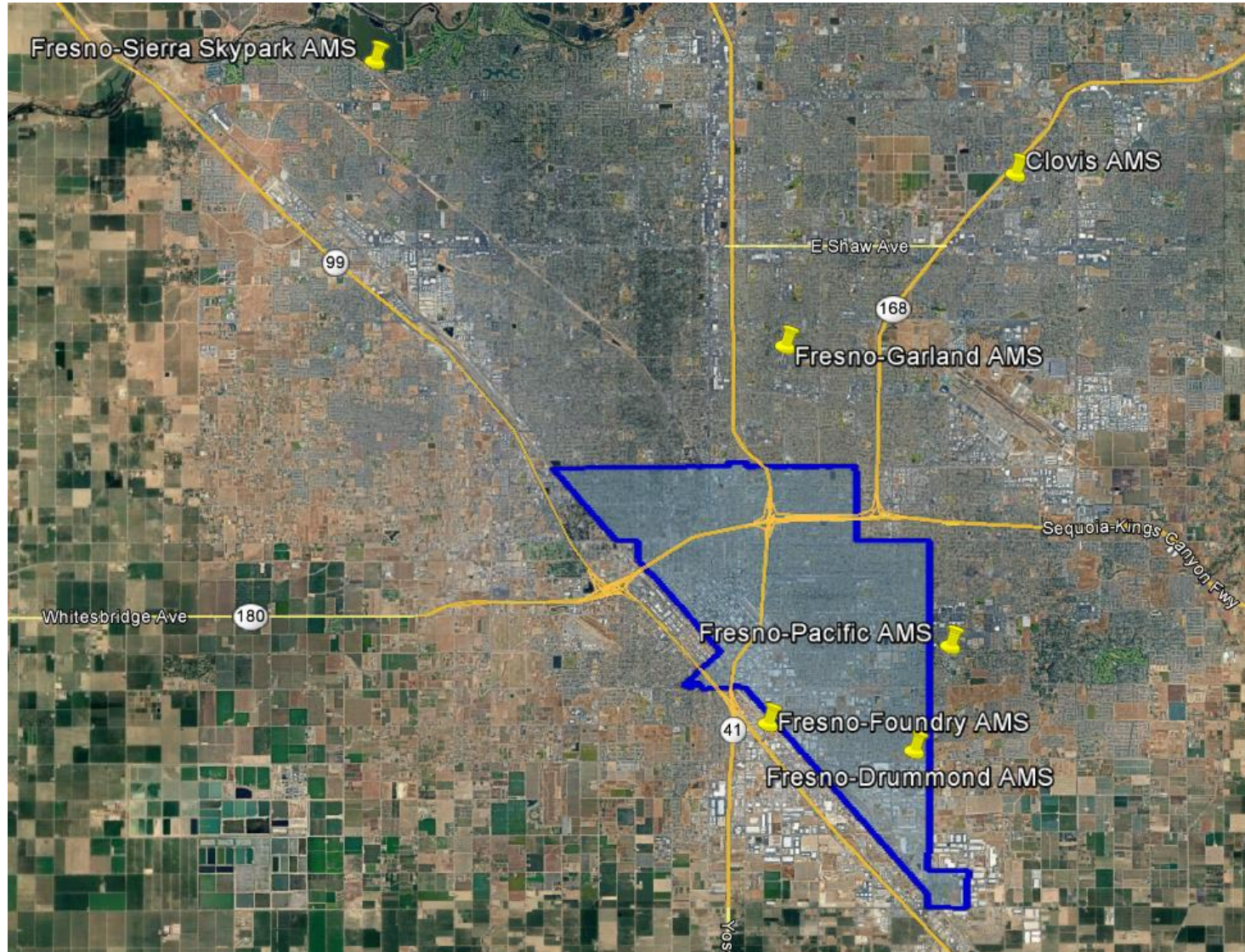
MONITORING OPERATION

- ★ Sites operated by the District
- Sites operated by the District & CARB
- Sites operated by CARB
- ▲ Sites operated by other agencies
- Other¹ Tribal
- Other² National Park Service
- + Air Monitoring Station (AMS)

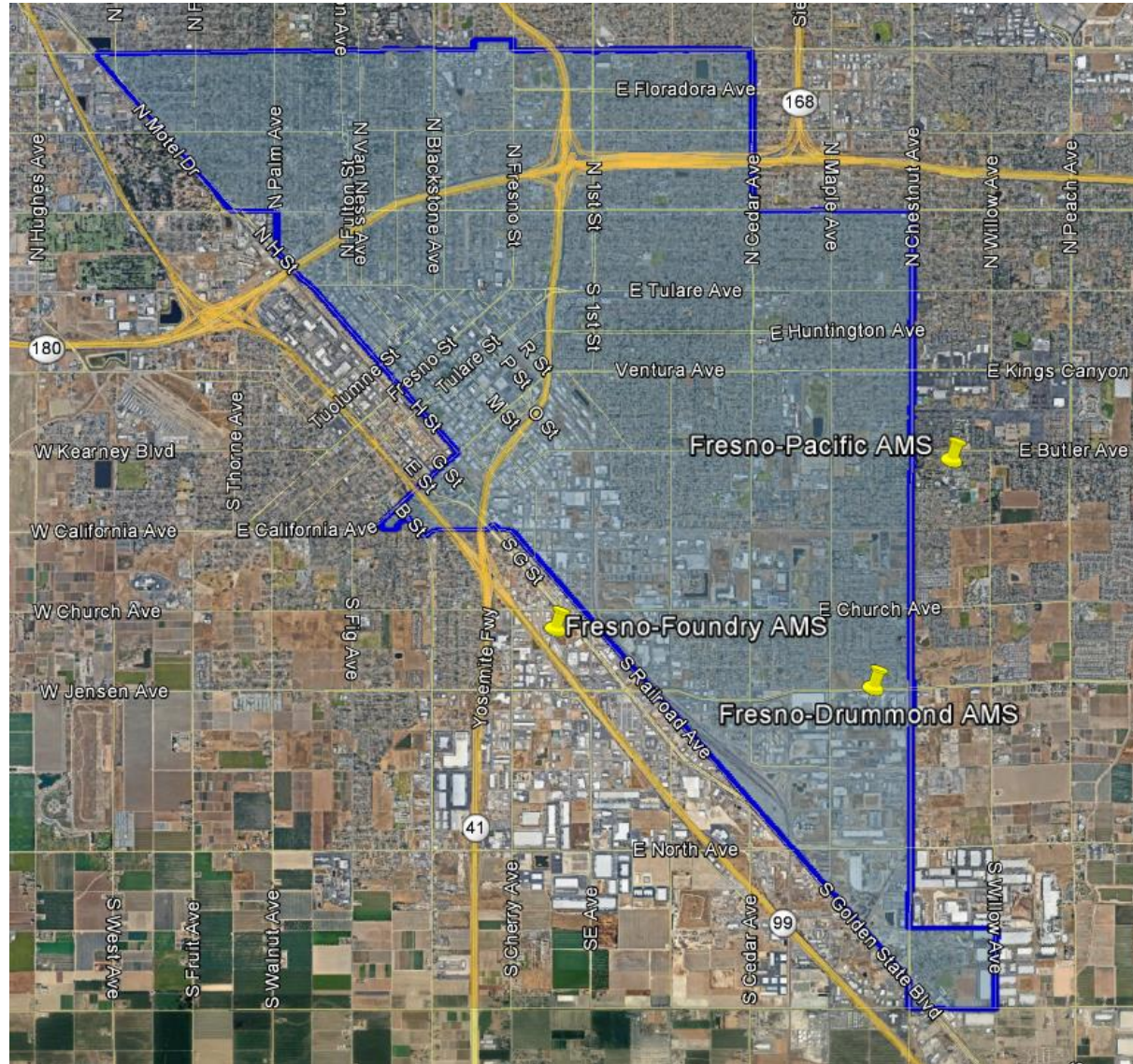
MONITORING DESIGNATIONS

- | | |
|----------------------------|----------------------|
| A Acid Deposition | P Particulate (PM10) |
| F Fine Particulate (PM2.5) | N National Core |
| G Gaseous | T Toxins |
| M Meteorological | L Lead |

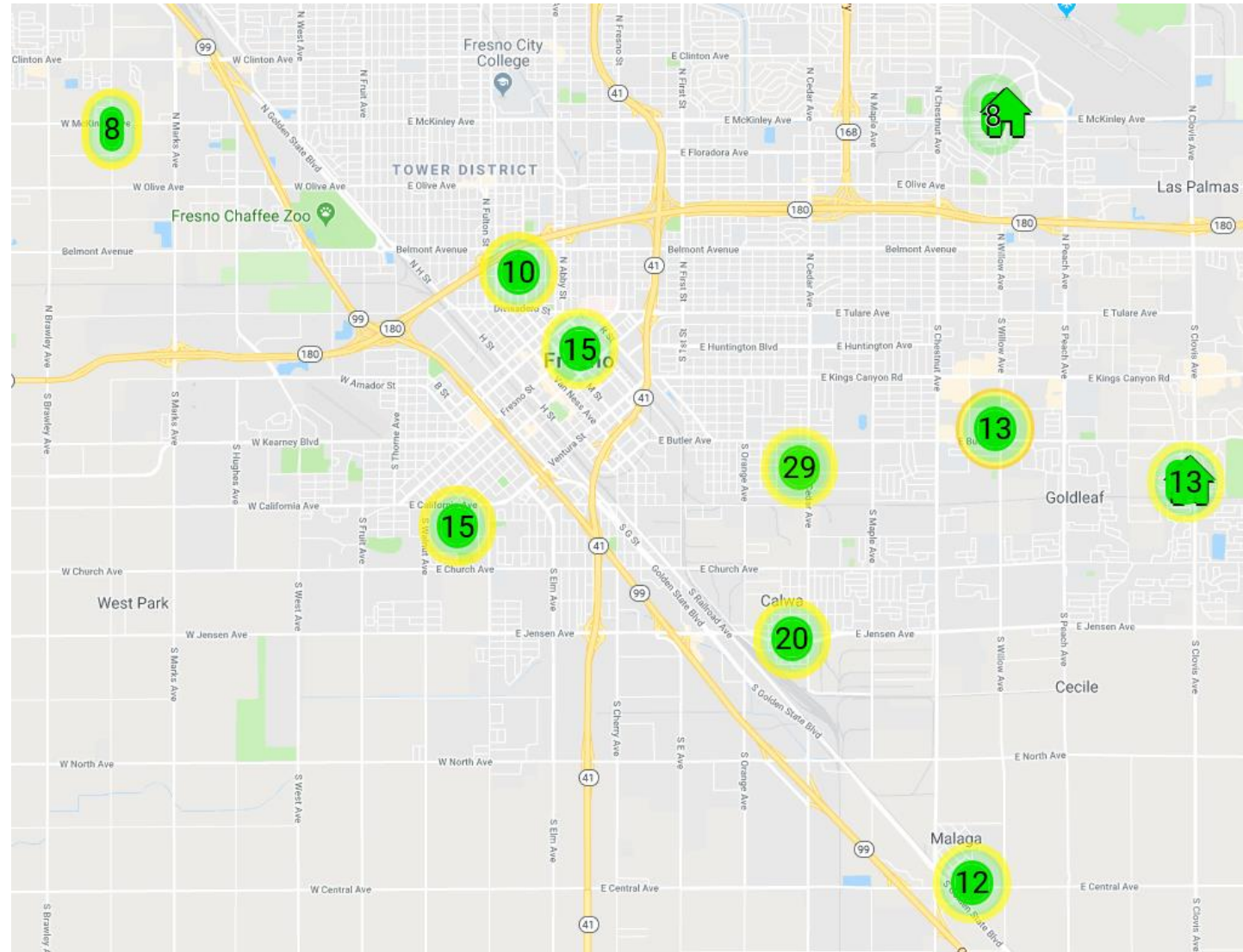
Current Air Monitoring in Fresno Area



Current Air Monitoring in South Central Fresno Area



Low-Cost Sensors in South Central Fresno Area



Source: www.purpleair.com

Air Monitoring in South Central Fresno

- Historical air quality data already exists within boundary of South Central Fresno area
 - Fresno-Drummond site operated by District since 1984 (located near Jensen and Chestnut Avenues)
 - Historical data includes ozone, NO/NO₂/NO_x, CO, filter-based PM₁₀, and meteorology
- Monitoring sites also operating just outside of South Central Fresno community boundary
 - Fresno-Pacific site operated by District since 2000 (located at Fresno Pacific University) – filter-based PM_{2.5}
 - Fresno-Foundry near-road site operated by District since 2016 (located near Jensen Avenue and Hwy 99) – NO₂, meteorology (PM_{2.5} and other monitoring coming soon)
- Historical data for these sites are available on CARB website
 - <https://www.arb.ca.gov/aqmis2/aqmis2.php>

Accessibility of Community Air Monitoring Data

- Air monitoring data collected in South Central Fresno community will be displayed on CARB Statewide Data Portal
 - Hourly data will be displayed in real-time
 - Validated air monitoring data will also be available on data portal once quality control reviews are complete
 - Samples taken that require laboratory analysis will be displayed at a later date
- South Central Fresno community air monitoring data will also be displayed on District website in real-time

Overview of Monitoring Resources

- District developing various additional resources for community air monitoring in South Central Fresno
- Development of these resources aimed to be scalable, portable, and rapidly deployable
- Instrumentation is regulatory-grade that will produce high-precision data
- Assets being developed include:
 - Mobile air monitoring trailers
 - Mobile air monitoring vans
 - Compact multi-pollutant air monitoring systems
 - Stand-alone PM_{2.5} instruments



Pollutants to be Measured in Community

- AB 617 requires that criteria and toxic pollutants be measured in selected communities as appropriate
 - Gas pollutants to be measured could include ozone, CO, NO/NO₂/NO_x, SO₂, H₂S, total and speciated VOCs (real-time and/or lab analysis), etc.
 - Particulate matter pollutants to be measured could include PM₁₀, PM_{2.5}, ultrafine PM, black carbon, PM_{2.5} speciation (real-time and/or lab analysis), toxic PM, etc.
- Feedback from Steering Committee will help District plan on which pollutants to measure and where equipment should be placed in the community

Recommendations for Initial Network Design

- Initial air monitoring assets available for South Central Fresno community include:
 - Ongoing monitoring at Fresno-Drummond, Fresno-Pacific, Fresno-Foundry sites
 - 1 air monitoring trailer
 - 1 air monitoring van
 - 1-2 compact multi-pollutant air monitoring systems (gas/PM)
 - 2-3 stand-alone PM2.5 monitors
 - Potential use of low-cost sensors to provide improved spatial coverage
- Air monitoring resources will be limited – can't measure everything, everywhere, at the same time
- District staff recommend that the air monitoring trailer be placed in a fixed location for the duration of the monitoring campaign
 - Will provide a fixed reference point and allow for analysis of longer term trends
- Other air monitoring assets could be moved more frequently to measure air quality in varying locations in the community – both within and outside of community boundary

Considerations for Community Air Monitoring

- Number of factors must be considered when planning for placement of air monitoring equipment
 - Permission of land-owner to place equipment on property
 - Establishment of lease agreements with property owner
 - Security of the location to protect equipment
 - Access to power for operating equipment
 - Proper monitoring siting with no obstructions
- These factors frequently affect ability to find potential monitoring locations
- These requirements should be kept in mind when making recommendations for monitoring locations

Questions for Steering Committee

- District asking South Central Fresno Community Steering Committee for thoughts and comments in the following areas:
 - What pollutants should be measured in the community?
 - Where should air monitoring assets be placed in the community?
 - Where should the trailer be installed for long-term operation?
 - How frequently should air monitoring assets be moved around the community?
- What specific information and resources could assist the Steering Committee in providing meaningful input in the design of the Air Monitoring Plan?

Contact Information

Contact the Valley Air District at:

AB617@valleyair.org

Fresno office (559) 230-6000

Modesto office (209) 557-6400

Bakersfield office (661) 392-5500

Jaime Holt Cell: (559) 309-3336

For information visit:

www.valleyair.org/community

www.valleyair.org

Follow us on
social media



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

