

Update on Stationary Sources within Community Boundary

South Central Fresno AB 617 Community Steering
Committee Meeting
April 13, 2022

Stationary Source CERP Commitments

- During Community Emissions Reduction Program (CERP) development, CSC & District identified measures to reduce emissions from various stationary sources, focusing on community-identified sources of concern
 - Biomass facilities, glass manufacturing, petroleum storage facilities & chrome plating operations
- South Central Fresno CERP Commitments for Stationary Sources:
 - **IS.1**-Incentives to reduce chrome plating emissions
 - **IS.4**-Enhanced inspection frequency of sources with emissions violations
 - **IS.7**-Evaluation of Best Available Retrofit Control Technology (BARCT) requirements
 - **IS.8**-Evaluation of rules beyond BARCT
 - **IS.9**-Expedited facility risk assessment under Air Toxics Hot Spot Information and Assessment Act (AB 2588)

Stationary Source CERP Commitments (cont'd)

CERP commitments for Stationary Sources will reduce criteria pollutant and air toxics emissions

NO_x

Precursor to ozone and PM_{2.5} formation

Primarily from combustion of fuel, including mobile sources, & industrial sources

PM_{2.5}

Directly emitted

Primarily from cooking, wood burning, road dust, equipment at industrial sources

SO_x

Precursor to PM_{2.5} formation

Primarily from burning of fossil fuels

VOC

Precursor to ozone formation

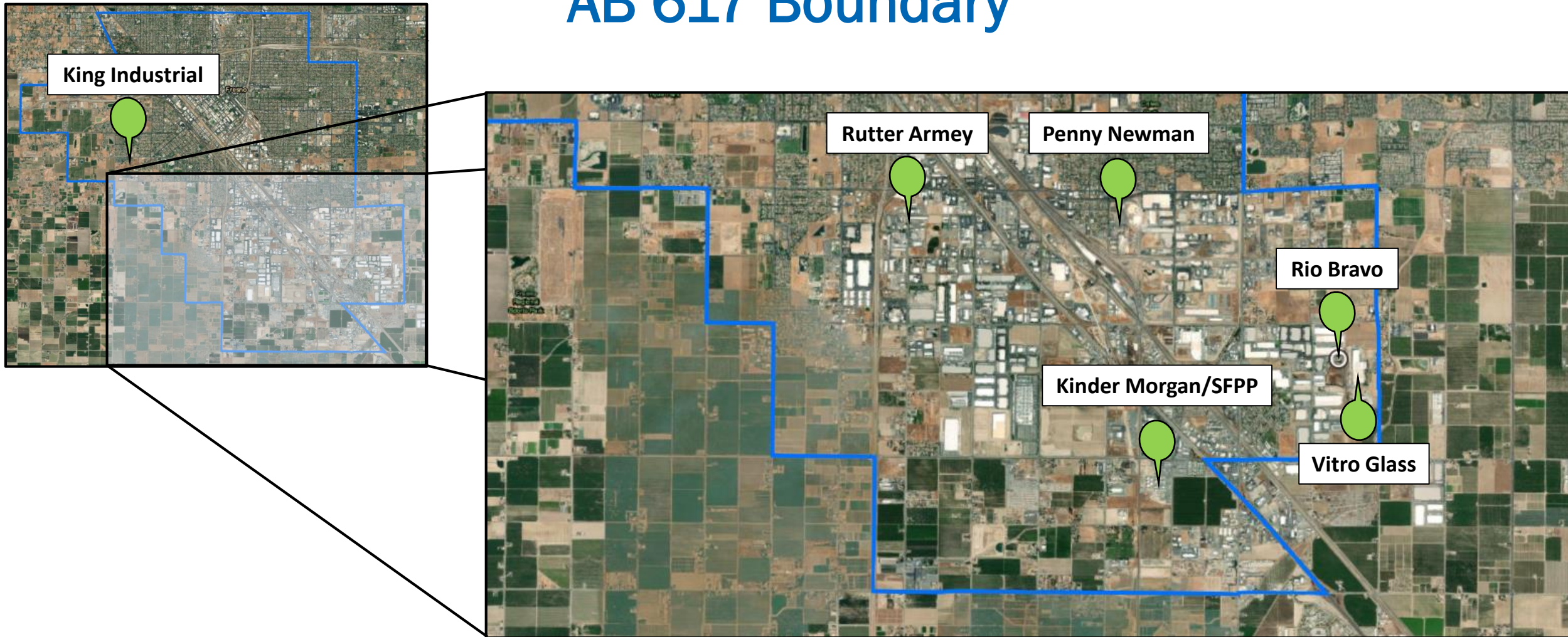
Primarily from cleaning & surface coatings, architectural coatings, & industrial sources

Air Toxics –hundreds of toxics, including:

Diesel Particulate Matter (DPM) from combustion of diesel fuel, primarily from heavy duty trucks

Benzene, Toluene, Ethylbenzene, Xylene (BTEX), type of VOC, primarily from oil refining & petroleum products

Map of Stationary Sources of Community Concern within AB 617 Boundary



Is there a source not listed you'd like to discuss?

Census Tract:
6019001500
(Population: 2,407)

The results for each indicator range from 0-100 and represent the percentile ranking of census tract 6019001500 relative to other census tracts.

Overall Percentiles

CalEnviroScreen 4.0 99
 Percentile



Rio Bravo

Vitro Glass

SFPP

Community Health

Exposures

Ozone	85
Particulate Matter 2.5	96
Diesel Particulate Matter	65
Toxic Releases	95
Traffic	25
Pesticides	95
Drinking Water	100
Lead from Housing	82

Sensitive Populations

Asthma	93
Low Birth Weight	34
Cardiovascular Disease	71

Environmental Effects

Cleanup Sites	98
Groundwater Threats	94
Hazardous Waste	99
Impaired Waters	0
Solid Waste	100

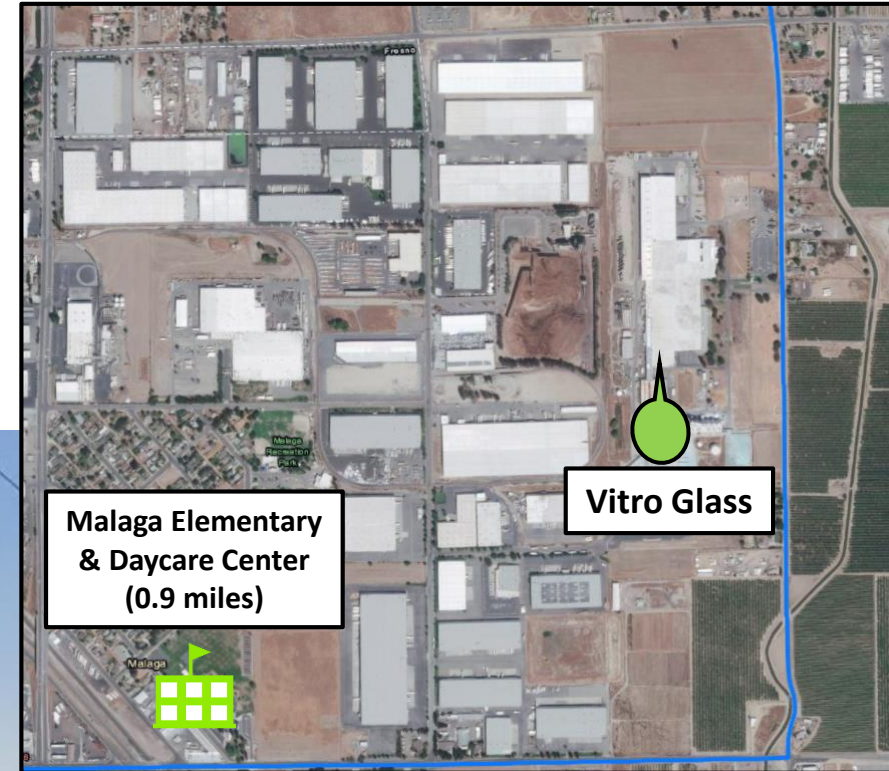
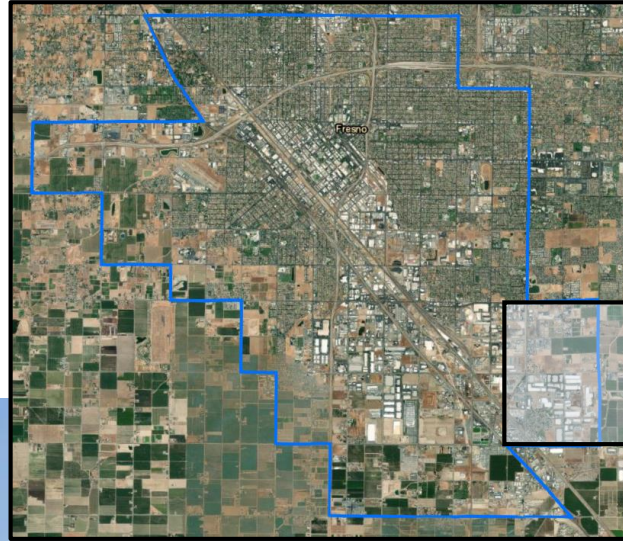
Socioeconomic Factors

Education	95
Linguistic Isolation	70
Poverty	94
Unemployment	88
Housing Burden	14

CARB, District, and OEHHA continuing to develop ways to assess cumulative impacts

Vitro Architectural Glass

Near the Southwest corner of Peach and North



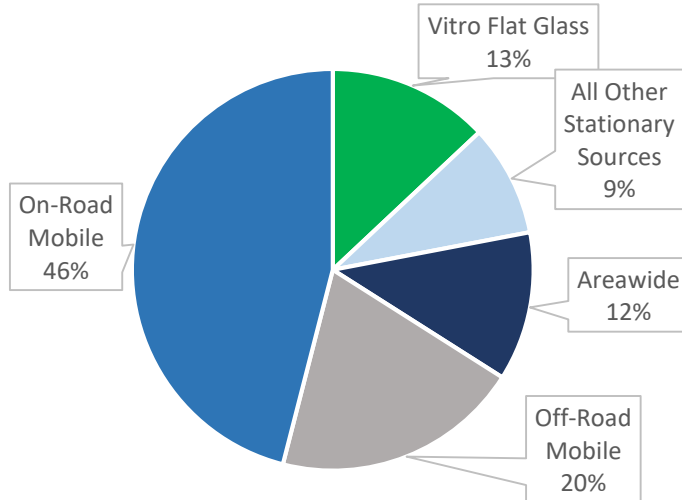
Flat glass manufacturing plant: Used in windows, etc.

Vitro Architectural Glass

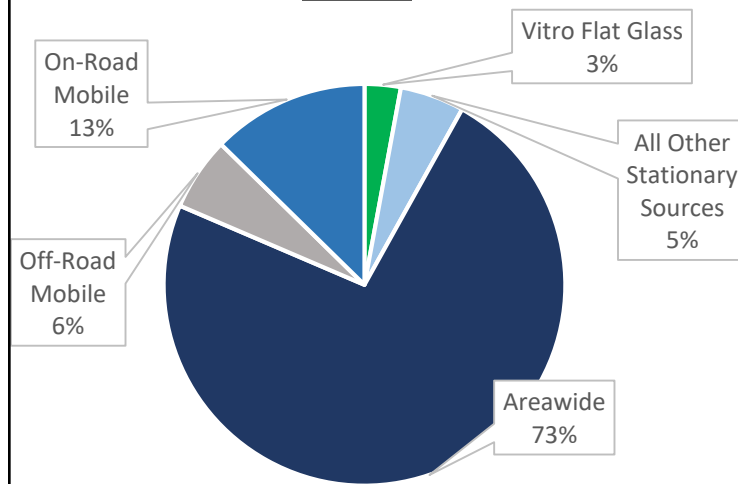
Emissions inventory in South Central Fresno AB 617 Community

*Based on the latest CARB
inventory for community

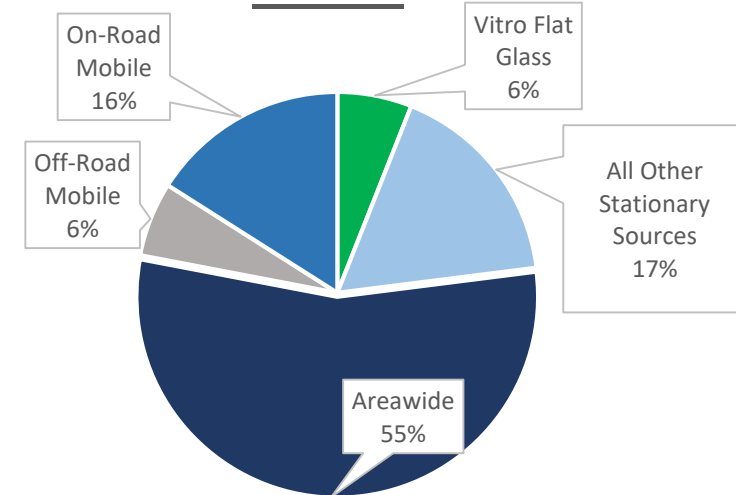
NOx



VOC



PM 2.5

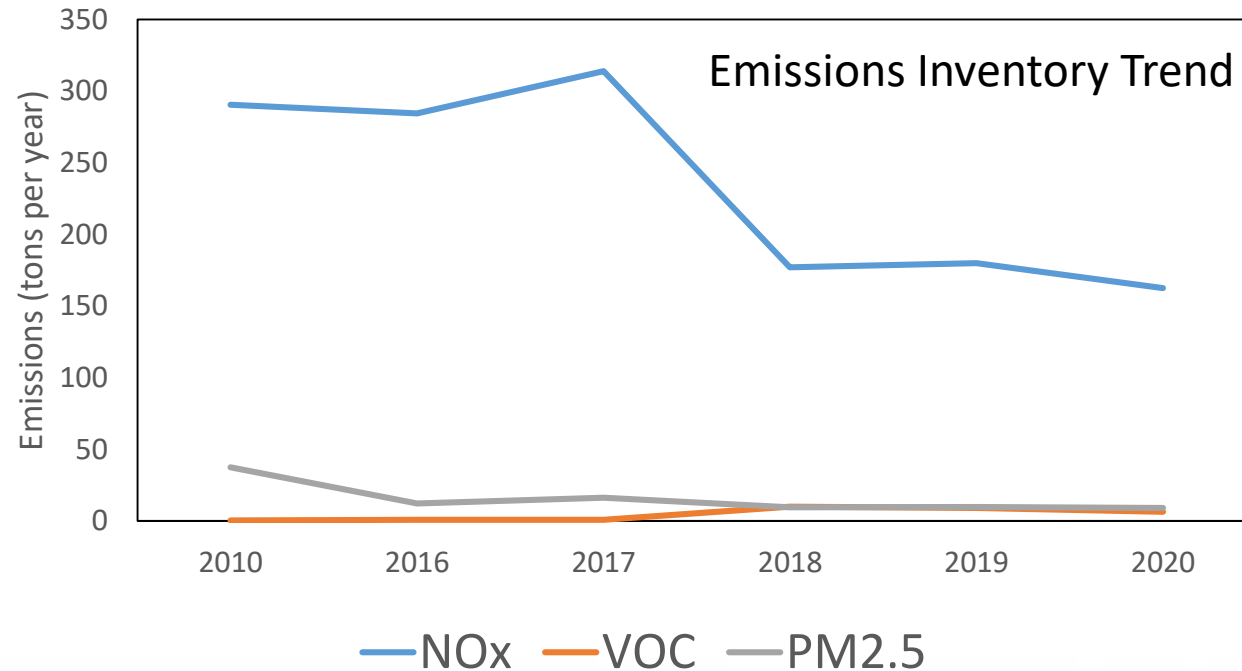


■ Vitro Flat Glass ■ All Other Stationary Sources ■ Areawide ■ Off-Road ■ On-Road

Vitro Architectural Glass

Emissions Inventory (tons per year)

Pollutant	2010	2016	2017	2018	2019	2020
NOx	290.38	284.36	313.83	177.11	179.87	162.42
VOC	0.46	0.77	0.92	9.99	9.11	6.49
PM2.5	37.40	12.27	16.18	9.56	9.68	9.00



Vitro Architectural Glass (cont'd)

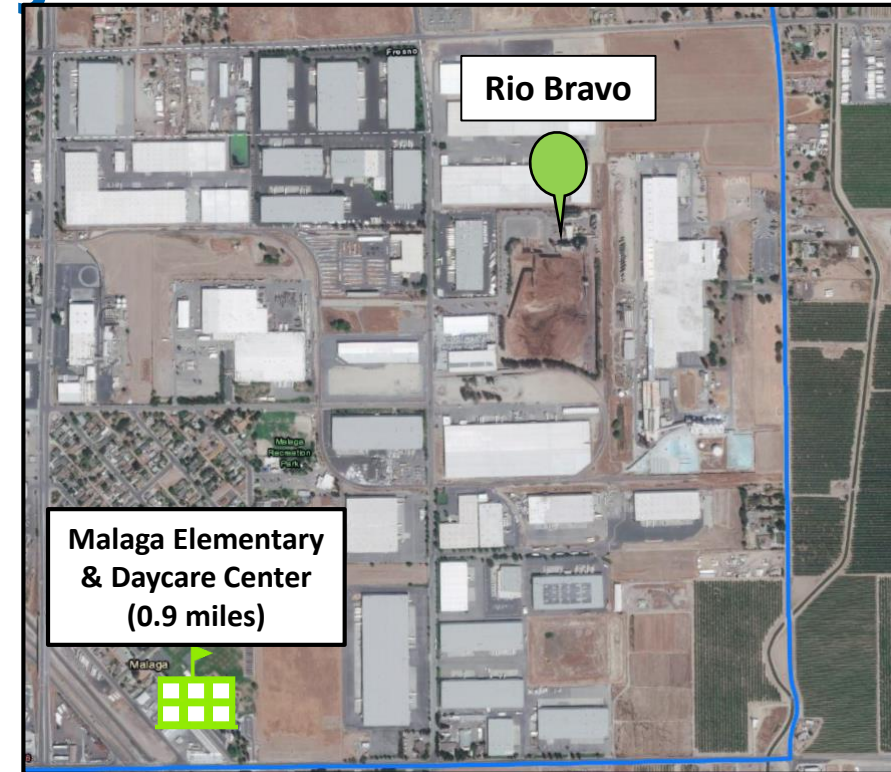
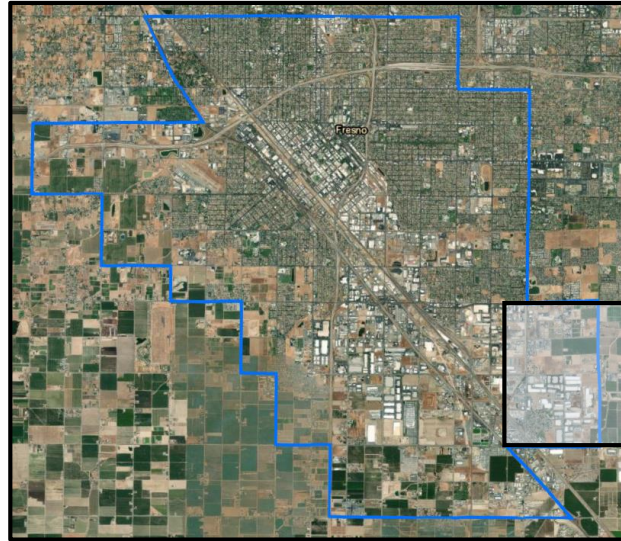
- **CERP Commitment:** Measure IS.8 – Evaluation of Rules (including for glass melting furnaces) for additional emissions reduction benefits
- **Action:** Amended Rule 4354 (Glass Melting Furnaces) December 2021
 - Rule requirements began in 1994, amended 6 times, NOx emissions already reduced by over 75%
 - December 2021 amendment lowered limits for NOx, PM, and SOx, resulting in further reductions of remaining emissions by 43% NOx, 49% PM, 4% SOx
 - Emissions from Vitro Glass will be reduced through these amendments
 - Public meetings and workshops noticed to CSC throughout 2021

Vitro Architectural Glass (cont'd)

- Per CERP measure IS.4, facility is subject to enhanced inspection frequency due to having an emissions violation within the last 3 years
 - Emissions violations over the last three years
 - 4/22/19 NOV Exceeded maximum differential pressure on dust collector serving the train shed
 - 6/27/19 NOV Failure of the dust collector serving the sand scale in basement
 - 8/26/19 NOV Leaking soda ash in the underground receiving pit and leaking material discharged from mixer level dust collector
 - 8/26/19 NOV Receiving sand while the train shed dust collector was not operating and insufficient dust control in the batch house basement
 - 4/30/21 NOV Unloading material while dust collector was not operating and insufficient dust control in the batch house basement
- Questions/Discussion

Rio Bravo Facility

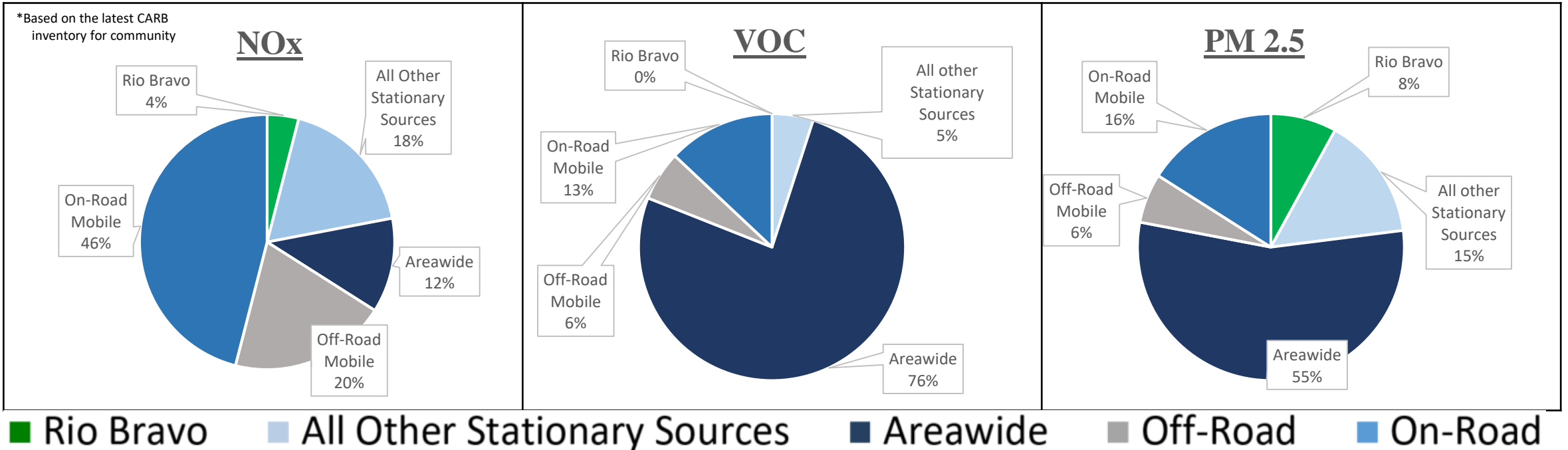
Near the Southeast corner of Willow and North



Biomass facility: As opposed to open burning, operation burns woody waste in controlled process to generate electricity

Rio Bravo Facility

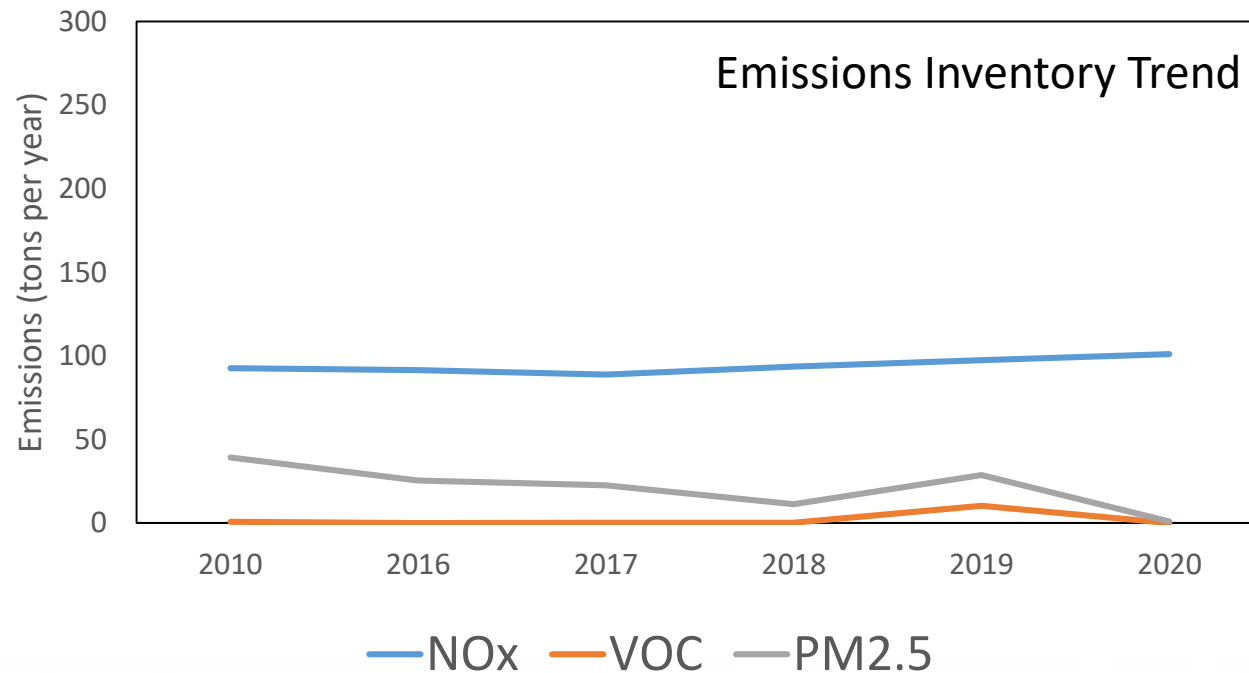
Emissions inventory in South Central Fresno AB 617 Community



Rio Bravo Facility

Emissions Inventory (tons per year)

Pollutant	2010	2016	2017	2018	2019	2020
NOx	92.50	91.40	88.66	93.58	97.40	101.02
VOC	0.63	0.00	0.05	0.06	10.34	0.00
PM2.5	39.14	25.44	22.49	11.21	28.73	0.94



Rio Bravo Facility (cont'd)

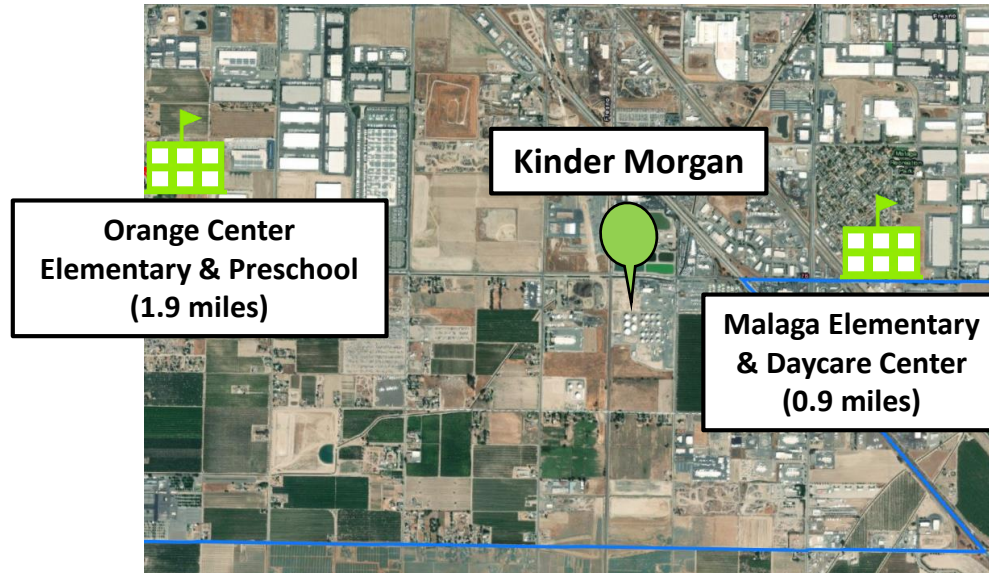
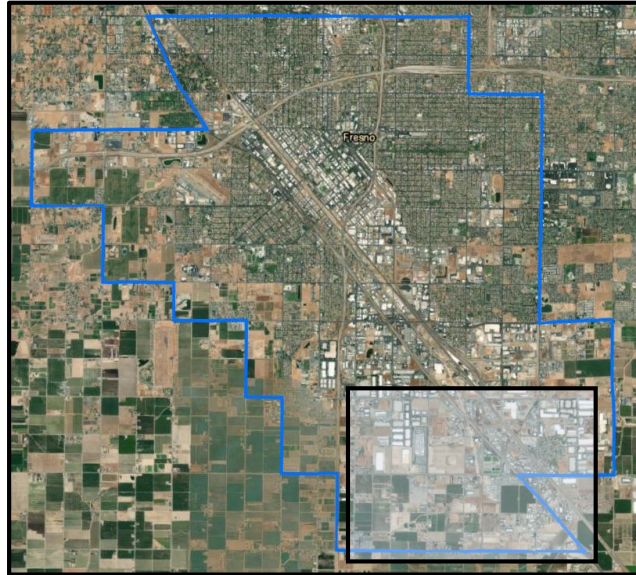
- **CERP Commitment:** Measure IS.8 – Evaluation of Rules (including for biomass facilities) for additional emissions reduction benefits
- **Action:** Amended Rule 4352 (Solid Fuel Fired Boilers, Steam Generators, Process Heaters) December 2021
 - Rule requirements began in 1994, amended 3 times, NOx emissions already reduced by approximately 75%
 - December 2021 amendment lowered NOx limits, established PM and SOx limits, resulting in further reductions of 15% NOx, 28% PM, 52% SOx
 - Emissions from Rio Bravo will be reduced through these amendments
 - Public meetings and workshops noticed to CSC throughout 2021

Rio Bravo Facility (cont'd)

- **Enhanced inspection frequency not in effect.** No emissions violations have been documented at the facility since CERP
 - No violations discovered since CERP adoption in February 2020
- **Questions/Discussion**

Kinder Morgan/SFPP Facility

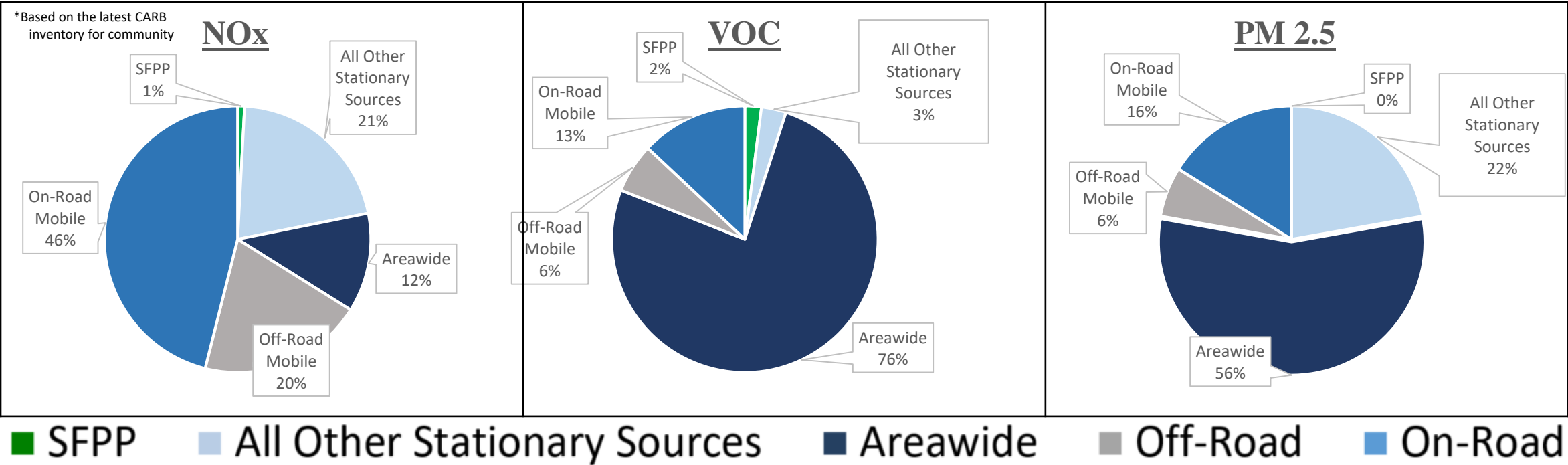
Near the Southeast corner of Cedar and Central



Petroleum products storage and transportation

Kinder Morgan/SFPP Facility

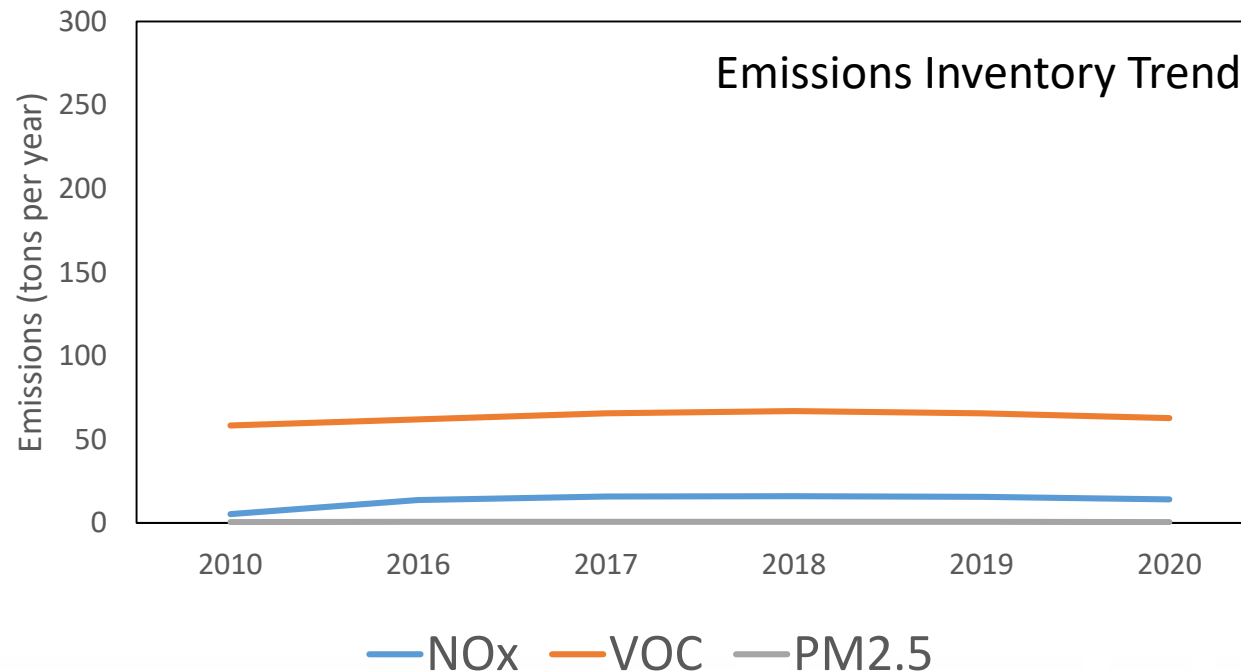
Emissions inventory in South Central Fresno AB 617 Community



Kinder Morgan/SFPP Facility

Emissions Inventory (tons per year)

Pollutant	2010	2016	2017	2018	2019	2020
NOx	5.22	13.71	15.78	16.07	15.59	14.17
VOC	58.37	61.91	65.53	66.89	65.59	62.67
PM2.5	0.58	0.64	0.70	0.71	0.70	0.60



Kinder Morgan/SFPP Facility

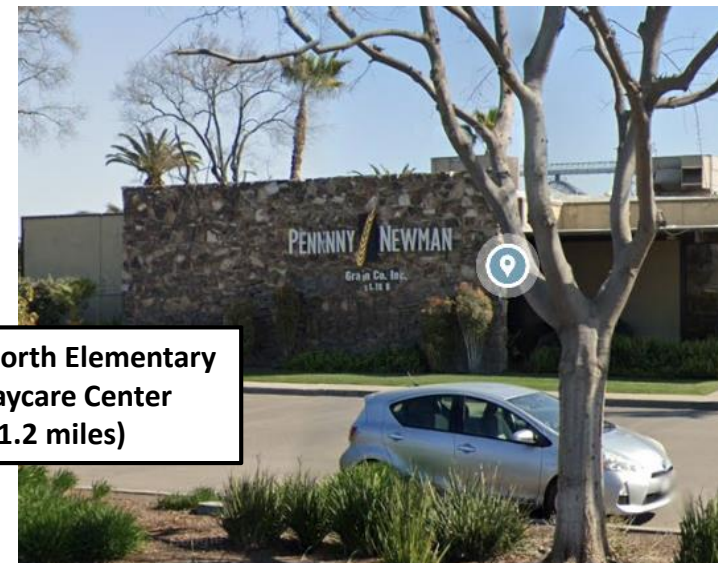
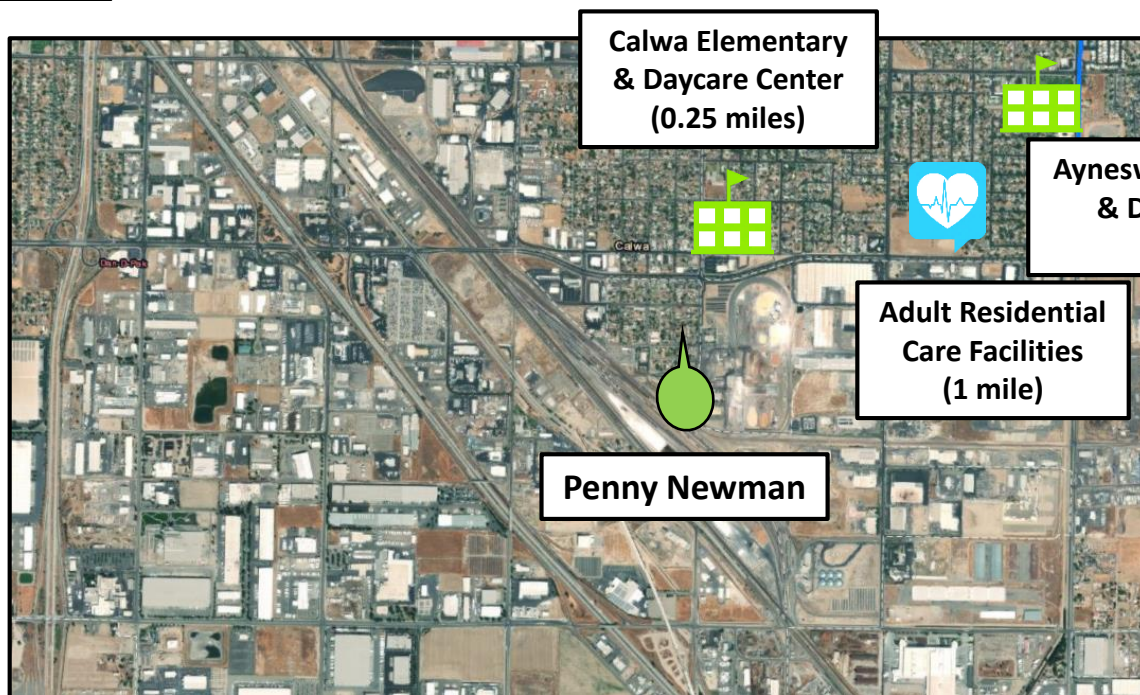
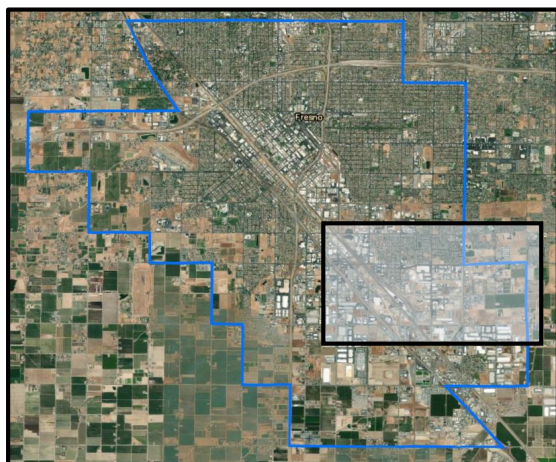
- **CERP Commitment:** Measure IS.7— Evaluation of BARCT Requirements
- **Action:** Through AB 617 BARCT evaluation, number of VOC leak detection and repair rules are going through rule amendment process
 - Rule evaluation will include Rules 4401, 4409, 4455, 4623, and 4624
 - For SFPP, Rules 4623 and 4624 apply
 - CSC members sent public workshop notices regarding public workshops held on October 7, 2021 and March 10, 2022
 - Amended rules to be considered by Governing Board in coming months

Kinder Morgan/SFPP Facility

- Per CERP measure IS.4, facility is subject to enhanced inspection frequency due to having an emissions violation within the last 3 years
 - Emissions violations over last 3 years
 - 4/7/20 NOV Driver did not connect the vapor hoses prior to loading
 - 6/4/20 NOV A 5,000 ppm leak was found on the West lane
 - 8/11/20 NOV Ladder seal had a 1 inch gap
- Questions/Discussion

Penny Newman

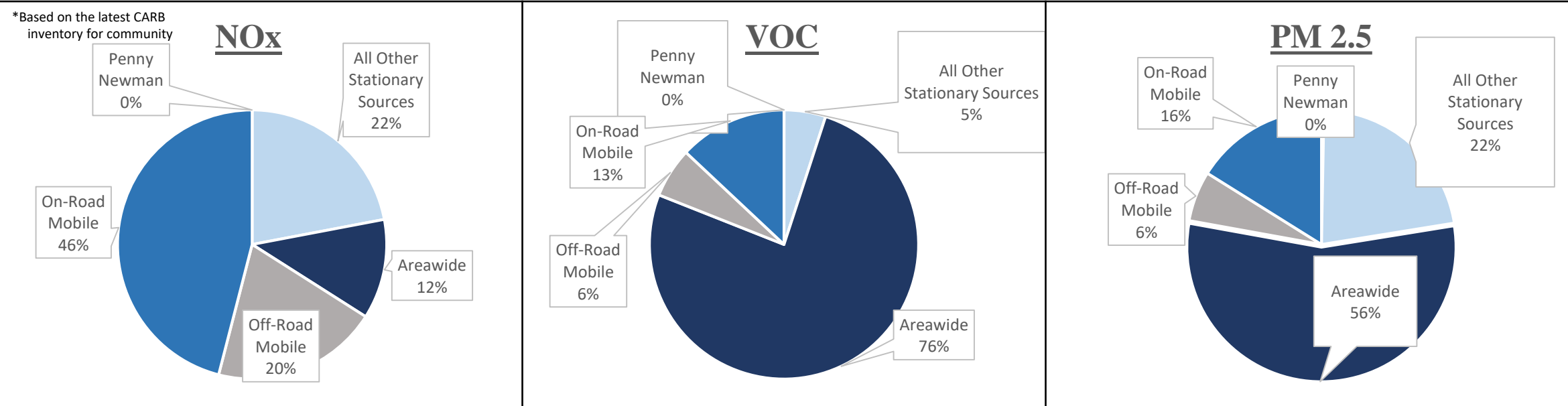
Near the Southeast
corner of Cedar and Jensen



Grain product storage
and transportation

Penny Newman

Emissions inventory in South Central Fresno AB 617 Community

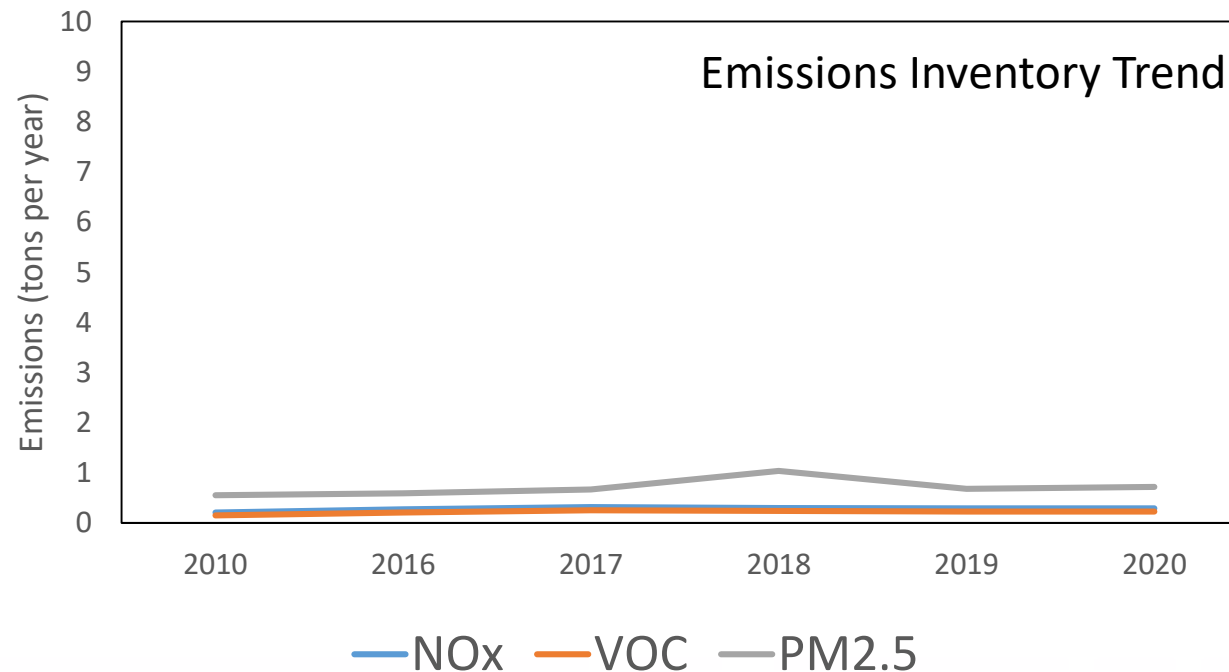


■ Penny Newman ■ All Other Stationary Sources ■ Areawide ■ Off-Road ■ On-Road

Penny Newman

Emissions Inventory (tons per year)

Pollutant	2010	2016	2017	2018	2019	2020
NOx	0.21	0.27	0.32	0.30	0.29	0.29
VOC	0.15	0.21	0.25	0.24	0.23	0.23
PM2.5	0.55	0.59	0.67	1.04	0.68	0.72



Penny Newman

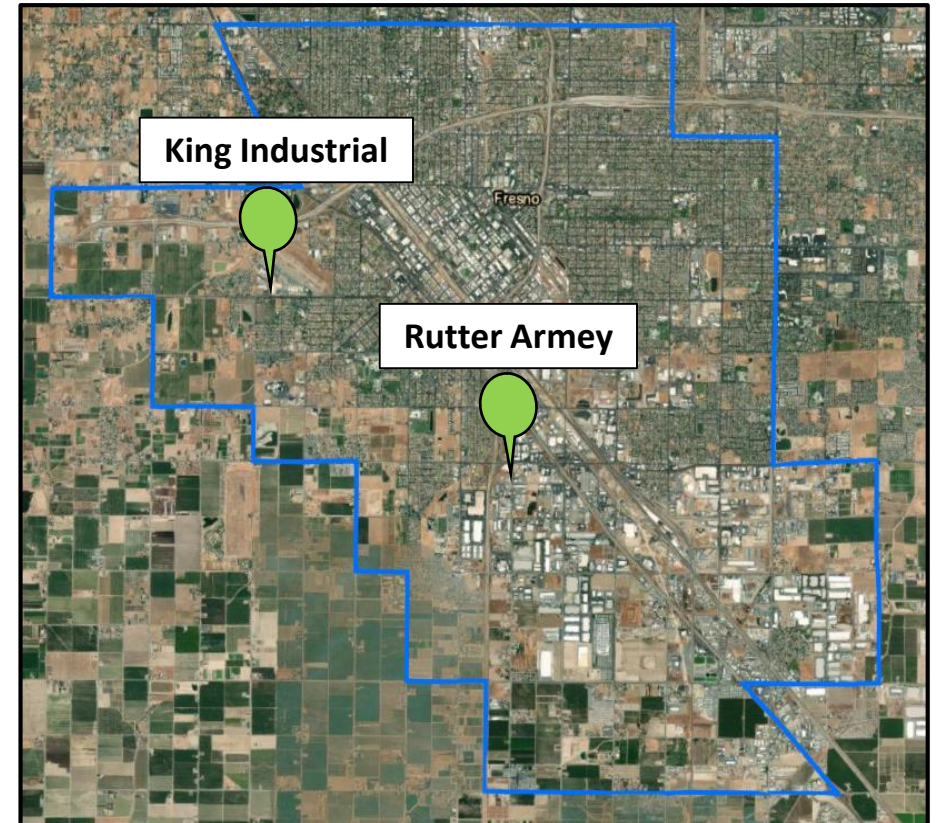
- **CERP Commitment:** Measure HD.10 Incentives for Railcar Movers/Switcher Locomotives
- **Action:** Working with Penny Newman to assess replacement of older railcar mover with new, cleaner model
- **Per CERP measure IS.4, facility is subject to enhanced inspection frequency due to having an emissions violation within the last 3 years**
 - Emissions violations over last 3 years
 - 1/7/20 NOV 50957 Monthly CO monitoring showed emissions exceeded 50 ppm limit on 4 occasions. Source failed to return emissions to within the acceptable range within 1 hour of detection.
- **Questions/Discussion**

Chrome Plating Operations

- 2 hard chrome plating facilities within the AB 617 community
- **Subject to State and Local requirements**
 - ATCM 17 California Code of Regulation 93102 – *Airborne Toxic Control Measure for Chromium Plating and Chromic Acid Anodizing*
 - CARB in process of amending rule, public technical working group scheduled Jan 20, 2022
 - District Rule 7011 – *Chrome Plating and Chromic Acid Anodizing Facilities*
 - District Rule 2201 - *New and Modified Source Review Rule*
- **CERP Commitment:** Measure IS.1 —provide incentives to the operations to convert to the use of trivalent chromium or installing advanced control technologies
- **Action:** Working with local facilities to continue to assess current control technologies, discuss upcoming regulations, and explore feasibility of installing advanced controls

Chrome Plating in South Central Fresno

- **King Industrial Hard Chrome**
 - Hard chrome plating facility
 - Utilizes a Merlin Tank Cover and Exhaust System which provides more than 99% control
- **Rutter Armey**
 - Hard chrome plating facility
 - Utilizes a three-stage control system which provides more than 99% control



Air Monitoring at King Industrial Hard Chrome



- **March 31, 2021:** District collected samples at two locations nearby the chrome plating operation
 - Sent to third party lab to analyze for presence of Hexavalent Chromium
- **No Hexavalent Chromium** present in the samples collected
 - Lowest value the lab can detect is $0.00004 \mu\text{g}/\text{m}^3$
 - Chronic Reference Exposure Level for Hexavalent Chromium $0.2 \mu\text{g}/\text{m}^3$

Air Monitoring at Rutter Armey



- **May 13, 2021:** District collected samples at two locations nearby the chrome plating operation
 - Sent to third party lab to analyze for presence of Hexavalent Chromium
- **No Hexavalent Chromium** present in the samples collected
 - Lowest value the lab can detect is $0.00004 \mu\text{g}/\text{m}^3$
 - Chronic Reference Exposure Level for Hexavalent Chromium $0.2 \mu\text{g}/\text{m}^3$

Other Stationary Source CERP Commitments

- **IS.9**-Expedited facility risk assessment under Air Toxics Hot Spot Information and Assessment Act (AB 2588)
 - The District is currently implementing a plan designed to expedite the assessment of the health risk associated with each of the facilities located in South Central Fresno
 - Progress updated monthly on CERP measure tracker
- Reduce emissions as a result of warehouses in boundary
 - Measures to replace HD diesel trucks, replace locomotive switchers, install charging stations, reduce idling through enforcement actions, study potential new truck routes, install vegetative barriers, and keep the community engaged through a land use subcommittee