

## Year 2 Community Prioritization Process

Through ongoing discussion with Valley residents, advocates, stakeholders, and CARB, the District has received significant interest in focusing the District's prioritization and selection process on a community located in one of the three northern region counties in the District (San Joaquin, Stanislaus, and Merced). The District agrees that there have been significant, effective resources already at work under the first year selection process for communities in the southern and central regions. Therefore, the District focused this round of community prioritization on the disadvantaged communities within northern region. Notwithstanding, the District welcomes all community suggestions and nominations for prioritization of communities throughout all regions of the Valley under AB 617.

In identifying the potential list of communities to be addressed under second-year implementation of AB 617, the District looked initially at the topmost communities in the northern region of the District, based on the State's CalEnviroScreen tool (CES 3.0) using the following two criteria:

1. ***Most impacted communities within the Northern three counties in the District as determined by CalEnviroScreen, with overall CES score in top 5% statewide:*** The District believes that the true burden on a community must include cumulative burden from multiple factors including socioeconomic conditions and health impacts from other causes including air pollution. The state has developed and utilizes CalEnviroScreen as the primary tool for identifying disadvantaged communities in California. The ranking methodology in CalEnviroScreen is based on the overall cumulative burdens derived from the following socioeconomic and health risk factors:
  - **Ozone:** Mean of summer months (May-October) of the daily maximum 8-hour ozone concentration (ppm), averaged over three years (2012 to 2014).
  - **PM2.5:** Annual mean concentration of PM2.5 (average of quarterly means,  $\mu\text{g}/\text{m}^3$ ), over three years (2012 to 2014).
  - **Diesel particulate matter:** Spatial distribution of gridded diesel PM emissions from on-road and non-road sources for a 2012 summer day in July (kg/day).
  - **Drinking water contaminants:** Drinking water contaminant index for selected contaminants.
  - **Pesticide use:** Total pounds of selected active pesticide ingredients (filtered for hazard and volatility) used in production-agriculture per square mile, averaged over three years (2012 to 2014).
  - **Toxic releases from facilities:** Toxicity-weighted concentrations of modeled chemical releases to air from facility emissions and off-site incineration (averaged over 2011 to 2013).
  - **Traffic density:** Sum of traffic volumes adjusted by road segment length (vehicle-kilometers per hour) divided by total road length (kilometers) within 150 meters of the census tract boundary (2013).

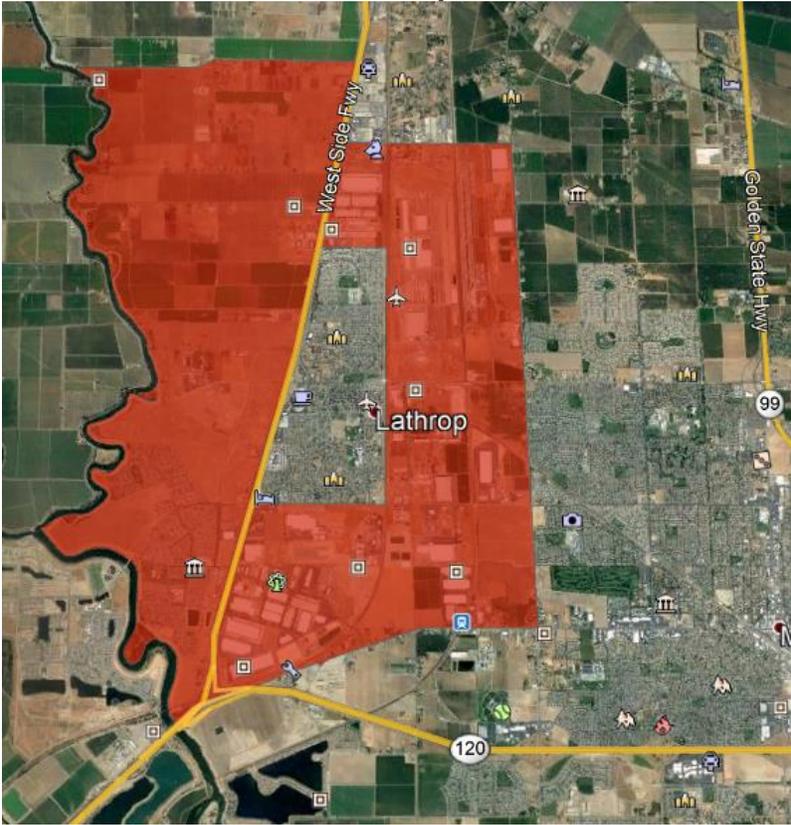
- **Cleanup sites:** Sum of weighted sites within each census tract, i.e., scored on a weighted scale of 0 to 12 in consideration of both the site type and status.
  - **Groundwater threats:** Sum of weighted scores for sites within each census tract.
  - **Hazardous waste generators and facilities:** Sum of weighted permitted hazardous waste facilities and hazardous waste generators within each census tract (hazardous waste data is from 2012 to 2014).
  - **Impaired water bodies:** Summed number of pollutants across all water bodies designated as impaired within the area (2012).
  - **Solid waste sites and facilities:** Sum of weighted solid waste sites and facilities (as of December 2016).
  - **Asthma:** Spatially modeled, age-adjusted rate of emergency department (ED) visits for asthma per 10,000 (averaged over 2011 to 2013).
  - **Cardiovascular disease:** Spatially modeled, age-adjusted rate of emergency department (ED) visits for AMI per 10,000 (averaged over 2011 to 2013).
  - **Low birth weight infants:** Percent low birth weight (averaged over 2006 to 2012).
  - **Educational attainment:** Percent of the population over age 25 with less than a high school education (5-year estimate, 2011 to 2015).
  - **Housing burdened low income households:** Percent of households in a census tract that are both low income (making less than 80% of the HUD Area Median Family Income) and severely burdened by housing costs (paying greater than 50% of their income to housing costs). (5-year estimates, 2009 to 2013).
  - **Linguistic isolation:** Percent limited English-speaking households (2011 to 2015).
  - **Poverty:** Percent of the population living below two times the federal poverty level (5-year estimate, 2011 to 2015).
  - **Unemployment:** Percent of the population over the age of 16 that is unemployed and eligible for the labor force. Excludes retirees, students, homemakers, institutionalized persons except prisoners, those not looking for work, and military personnel on active duty (5-year estimate, 2011 to 2015).
2. ***Communities with high CalEnviroScreen Score for PM2.5, diesel PM, and pollution burden characteristics:*** In order to ensure the District was targeting communities that were particularly impacted by harmful air pollutants, the District focused on pollution burden, PM2.5, and diesel particulate emissions scores for the census tracts identified in step 1. PM2.5, and diesel particulate emissions in particular, are more indicative of air pollution burdens than overall CES score.

Using the above criteria, for the purpose of presenting preliminary prioritization of communities, the District initially identified the top 25 census tracts in the District's northern region of the Valley. The District then agglomerated these census tracts and surrounding localities into 5 identifiable communities throughout the northern Valley (listed north to south):

**Southwest Stockton**



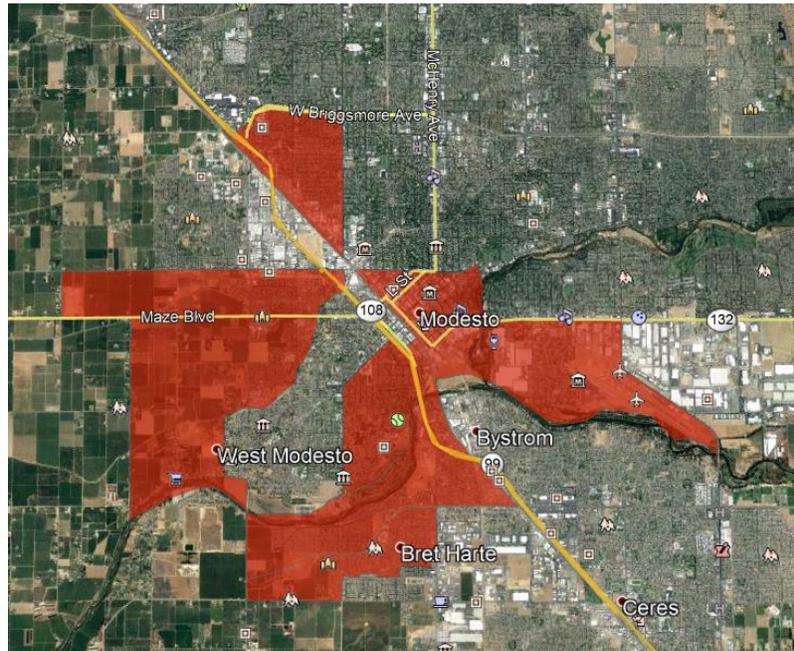
**Lathrop**



## Riverbank



## Southwest Modesto



## Northwest Merced



### Prioritizing Communities for Action under AB 617

To ensure that community prioritization was conducted in a manner that focused on air pollution exposure and socioeconomic vulnerability in accordance with CARB's *Community Air Protection Blueprint*, the District looked at a number of factors to prioritize the identified communities for action under AB 617. Although exposure to high levels of all air pollutants has an impact to public health, numerous studies have indicated that prolonged exposure to high concentrations of PM<sub>2.5</sub> can have an even greater impact on health, including decreased lung function, hypertension, heart disease, cancer, and heart failure. Due to this, the *Blueprint* prioritizes PM<sub>2.5</sub> and diesel PM and other air toxics. The following factors and associated weights were used to prioritize the 5 identified communities:

- **Overall CES 3.0 Score (weight: 20%)**
- **Overall Pollution Burden Score (weight: 20%)**
- **PM<sub>2.5</sub> Score (weight: 30%)**
- **Diesel PM Score (weight: 30%)**

## **Recommended Prioritization of Valley Communities for Year 2 of AB 617**

Utilizing the above methodology, identified communities were evaluated to provide a prioritized list for the entire San Joaquin Valley. Based on the results of the District's analysis in Table 1 and Table 2 below, the District is considering recommending southwest Stockton be selected by CARB for second-year resources for the development of community air monitoring and emissions reduction programs.

**Table 1 Summary of Statewide Percentile Rank for Indicators among Census Tracts in District's Identified Northern Region Communities**

<b>CalEnviroScreen 3.0 Percentile Score</b>							
Rank	Identified Communities	Overall CES Score	PM 2.5 Score	Diesel PM Score	Pollution Burden Score	Community Population	Area (Mile <sup>2</sup> )
1	SW Stockton	100*	94	74	100	50,938	12.2
2	SW Modesto	100*	93	77	99	42,975	12.7
3	NW Merced	98	93	70	93	2,406	1.1
4	Lathrop	99	82	41	100	6,006	14.4
5	Riverbank	97	93	47	99	5,003	1.0

\*Highest census tract score

**Table 2 Summary of CES Scores and Community Characteristics among Census Tracts in District's Identified Northern Region Communities**

<b>CalEnviroScreen 3.0 Raw Score</b>						
Rank	Identified Communities	Overall CES Score	PM 2.5 Score	Diesel PM Score	Pollution Burden Score	Weighted Total Score
Weight		20%	30%	30%	20%	100%
1	SW Stockton	82.49*	13.61	24.12	74.48	427.1
2	SW Modesto	78.52*	12.89	25.26	71.92	415.3
3	NW Merced	63.40	12.89	22.83	60.88	355.7
4	Lathrop	71.30	12.05	13.47	80.10	379.4
5	Riverbank	62.64	12.89	15.31	70.56	351.0

\*Highest census tract score

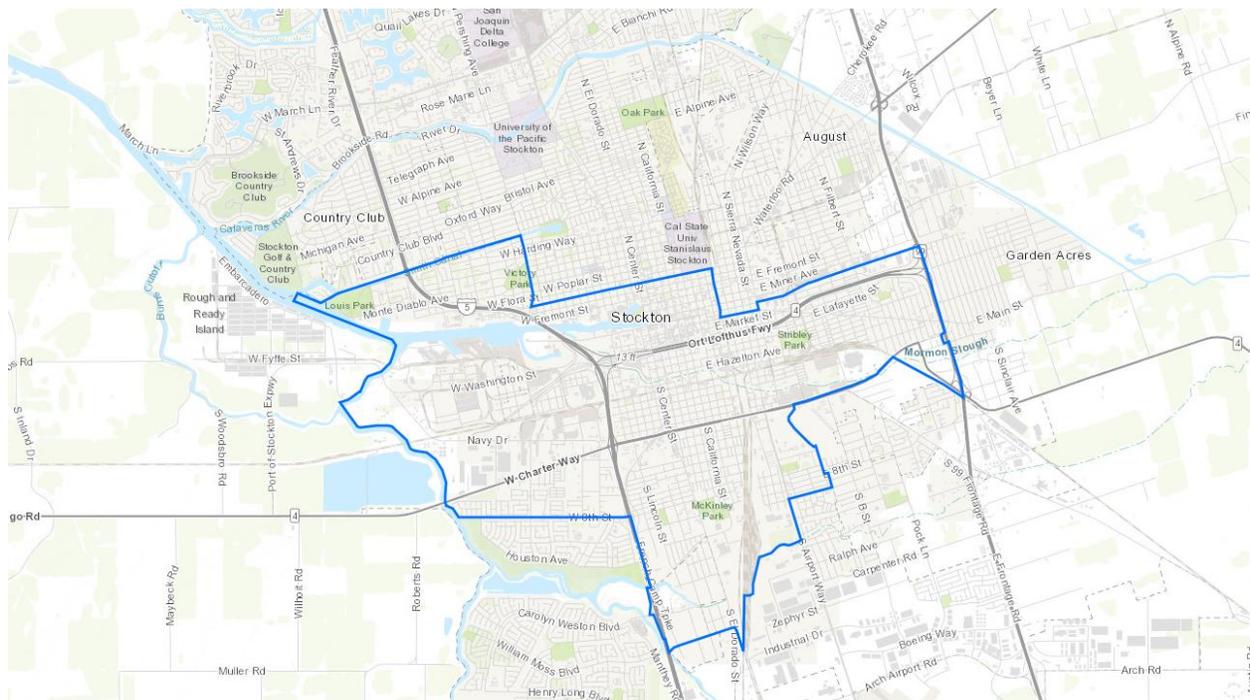
### **Southwest Stockton**

Stockton is the largest metropolitan area in the northern region of the District, with a current estimated population over 310,000. A number of heavily trafficked freeways

pass through the City of Stockton, including interstate 5 and highways 99 and 4, contributing a significant amount of PM2.5 emissions in the community. Specifically, Southwest Stockton (Figure 1) is a densely populated community within the City of Stockton directly impacted by large freeways, the Port of Stockton, freight locomotives, industrial sources, and emissions traveling downwind from the northern portion of the city.

The proposed community of Southwest Stockton defined in Figure 1 is approximately 12.2 square miles and has an estimated population of 51,000. Using the state CalEnviroScreen 3.0 (CES) tool, the entire Southwest Stockton proposed community ranks in the top 5% most disadvantaged communities in California and contains the highest ranked census tract in the District’s northern region (San Joaquin, Stanislaus, and Merced Counties) for overall CES score. This community also ranked highest in PM2.5 impacts, and second highest on diesel PM exposure, compared to all other disadvantaged communities in the northern District counties. Additionally, most of the community is within the “Rise Stockton” Transformative Climate Community (TCC) boundary, which allows the District and community to leverage resources to maximize benefits under AB617.

**Figure 1 Community of Southwest Stockton**



The Southwest Stockton community is impacted across a number of health and pollution indicators. The following table summarizes the percentile scores (based on statewide comparison in CES) among the census tracts located in the most impacted communities in the District’s northern three counties of San Joaquin, Stanislaus, and Merced. As this summary indicates, the Southwest Stockton community includes the highest percentiles among its census tracts for overall burden (pollution, poverty, and

population indicators), PM2.5 concentrations, and pollution burden, and the second highest among these communities for diesel PM, with many averages exceeding the 90th percentile for the state. Specifically, the average overall CES score, PM2.5 exposure, and pollution burden values are all above the 90th percentile. It should be noted that this community includes the census tract with the highest overall CES score (100<sup>th</sup> percentile statewide) in the District's northern region, which represents a number of health and socioeconomic factors (asthma, cardiovascular disease, low birth weight, educational attainment, housing burdened low-income households, linguistic isolation, poverty, and unemployment).