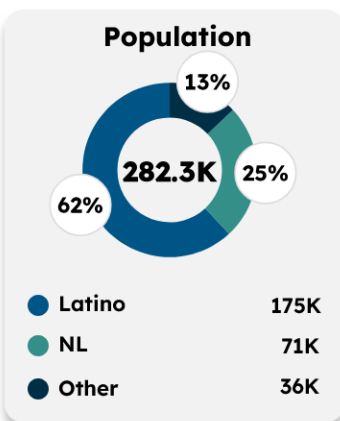


# AIR POLLUTION

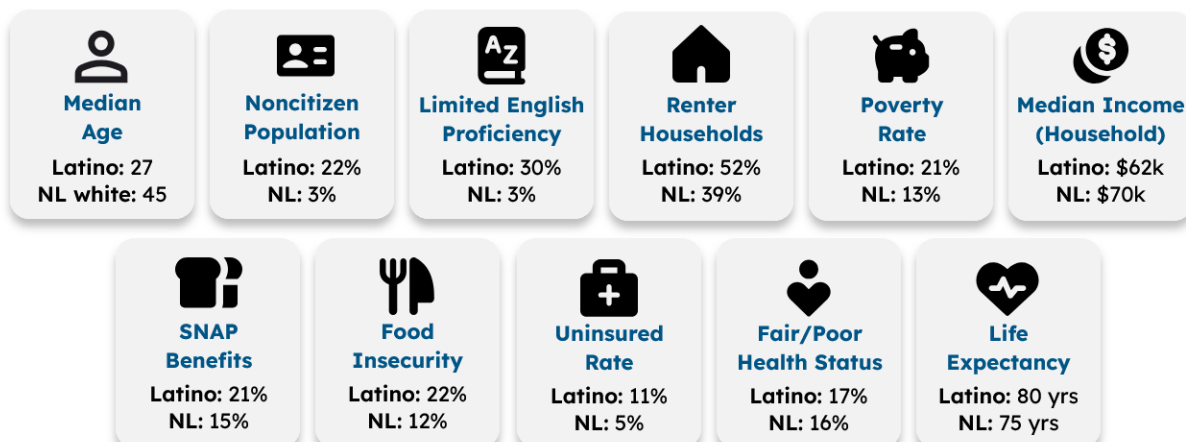
## Merced County

### County Statistics

#### Factors Influencing Exposure to Air Pollution



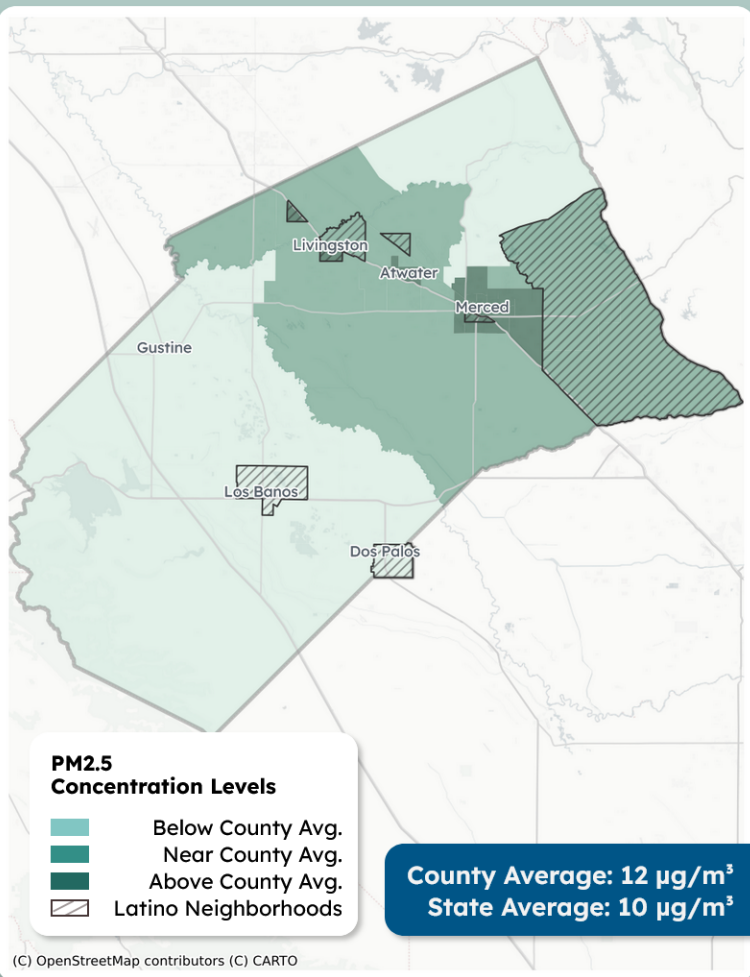
\*NL = Non-Latino



### Neighborhood Statistics

#### Air Pollutants

#### Latino Neighborhoods and Exposure to Particulate Matter 2.5 (PM2.5), 2015- 2017

Note:  $\mu\text{g}/\text{m}^3$  = one-millionth of a gram per cubic meter of airNote: California's state standard for PM2.5 is an annual average of  $12 \mu\text{g}/\text{m}^3$ , while the federal standard is  $9 \mu\text{g}/\text{m}^3$ . There is no state or federal or state standard for Diesel PM.

#### PM2.5

PM2.5 is produced from sources like vehicle exhaust, wildfires, and industrial activity. These fine air particles enter the lungs and bloodstream and worsen conditions like asthma and heart disease.

Latino neighborhoods had about the same exposure to PM2.5 similar to NL neighborhoods. **$12 \mu\text{g}/\text{m}^3$** 

Latino neighborhoods

 **$12 \mu\text{g}/\text{m}^3$** 

NL neighborhoods

Annual mean concentration

#### Diesel PM

Diesel emissions from vehicles and heavy-duty equipment release harmful particulate matter. Exposure to diesel exhaust can raise blood pressure, trigger heart attacks, and worsen lung conditions.

Latino neighborhoods had higher exposure to diesel PM than NL neighborhoods.**0.14 tons/year**

Latino neighborhoods

**0.13 tons/year**

NL neighborhoods

Emissions

Latino neighborhoods = Census tracts with 70%+ Latino residents

Non-Latino neighborhoods = Census tracts with 70%+ non-Latino residents

## Neighborhood Statistics (cont.)

### Proximity to Major Sources of Air Pollution

**Note:** Exposure and proximity scores take into account the number of sites/facilities and their proximity to neighborhoods.

**Higher scores = more exposure to pollutants for residents.**

**Cleanup sites**, such as Superfunds, are polluted with materials like lead and asbestos. Examples include old and abandoned processing plants and manufacturing facilities.

#### Exposure Score



**Hazardous waste facilities** are treatment, storage, and disposal sites. They can release toxic substances such as carcinogens, mercury, and asbestos into the air, water, and soil.

#### Exposure Score



**RMP facilities** are sites where hazardous chemicals—like propane, pesticides, ammonia, and explosives—are present, posing risks to the environment and communities if released.

#### Proximity Score



### Vehicle Types and Traffic

**Lower-emission vehicles (LEVs)** use battery electric, plug-in hybrid, or hybrid technology to reduce greenhouse gas emissions.

#### % of LEVs owned



**Clunker vehicles** (vehicles 20 years or older) emit high levels of pollutants because they lack advanced emission-control equipment.

#### % of clunker vehicles owned



**Traffic density** measures the concentration of vehicles on roads within an area. Neighborhoods near major roadways face greater exposure to harmful emissions released from vehicles.

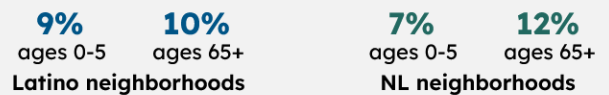
#### Vehicle kilometers per hour



### Vulnerable Groups

#### Age

Children and older adults are more vulnerable to air pollution and have a higher risk of developing respiratory and cardiovascular diseases.



#### Health

Air pollution worsens pre-existing health conditions like asthma and coronary heart disease, increasing emergency visits and health complications. Long-term exposure to air pollution can cause chronic illness and premature death.

#### % of Adults (18+) with Pre-Existing Conditions



#### Emergency Department Visits (per 10,000 people)



#### Low Birth Weight (LBW) Babies

LBW babies are born under 5 lbs. LBW increases the risk of infant mortality, developmental delays, and chronic health conditions. Exposure to air pollution, such as PM2.5, contributes to higher rates of LBW babies.

#### % of Infants



### Disadvantaged Communities

The CA Environmental Protection Agency defines disadvantaged communities based on their environmental pollution burden and population characteristics. Under Senate Bill 535, revenue from CA's Cap-and-Trade Program is partly directed toward these communities through the CA Climate Investments program to reduce pollution, enhance climate resilience, and improve health and economic well-being.

#### % of Disadvantaged Communities

