



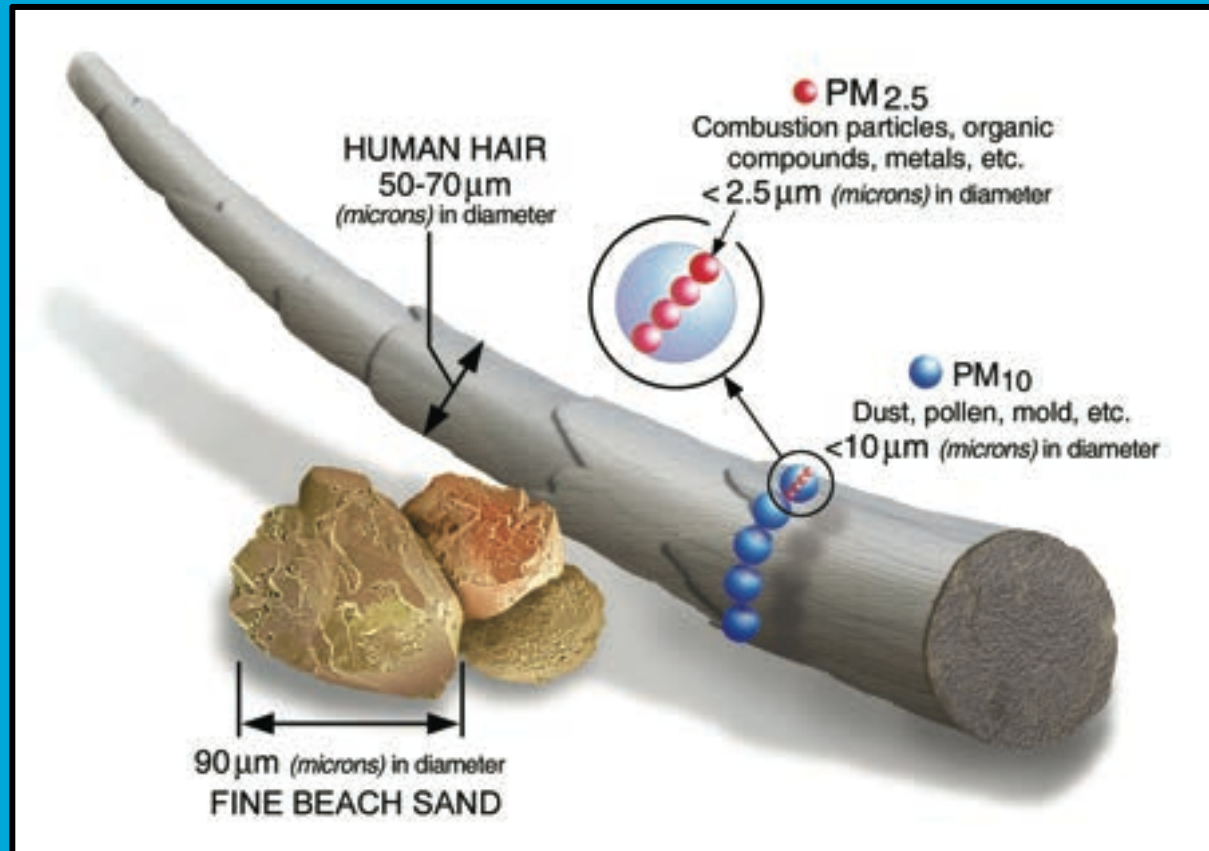
Community Air Monitoring Program

*Data presentation for
East Houston*

March 2024



Particulate Matter 2.5 (PM_{2.5})



What is Particulate Matter?

Tiny particles - dust, dirt, smoke, soot etc – that are in the air

Released by industries, vehicles, construction sites, fires, unpaved roads

Can irritate the eyes, nose, throat, and penetrate into the lungs and bloodstream

Contributes to heart & lung diseases, asthma, cancer, strokes

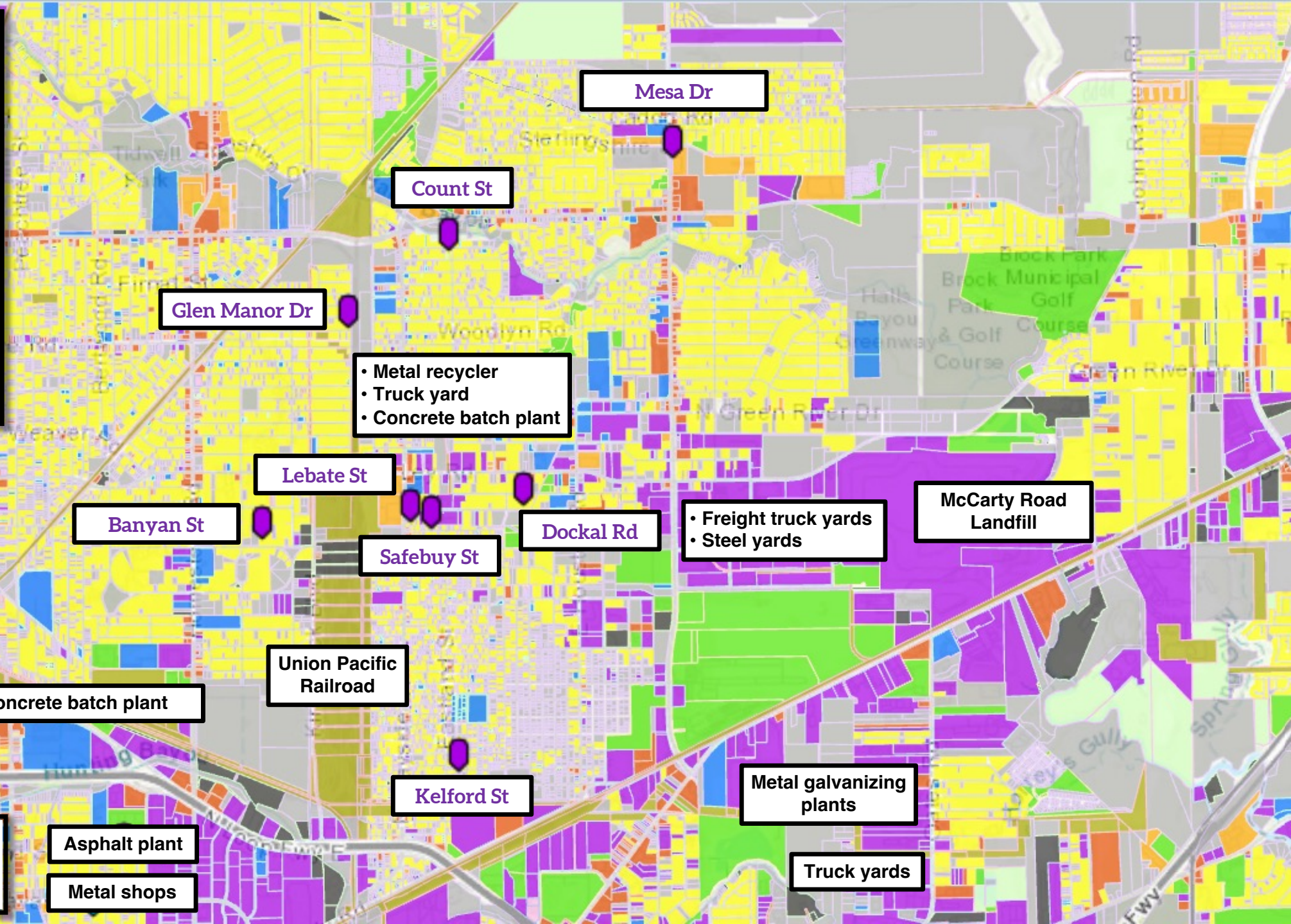
Breathing in PM results in more than 4 million premature deaths each year due to cardiovascular, respiratory, and other illnesses, according to the Global Burden of Disease.



Surrounding Area Map

Residences, Schools, Industries, Air Monitors

- Single-Family Residential
- Multi-Family Residential
- Commercial
- Office
- Public & Institutional
- Industrial
- Park & Open Spaces
- Transportation & Utility
- Undeveloped
- Agriculture Production
- Unknown



Mesa Dr

Count St

Glen Manor Dr

- Metal recycler
- Truck yard
- Concrete batch plant

Lebate St

Banyan St

Dockal Rd

- Freight truck yards
- Steel yards

McCarty Road
Landfill

Safebuy St

Concrete batch plant

Union Pacific
Railroad

Kelford St

Metal galvanizing
plants

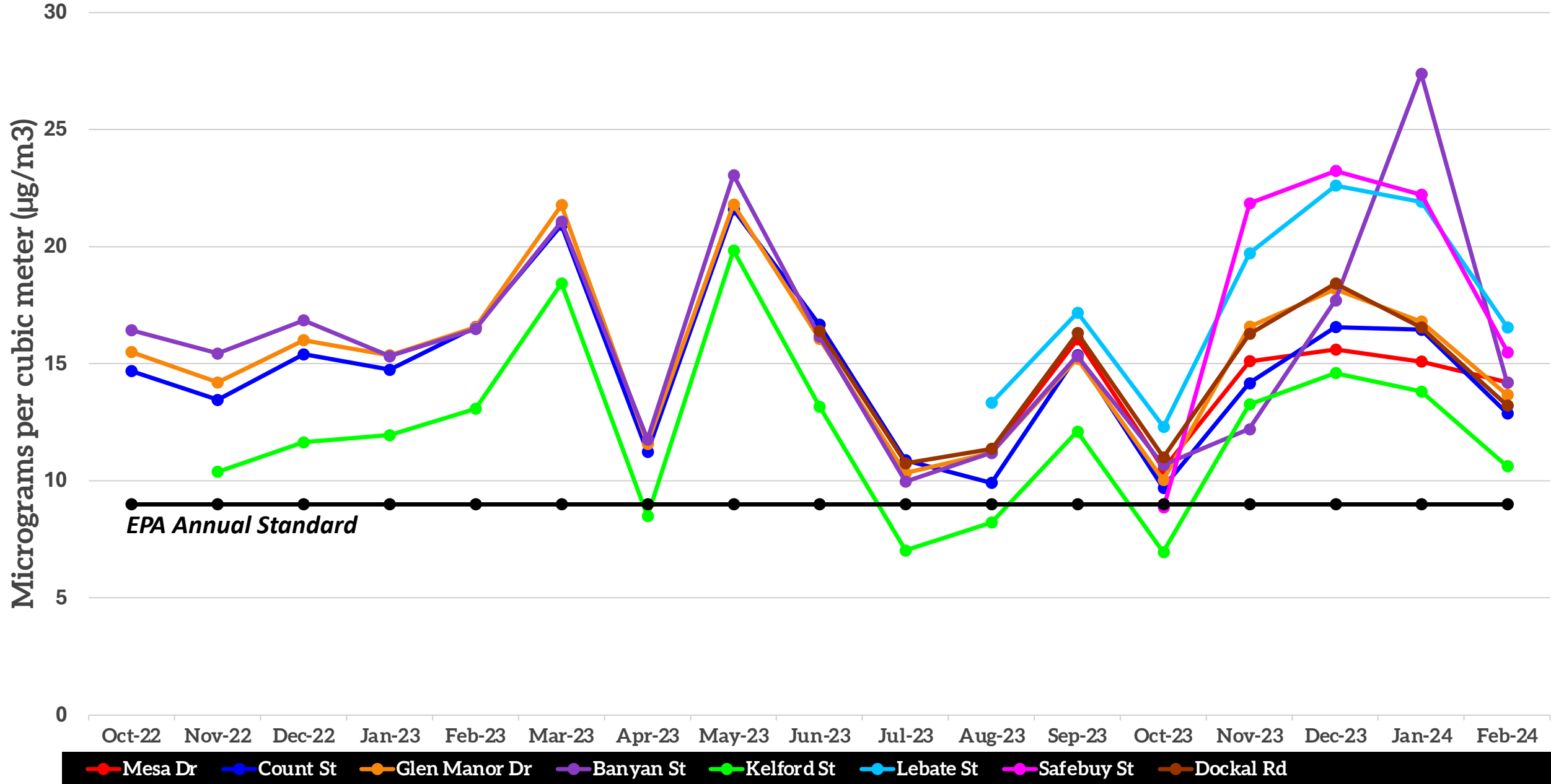
Purple Air

Asphalt plant

Metal shops

Truck yards

PM2.5: Monthly Averages



REVIEW

Summary Statistics

EPA
PM_{2.5} standard

Annual
9 ug/m³

Monitor	Mesa Dr	Count St	Glen Manor Dr	Banyan St	Kelford St	Lebate St	Safebuy St	Dockal Dr
Annual mean	14.3	14.7	15.2	15	12.2	17.8	20.2	14.6
Highest daily mean	70.4	100.9	85.6	91.5	105	120.8	124.3	91.1
Lowest daily mean	2.1	1.7	2.2	3	0.4	3.6	2.5	2.6

Highest values: **Safebuy St and Lebate St**

All monitors above EPA annual standard of **9 ug/m³**

Summary conclusions

1st: Lebate Street and Safebuy Street

- Very close to Gold Star (Metal recycling), Five Star Ready Mix (Concrete batch plant), and several trucking yards (4-5)

2nd: Banyan Street and Glen Manor Drive

- Union Pacific railyard, rail-lines, warehouse

3rd: Count Street and Mesa Drive

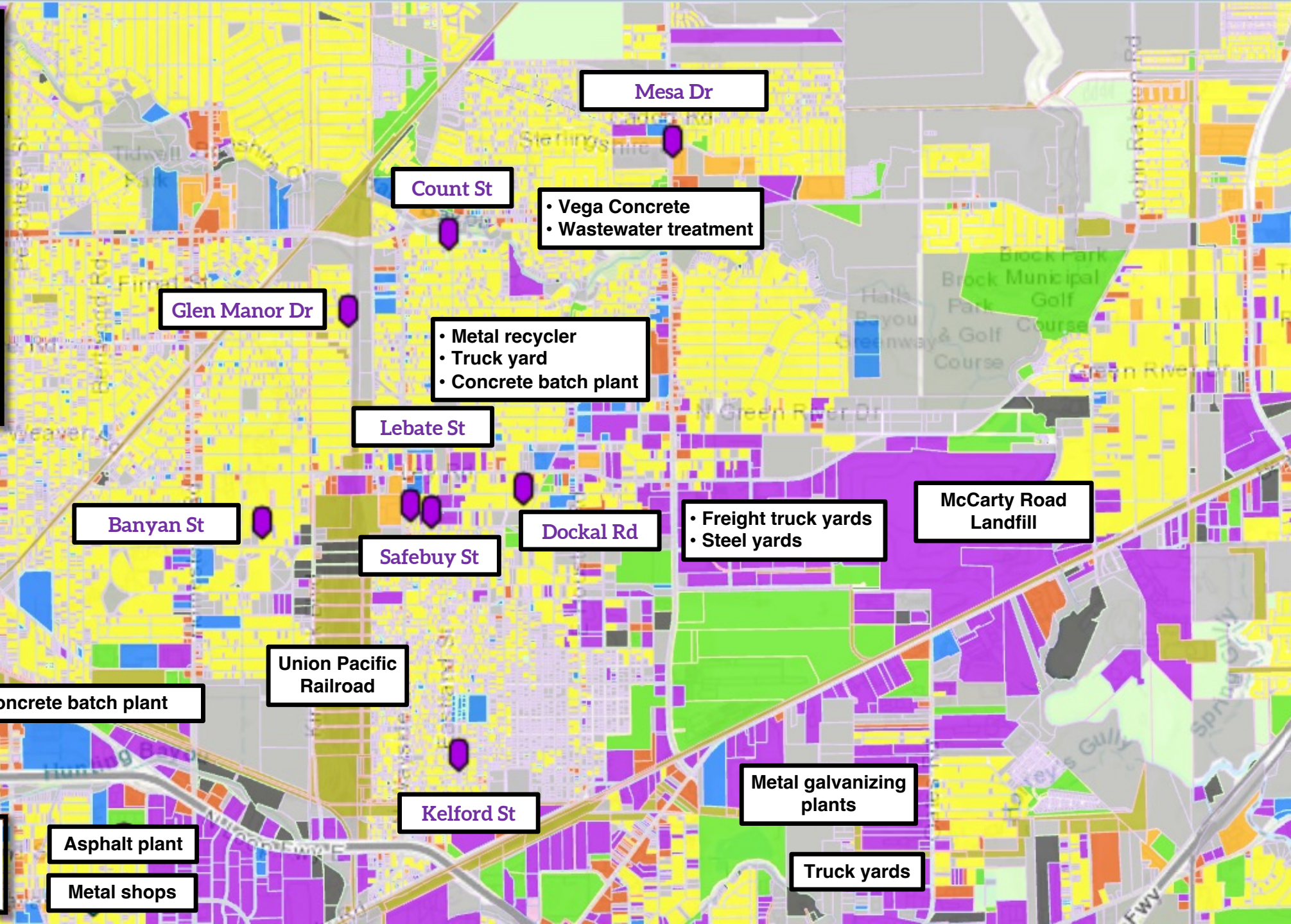
- Vega concrete yard, Wastewater treatment

4th: Kelford Street: Freeway traffic, rail lines

ALL sites are still above the EPA annual standard

- **Pollution levels do not have seasonal patterns**
- **All monitors are in strong agreement**

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Mesa Dr

• Vega Concrete
• Wastewater treatment

Count St

• Metal recycler
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Purple Air

Caveats / Limitations

- **EPA Standards:**

- Guidelines for public health protection. Regularly updated / revised
 - Just because averages aren't at/near limit, doesn't mean there aren't effects to health
- Short-term spikes can still be harmful

- **Monitors:**

- Limited by wind direction, technology, types of pollution measured
- Area of location
 - E.g.: Idling cars, household events, fireworks, outages, etc.
- Sensitivity: A high measurement point to multiple possible sources. Cannot pinpoint 100%
- Limited number of monitors across neighborhood: Not everywhere



**Thank
you!**