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Initial Concepts for Public Reporting: East Los Angeles/Boyle Heights/West Commerce AB 617 Community

Data source: Aclima, July 1 to Sept 30, 2021

Presented November 18, 2021

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AGENDA FOR TODAY

Following completion of 3-months of mobile air monitoring in East Los Angeles/Boyle Heights/West Commerce on September 30, 2021, the Aclima data science and atmospheric science teams commenced analysis. Today we'll review...

...Initial Concepts* for Public Reporting:

- Where and What We Measured
- Comparative Air Pollutant Overview
- Community Resilience Index
- Transportation Impacts Analysis
- Stationary Facilities/Fixed Sources
- Sensitive Receptors
- Address Look-up
- Early stage VOC Analysis

*Data undergoing final QA/QC; results are not expected to shift.

2

Mobile Air Monitoring in the ELABHWC AB 617 Area

Aclima measured air pollutants and GHGs block by block multiple times, day/night, weekdays/weekends, from July 1 to Sept 30, 2021.
Data in this report is currently undergoing final QA/QC; Results are not expected to shift.

Featured in this report

- Fine particulate matter ($PM_{2.5}$)
- Black carbon (BC)
- Nitrogen Dioxide (NO_2)
- Ozone (O_3)
- Carbon monoxide (CO)
- Volatile Organic Compounds (VOCs)

Will be included in final report

- Carbon dioxide (CO_2)
- Nitric oxide (NO)
- Methane (CH_4)
- Ethane (C_2H_6)

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SECTION 01

Area Overview

- Overall, how is the air quality in East Los Angeles/Boyle Heights/West Commerce (ELABHWC)?
- How are various pollutants concentrated within each?
- What areas warrant further investigation, analysis, or research?

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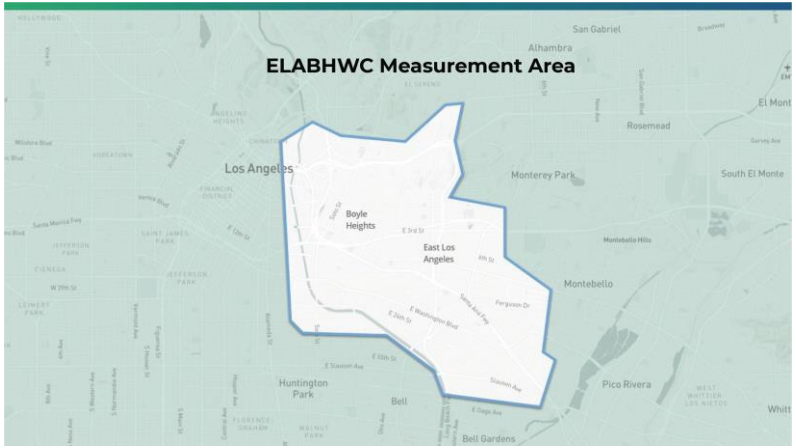
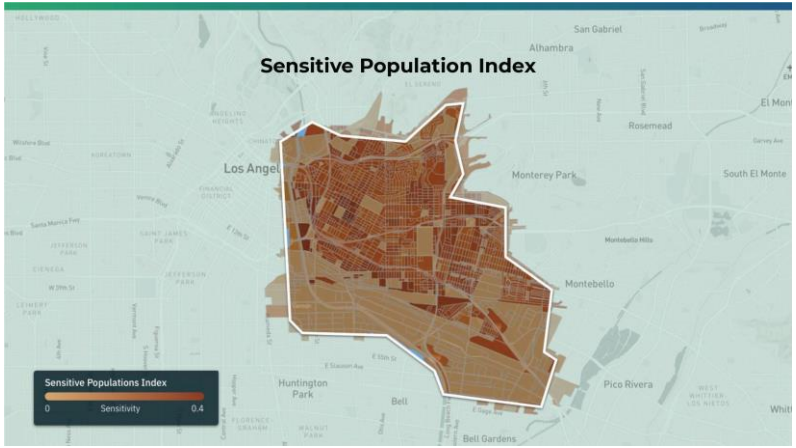
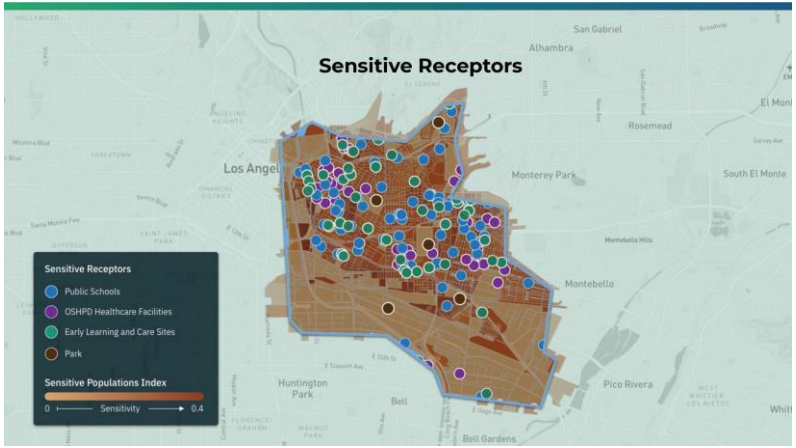

ELABHWC Measurement Area
San Gabriel
Alhambra
Rosemead
El Mont
Los Angeles
Monterey Park
South El Monte
Boyle Heights
East Los Angeles
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens

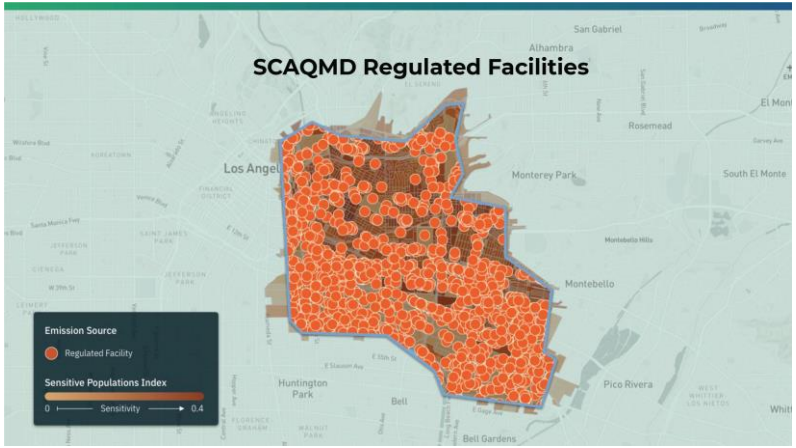
5


Sensitive Population Index
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Populations Index
0
Sensitivity
0.4

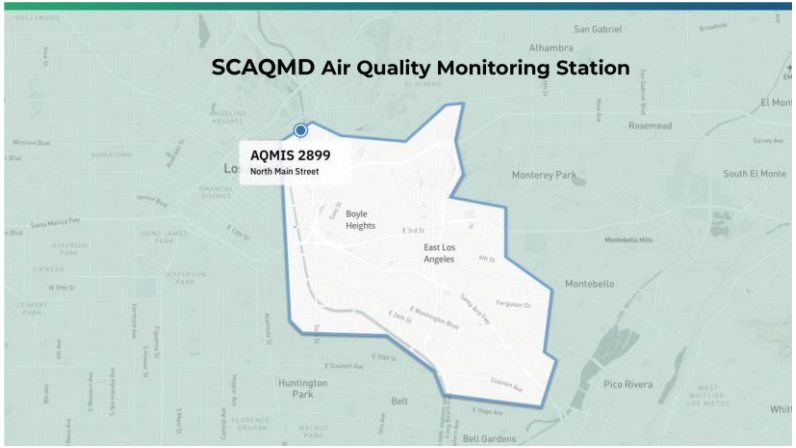
6


Sensitive Receptors
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Receptors
Public Schools
OSHPD Healthcare Facilities
Early Learning and Care Sites
Park
Sensitive Populations Index
0
Sensitivity
0.4

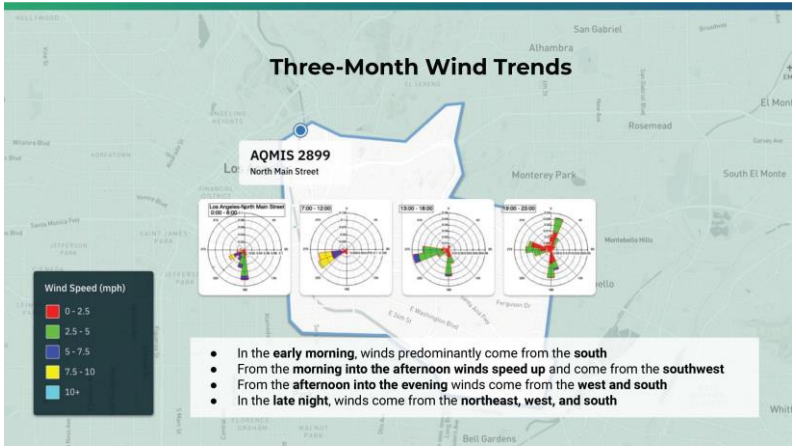
7


SCAQMD Regulated Facilities
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Emission Source
Regulated Facility
Sensitive Populations Index
0
Sensitivity
0.4

8


SCAQMD Air Quality Monitoring Station
AQMIS 2899
North Main Street
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Boyle Heights
East Los Angeles
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens

9


Three-Month Wind Trends
AQMIS 2899
North Main Street
Wind Speed (mph)
0 - 2.5
2.5 - 5
5 - 7.5
7.5 - 10
10+
In the early morning, winds predominantly come from the south
From the morning into the afternoon winds speed up and come from the southwest
From the afternoon into the evening winds come from the west and south
In the late night, winds come from the northeast, west, and south

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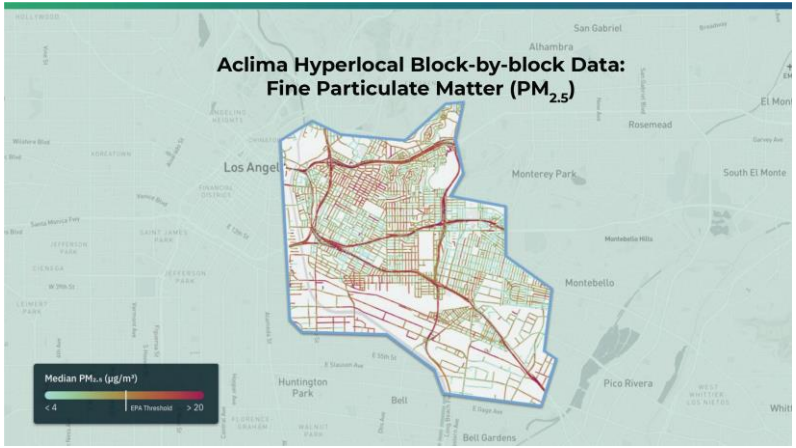
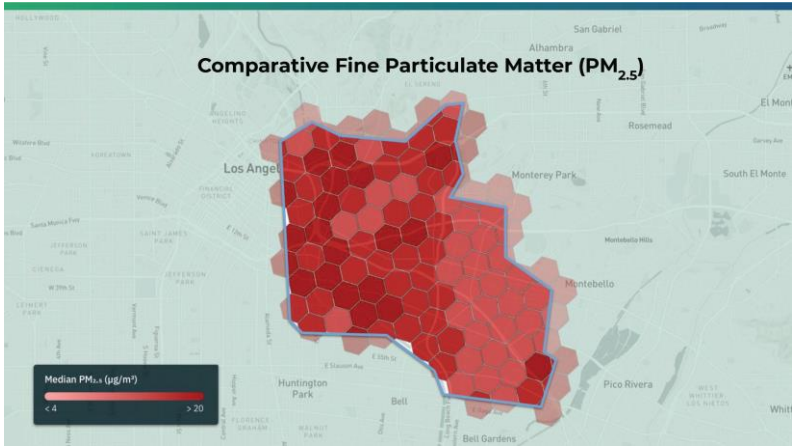
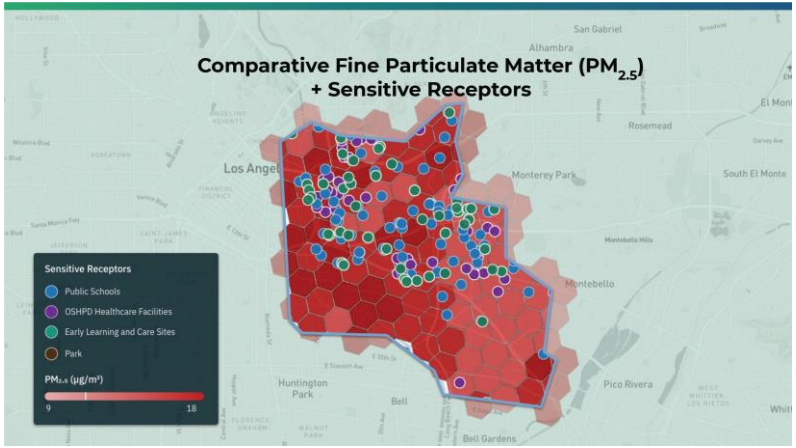

Aclima Hyperlocal Block-by-block Data:
Fine Particulate Matter ($PM_{2.5}$)
San Gabriel
Alhambra
Rosemead
Los Angeles
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Median $PM_{2.5}$ (µg/m³)
< 4
EPA Threshold
> 20

11


Comparative Fine Particulate Matter ($PM_{2.5}$)
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Median $PM_{2.5}$ (µg/m³)
< 4
> 20

12


Comparative Fine Particulate Matter ($PM_{2.5}$) + Sensitive Receptors
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Receptors
Public Schools
OSHPD Healthcare Facilities
Early Learning and Care Sites
Park
$PM_{2.5}$ (µg/m³)
9
18

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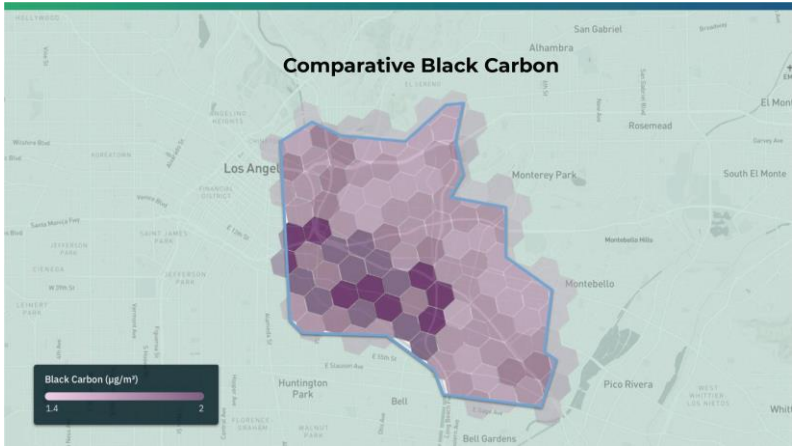
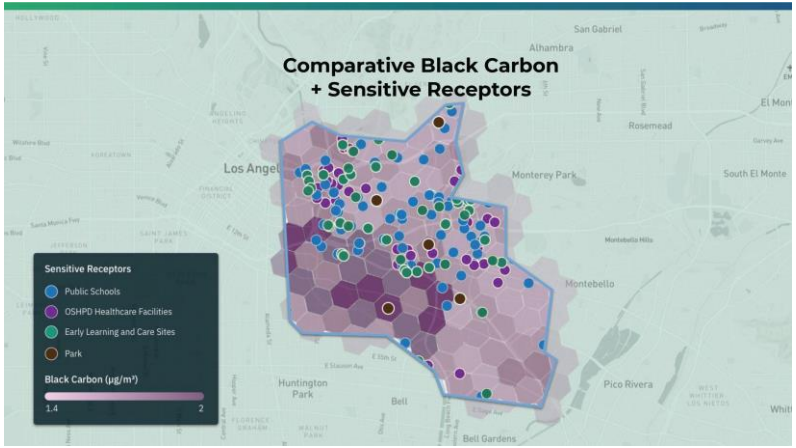
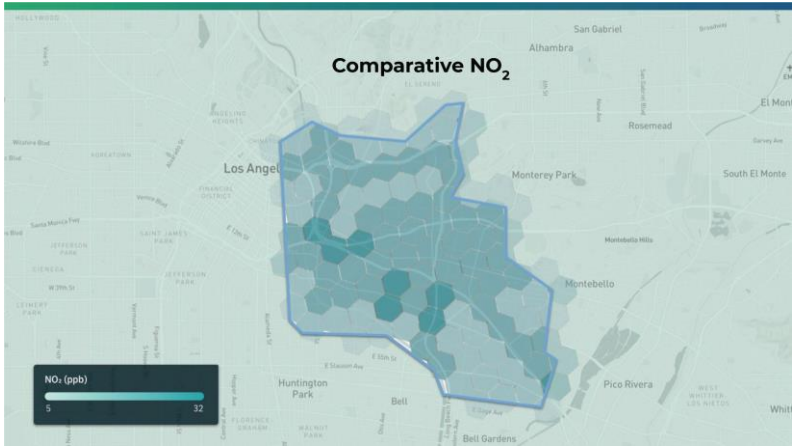

Comparative Black Carbon
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Black Carbon (µg/m³)
1.4
2

14


Comparative Black Carbon
+ Sensitive Receptors
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Receptors
Public Schools
OSHPD Healthcare Facilities
Early Learning and Care Sites
Park
Black Carbon (µg/m³)
1.4
2

15


Comparative NO2
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
NO2 (ppb)
5
32

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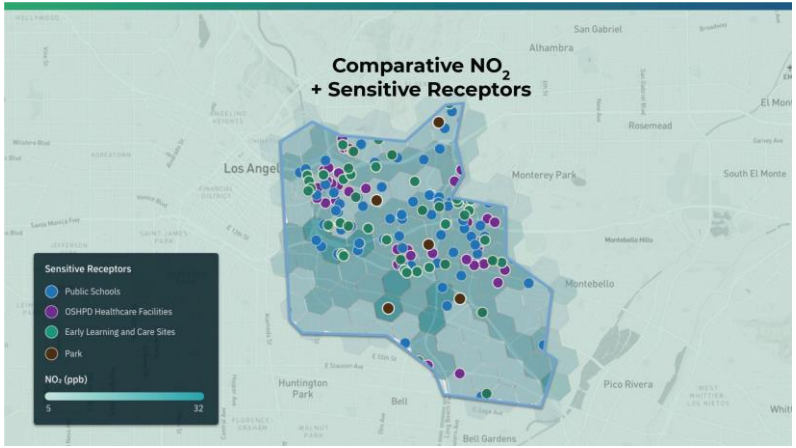
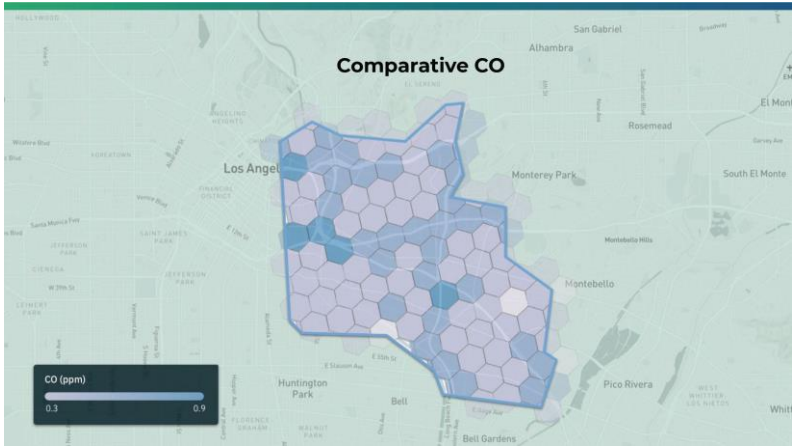
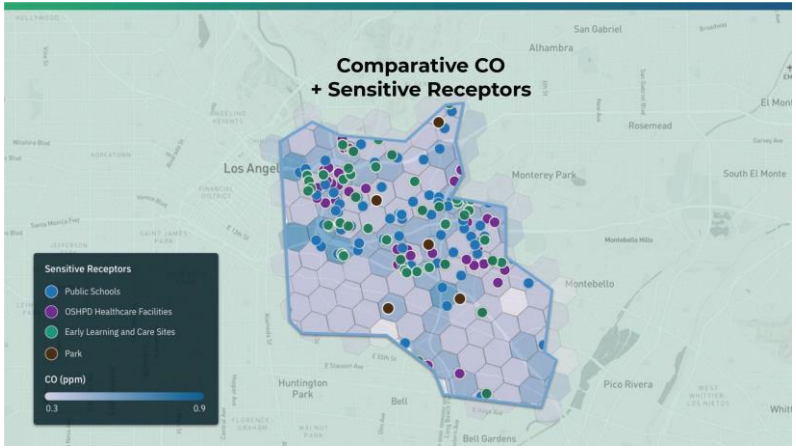

Comparative NO_2
+ Sensitive Receptors
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Receptors
Public Schools
OSHPD Healthcare Facilities
Early Learning and Care Sites
Park
NO_2 (ppb)
5
32

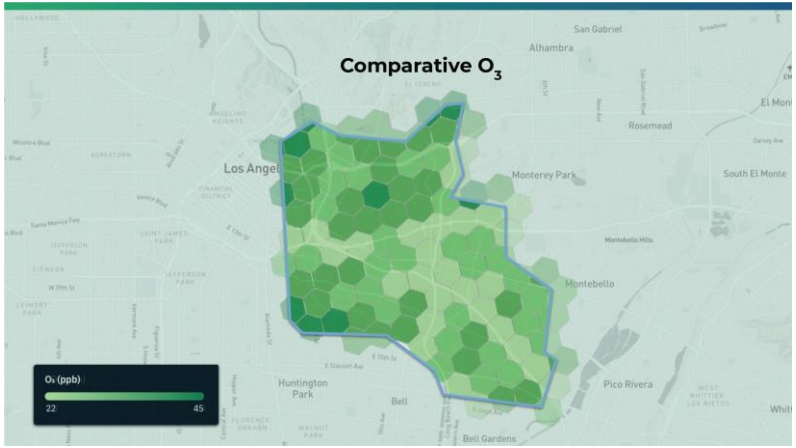
17


Comparative CO
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
CO (ppm)
0.3
0.9

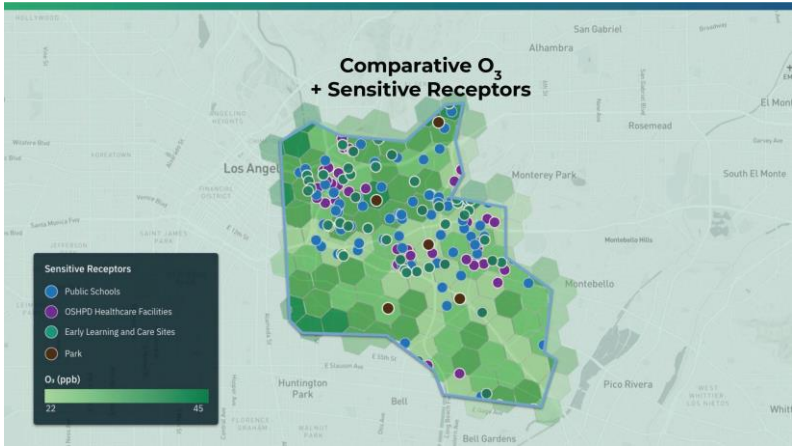
18


Comparative CO
+ Sensitive Receptors
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
Sensitive Receptors
Public Schools
OSHPD Healthcare Facilities
Early Learning and Care Sites
Park
CO (ppm)
0.3
0.9

19


Comparative O_3
San Gabriel
Alhambra
Rosemead
Monterey Park
South El Monte
Montebello
Huntington Park
Bell
Pico Rivera
Bell Gardens
O_3 (ppb)
22
45

20



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SECTION 02

Transportation

- How do pollutant concentrations change with respect to distance from *highways* and *major roads*?
- How do they change with regard to distance from *railroads*?

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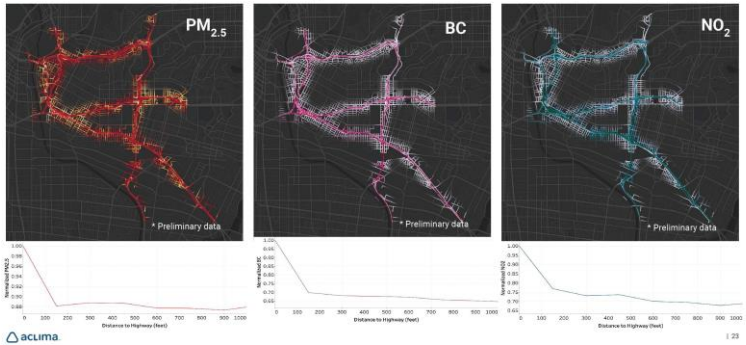
East LA Transportation Impact: Areas within 150 ft of a Highway



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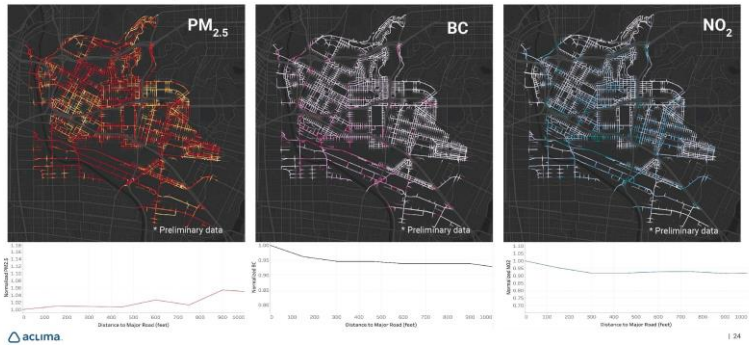
East LA Transportation Impact: Areas within 150 ft of a Major Road



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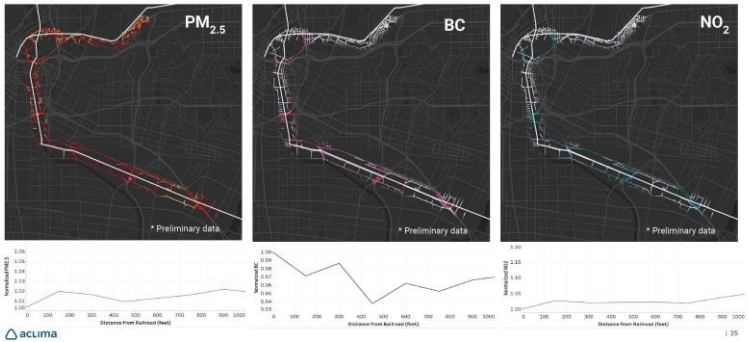
East LA Transportation Impact: Areas within 150 ft of a Railroad



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SECTION 03

Stationary Facilities / Fixed Sources

- What is the typical air quality like near a given facility?
- What sensitive receptors are nearby?
- Are there pollution hotspots nearby?

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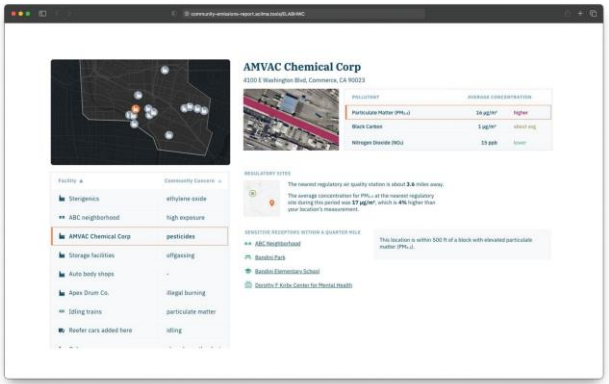

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SECTION 04

Sensitive Receptors

- What is the typical air quality experienced at sensitive locations?
- What emission sources are nearby?
- Are there pollution hotspots nearby?

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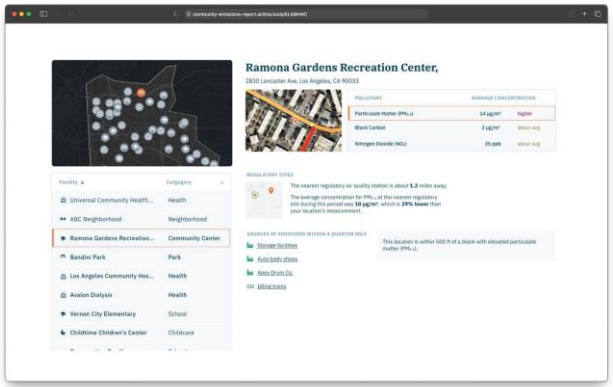
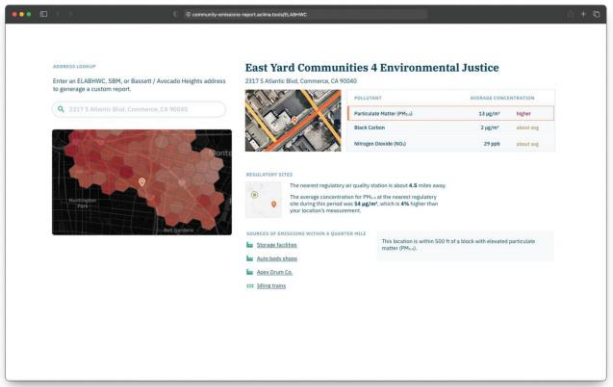


SECTION 05

Address Look-up

- What is the typical air quality like for a given location?
- How does that compare to regulatory sites?
- Is this location near a hotspot?
- What known emission sources are nearby?



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SECTION 06

Early Stage VOC Analysis

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VOC peaks near City Terrace

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THANK YOU.

We want your feedback!

Please complete this quick survey:

https://forms.gle/Svut5Gv5UzTLdTmf6

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