



# HOUSTON HEALTH DEPARTMENT

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# Environmental Hazards in Houston Neighborhoods

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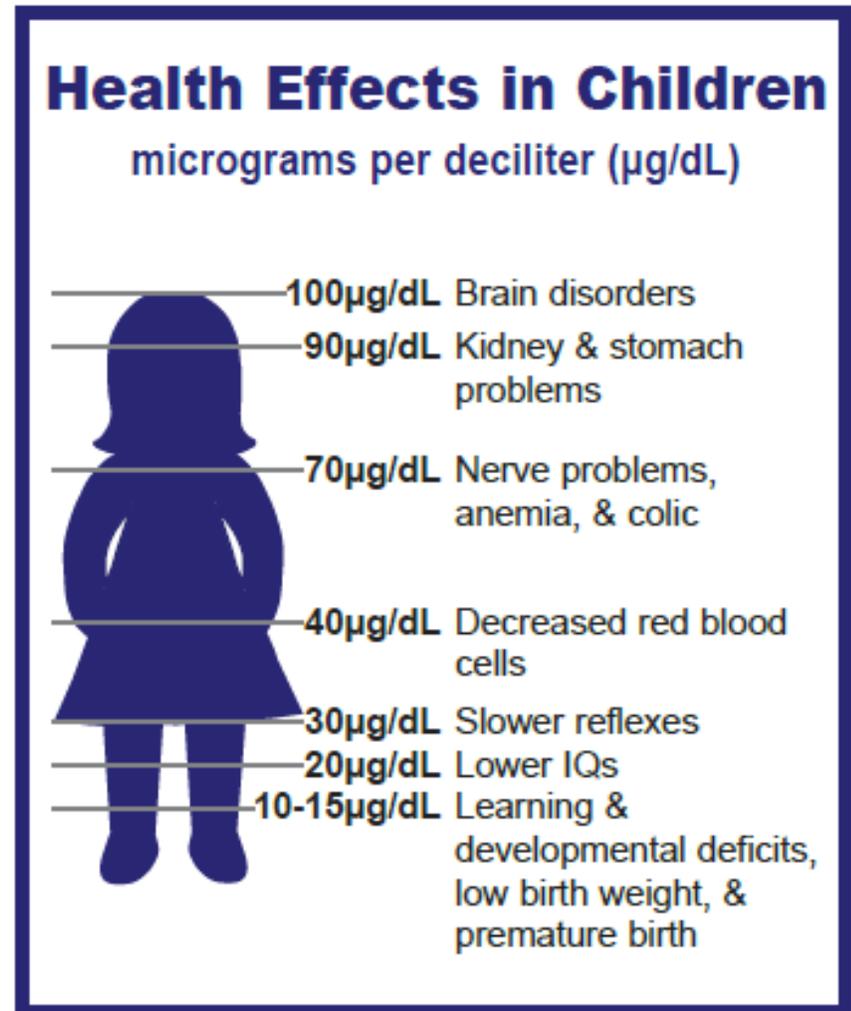
# Lead Poisoning

HEALTH EFFECTS

In 2017, 829 children screened were found to have elevated blood lead levels (BLLs) above the CDC reference value of 5  $\mu\text{g}/\text{dL}$ .

Lead is traditionally found in paint, but children can be exposed through non-traditional sources such as toys, candies, jewelry, cosmetics, and more.

Lead poisoning can lead to severe adverse health effects, with most behavioral and learning impairments manifesting at BLLs  $<5 \mu\text{g}/\text{dL}$ .



# Lead Poisoning

PEELING, CHIPPING, FLAKING LEAD PAINT



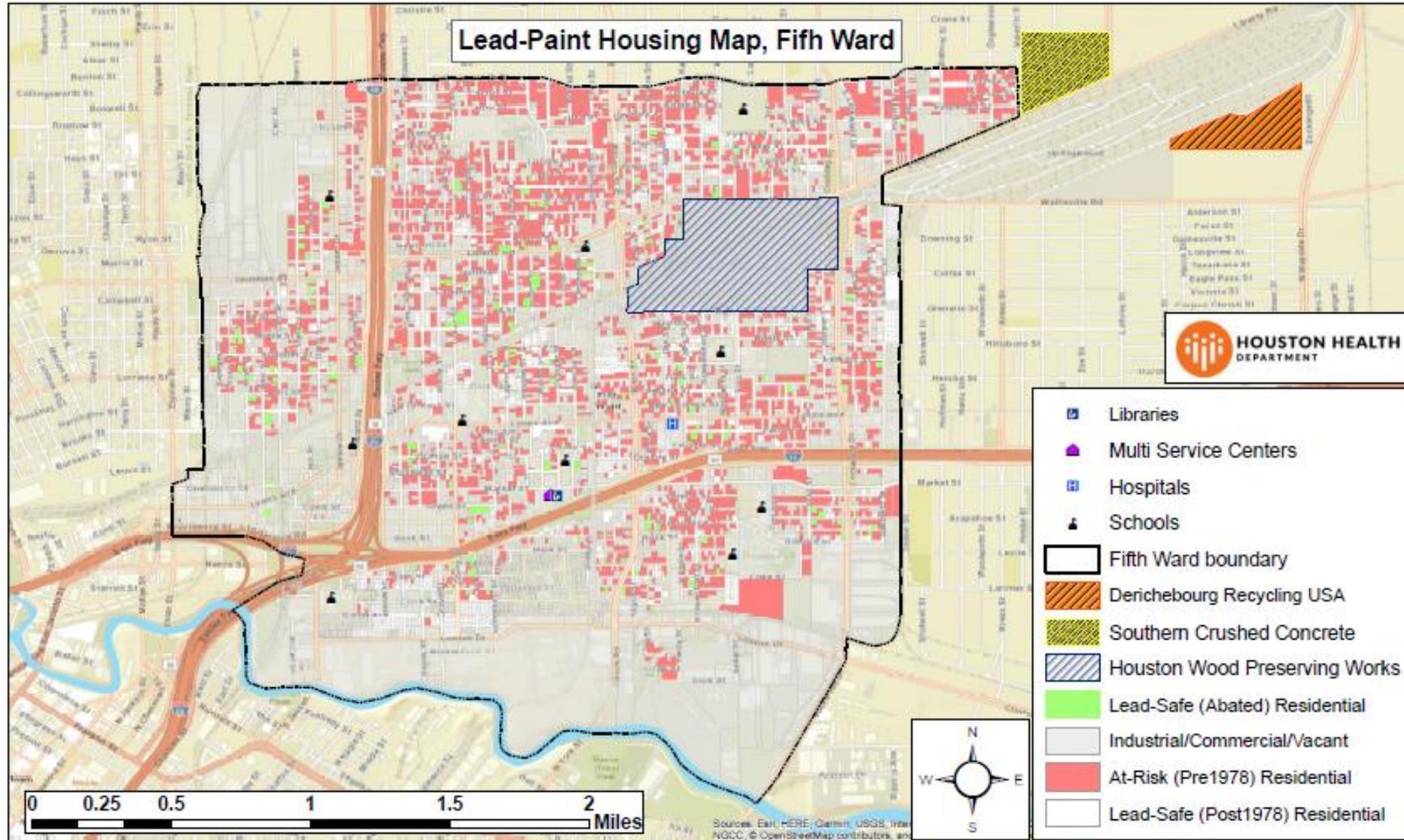
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# Lead Poisoning

LEAD-RISK HOUSING MAP – FIFTH WARD

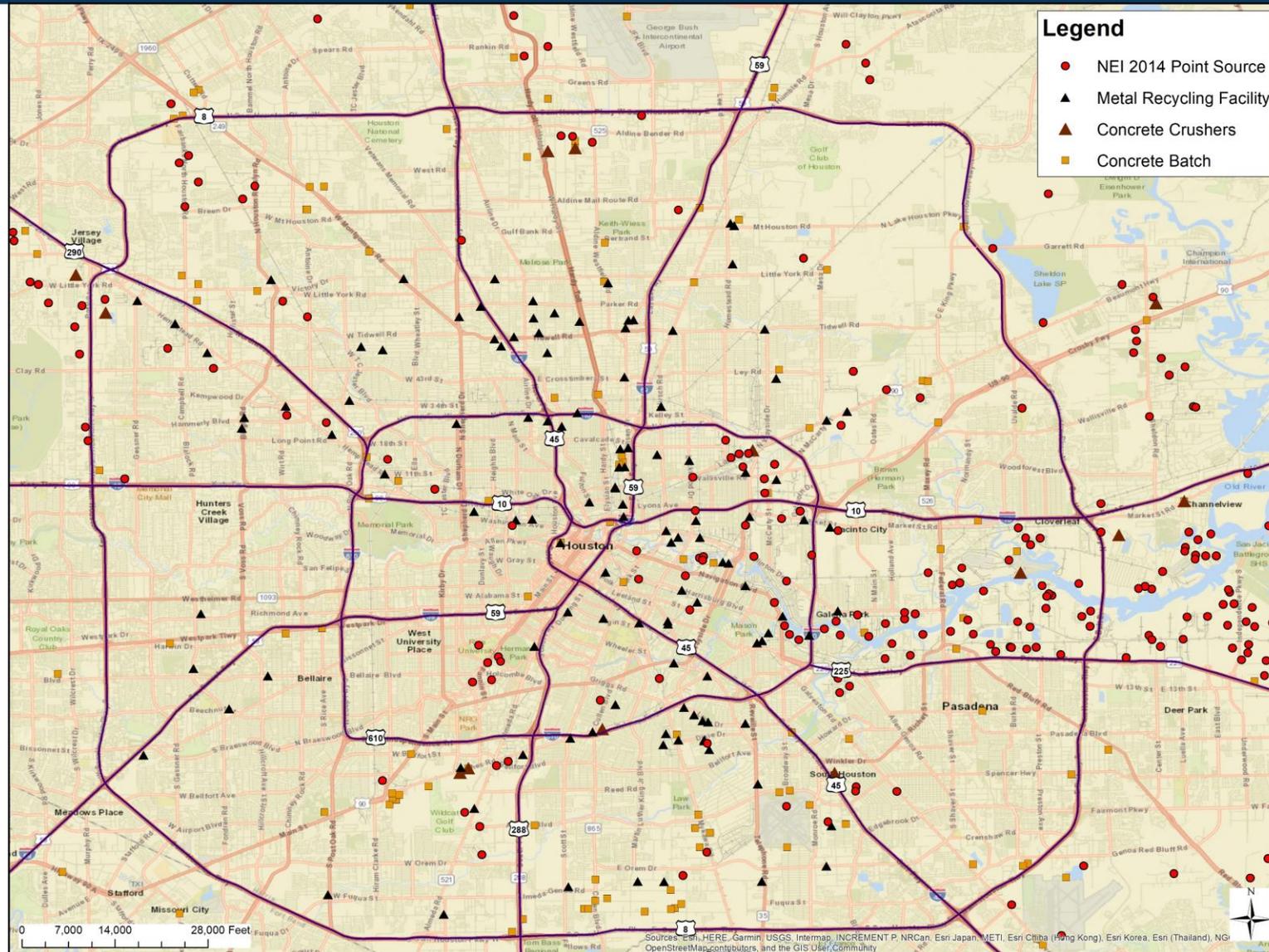


# Air Pollution Sources

METAL RECYCLERIES, CONCRETE BATCH PLANTS, CONCRETE CRUSHERS



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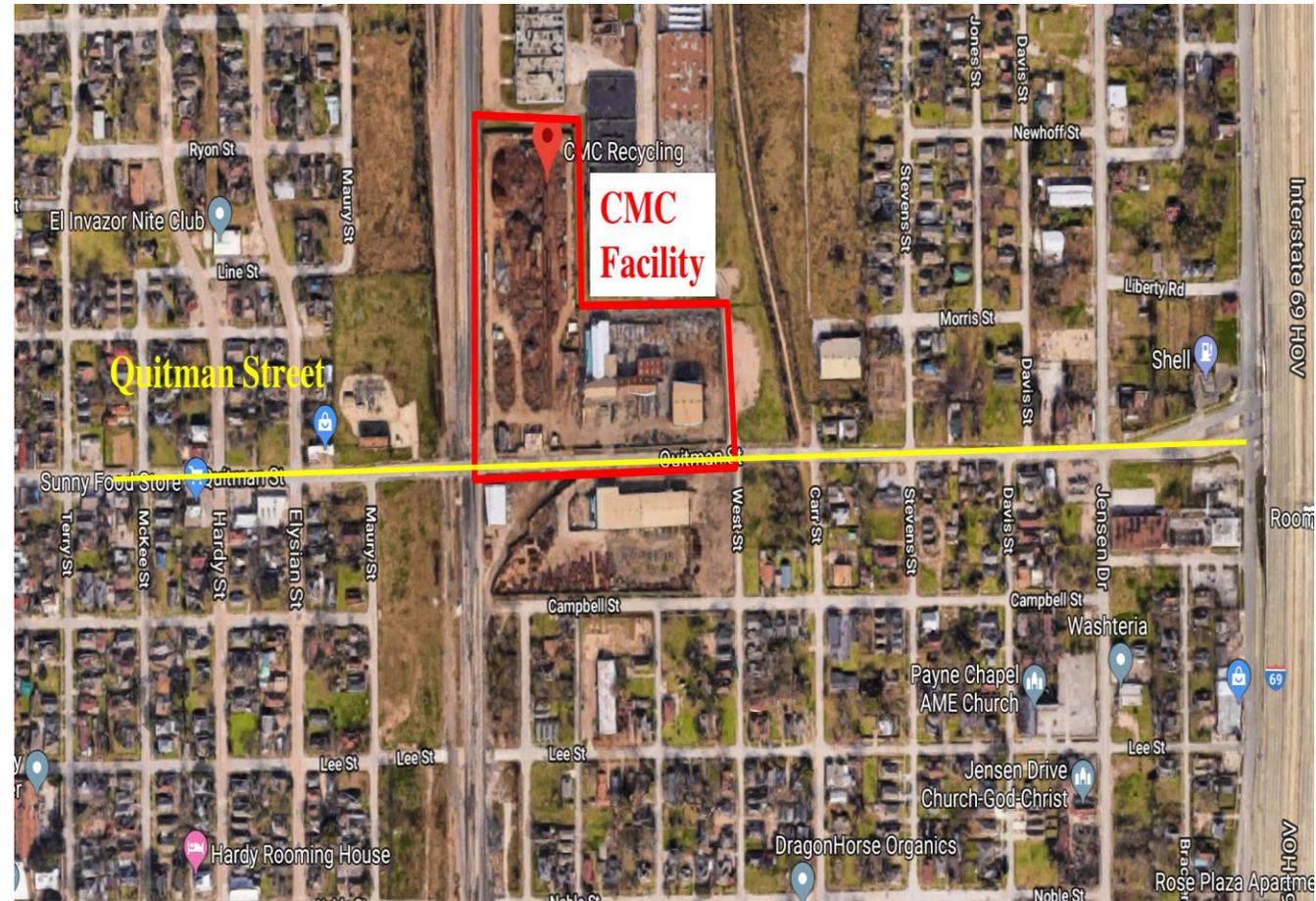


# Neighborhood Pollution Sites

CMC METAL RECYCLERY

Data collected from risk assessments conducted at CMC Metal Recycler North and South has shown an increase in carcinogenic risk for adult residents from inhalation of metals:

- Arsenic,
- Cadmium,
- Cobalt, and
- Nickel



# Neighborhood Pollution Sites

UNION PACIFIC RAILROAD FACILITY



Map of affected residences

Railroad ties were dipped in creosote, a preservative that is listed by the EPA as a cancer-causing chemical.

Creosote emits harmful fumes and leaches into the surrounding soil.

There have been concerns regarding cancer deaths in the nearby areas.

The railroad site is in close proximity to Dogan Elementary School, leading to concerns of children being affected.

There are a total of **88** concrete batch plants in the city limits of various operational statuses.

Since 2016 the Bureau of Pollution Control and Prevention has conducted over 40 investigations of concrete batch plants within the City's limits and found more than 40 violations of TCEQ Standard Air Permit and City Ordinances.

Violations included insufficient dust controls, nuisance conditions, inadequate buffer distances (i.e., for locating of stockpiles) among others.

# Deer Park ITC Fire

VIEW OF THE FACILITY

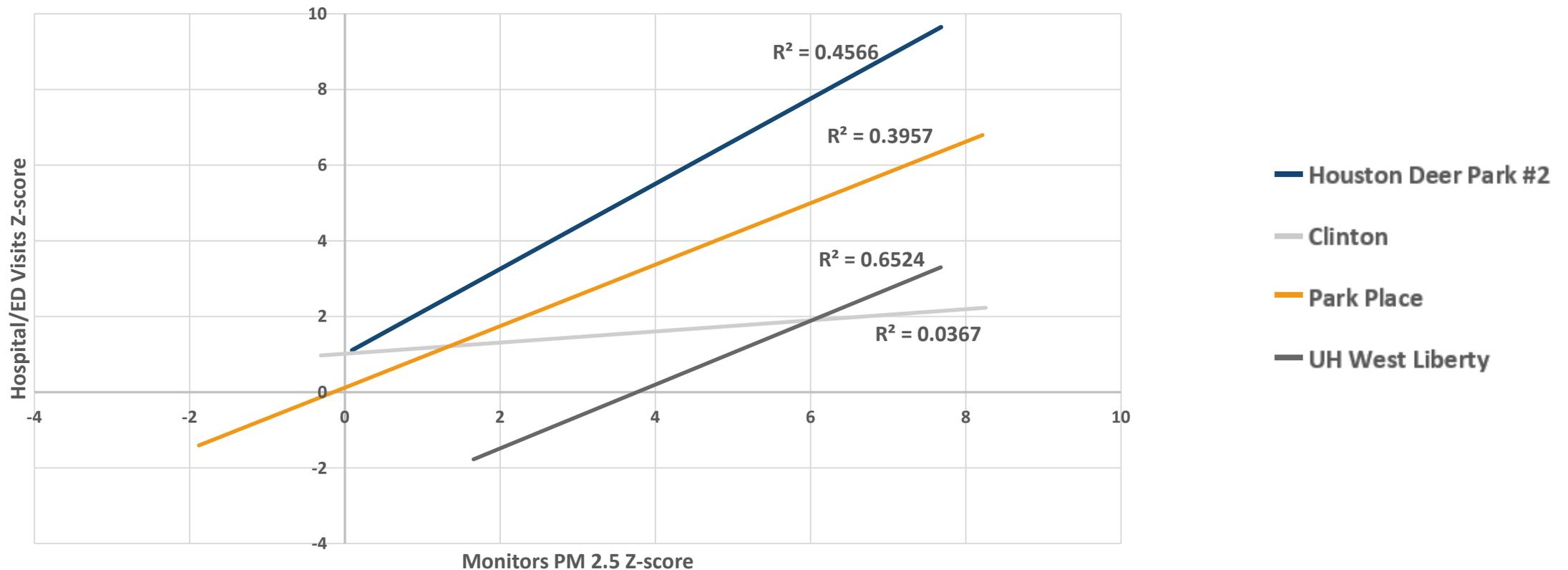


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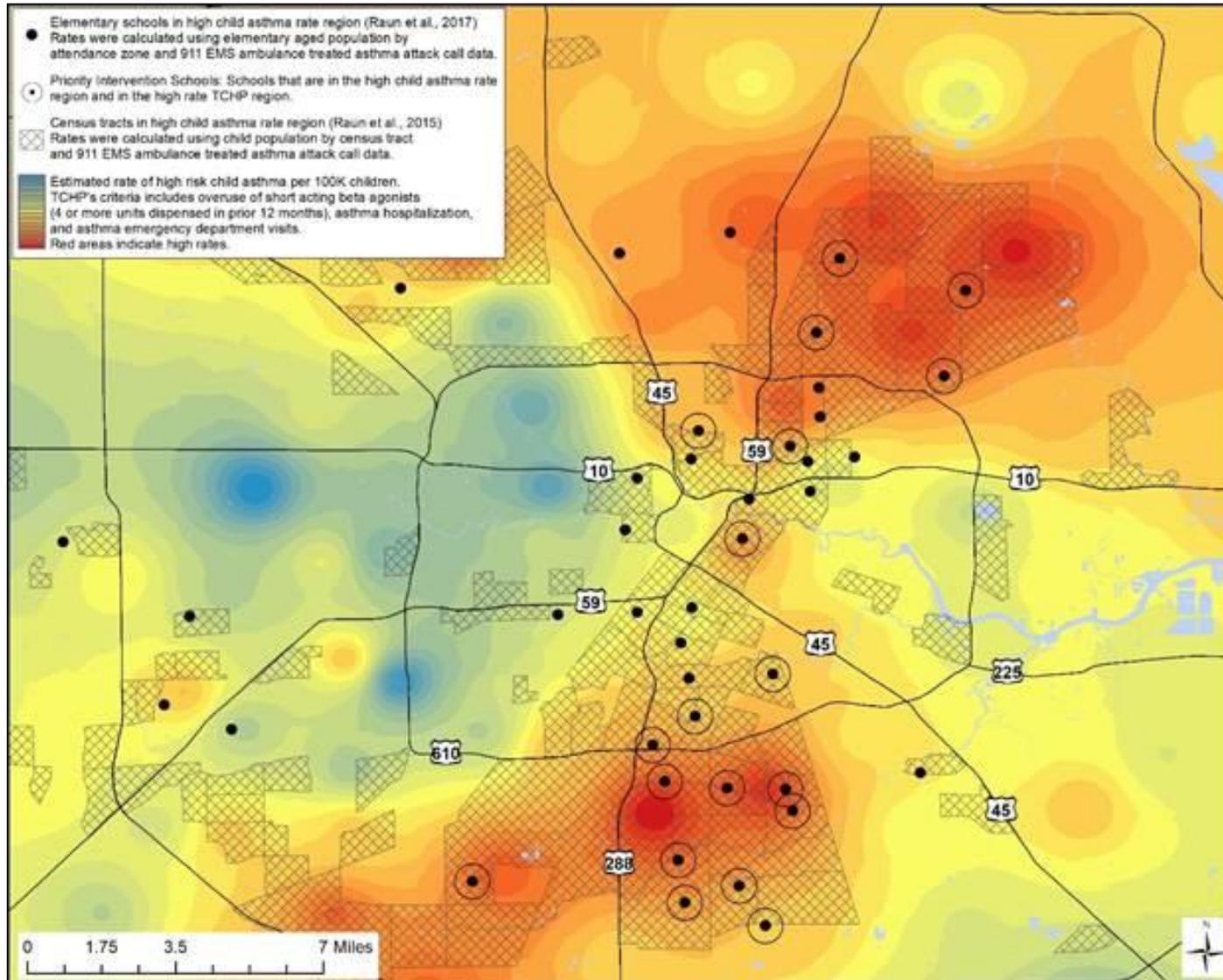
# PM2.5 Data and Hospital/ED Data

Regression of Hospital/ED visits Z-Scores on PM2.5 Monitors Z-Scores, 3/17-3/23



At Deer Park #2, 46% of the variability in Hospital/ED visits is explained by PM2.5.

# Asthma High Rate Regions



The map shows where TCHP high-risk regions (heat map) were aligned with EMS high-rate school zones (hatch markings) of ambulance-treated asthma attacks. The map shows the 41 high-rate elementary schools with the 19 highest rate schools, based on EMS and TCHP data, identified and coded as priority intervention schools.



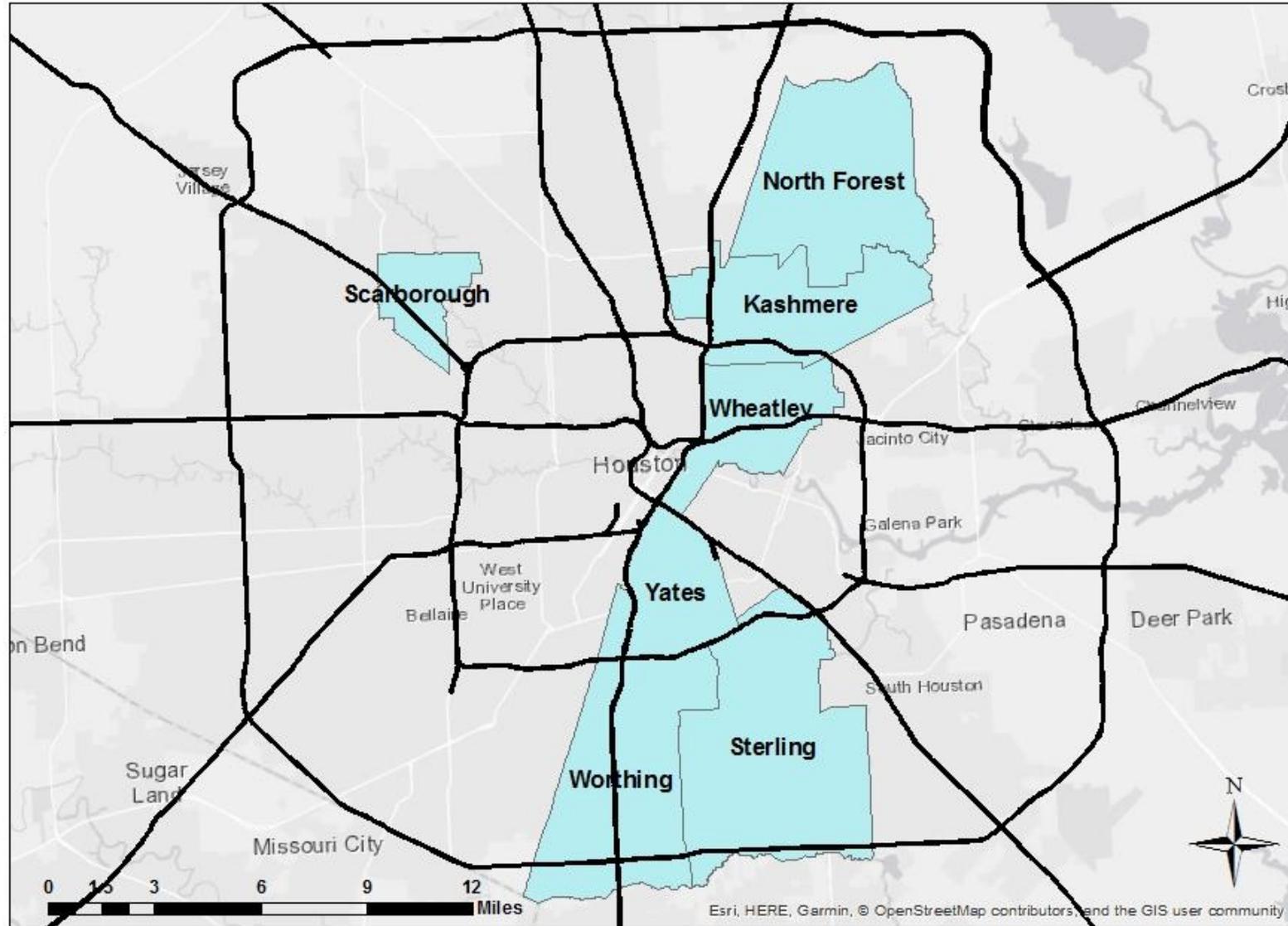


# Asthma High Rate Regions

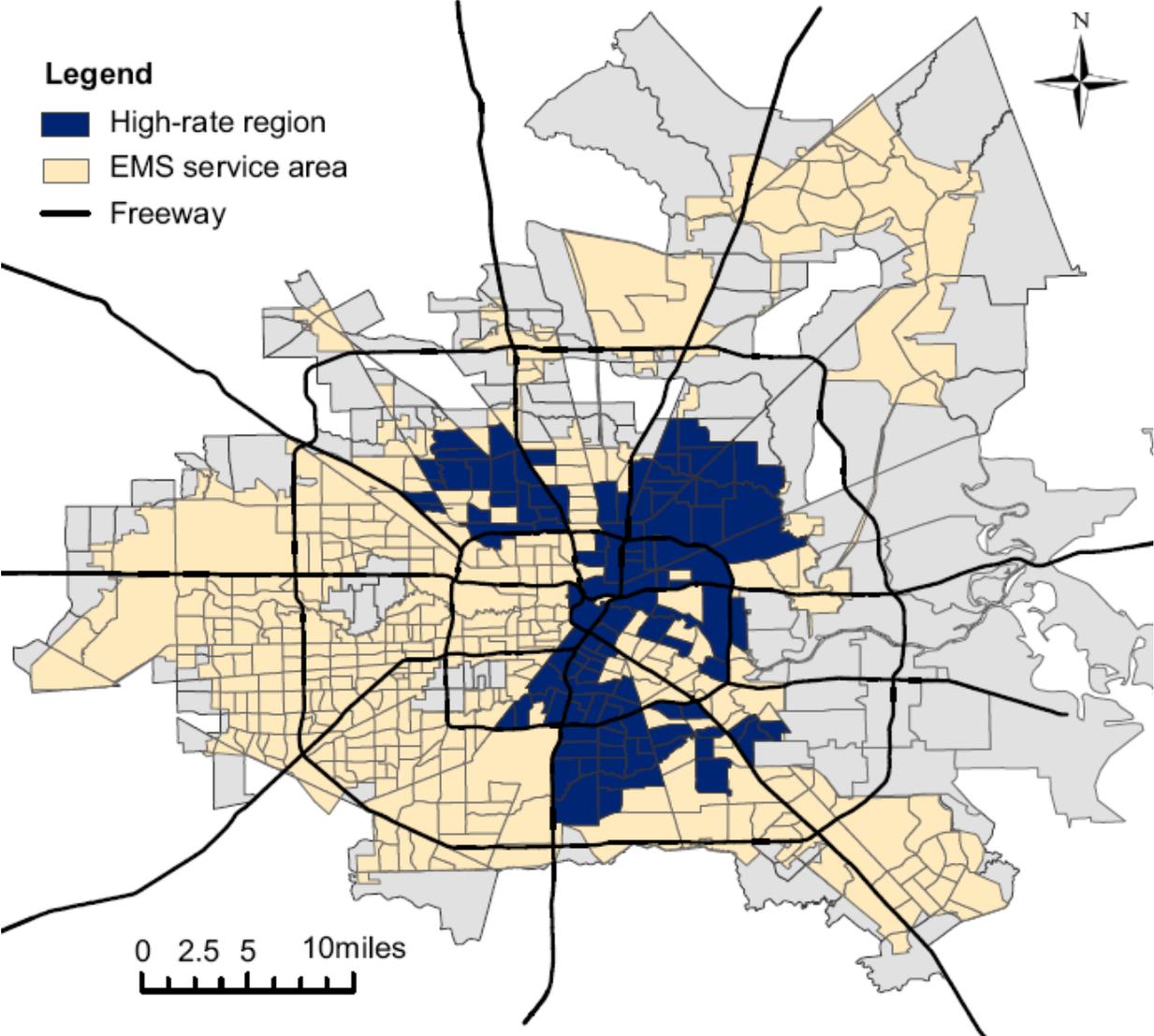
HIGH SCHOOLS



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# Cardiac Arrest High Rate Regions



Out of hospital cardiac arrest high-rate region for 2004 - 2011.

**Thank you!**