



**PASADENA  
COMMUNITY PROJECT  
PCAC MEETING**

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August 23, 2018

# AIR ALLIANCE HOUSTON

- AAH researches existing air pollution challenges to better understand how to improve public health and quality of life for affected residents.
- AAH offers educational programs to Houston-area youth and community members about air pollution.
- AAH staff members advocate for Houston- and Pasadena-area communities by meeting with legislators, partnering with regulators, and organizing meetings between industry and community members to promote the protection of public health.



Pasadena  
Community  
Project

Pasadena  
Community  
Survey  
Key Findings

Anti-Idling  
Ordinance

Take Action

# PROJECT GOALS

- Build community awareness regarding air pollution while also recruiting strong community ambassadors in Pasadena.
- Educate Pasadena decision-makers about air pollution and potential health impacts for residents.
- Build partnerships with community organizations with common interests to strengthen the voices of Pasadena area residents.
- Advocate for an anti-idling ordinance in the City of Pasadena.



# PROJECT ACTIVITIES

- Conduct community surveys
- Hold community mapping workshops
- Perform community air monitoring
- Advocate for an anti-idling ordinance.



# AAH's Work in Pasadena





**PASADENA  
COMMUNITY SURVEY  
KEY FINDINGS**

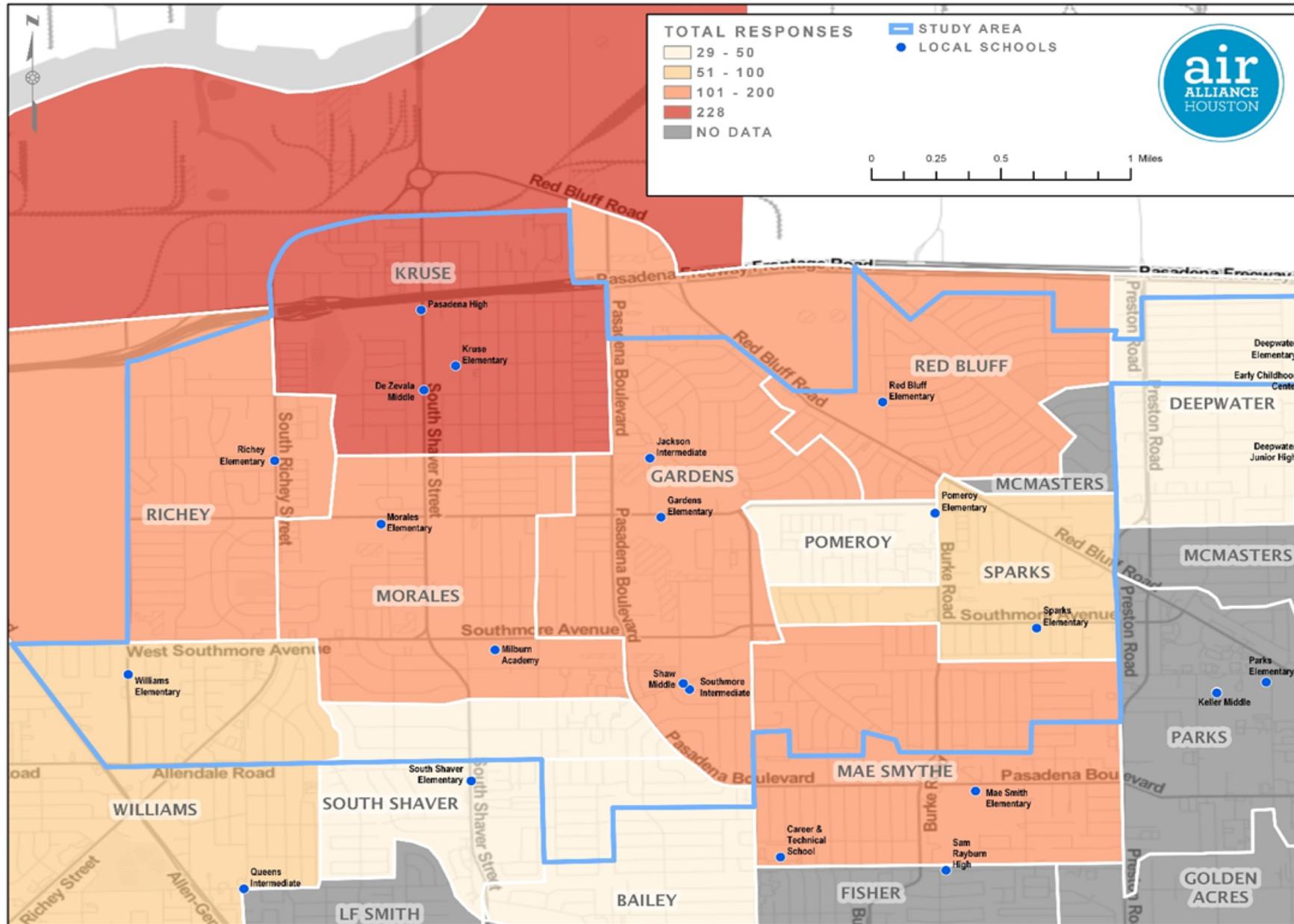
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# Key Findings from Pasadena Community Surveys

We collected a total of 1,360 completed surveys from north Pasadena neighborhoods in close proximity to elementary schools near refineries, chemical plants, major highways and heavy truck traffic. We have analyzed key findings and the following are some of the results.



# Total Responses Collected from School Zones



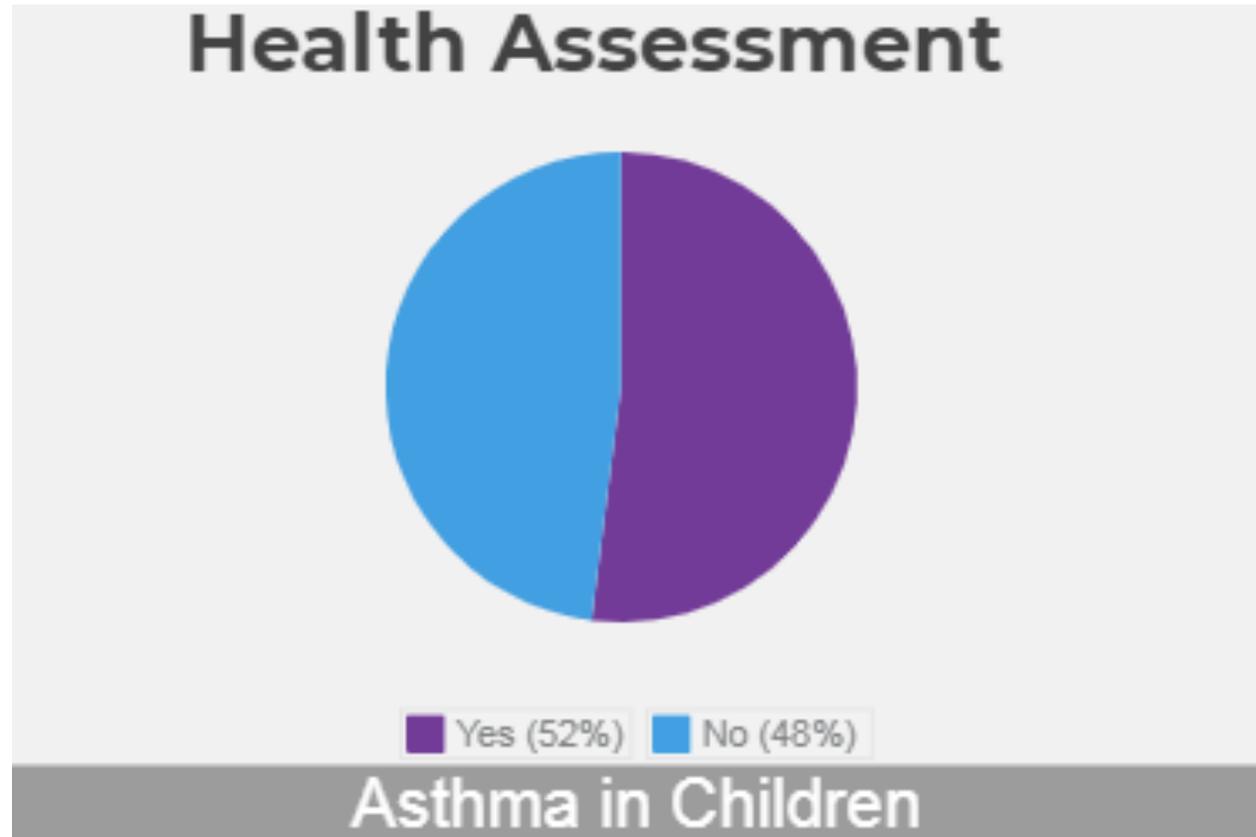
# Health Assessment



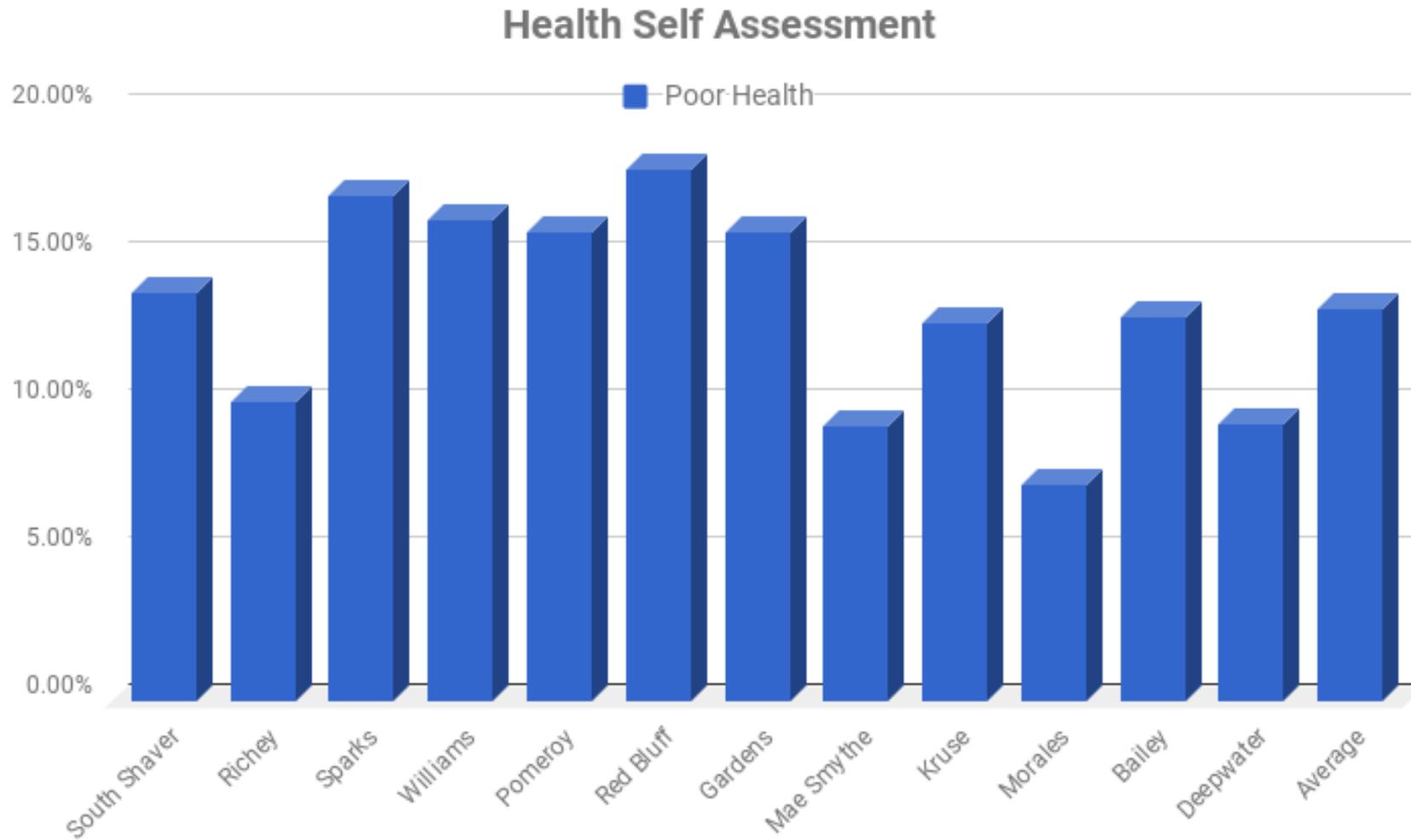
# General Overview of our Children's Health Assessment

Approximately 483 parents reported that their children have asthma. This accounts for 52 percent of the total surveyed population.

Studies have shown a strong connection between long-term exposure to diesel exhaust and carbon monoxide from cars and chronic respiratory diseases such as asthma.

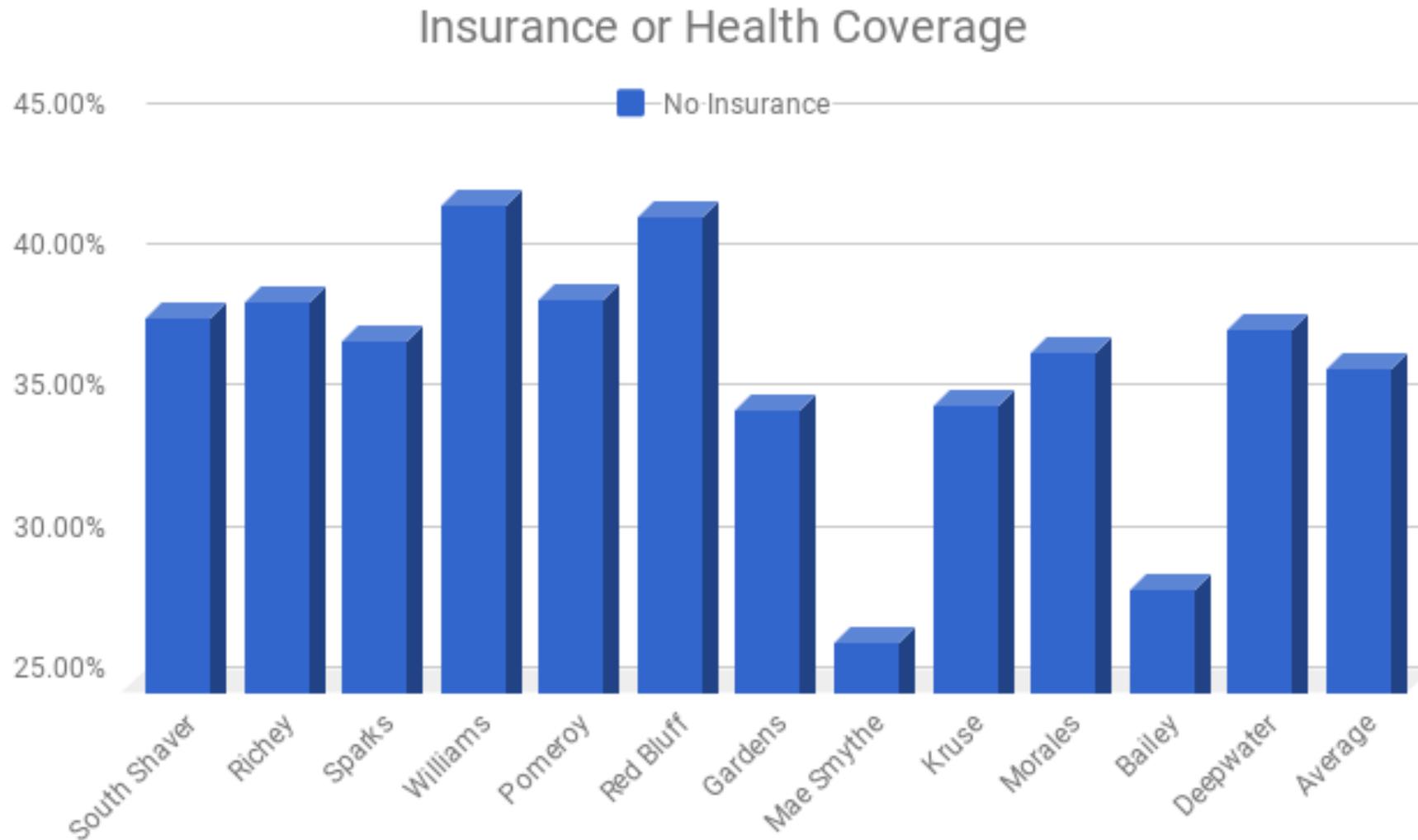


# Overall, how would you rate your health over the past year?

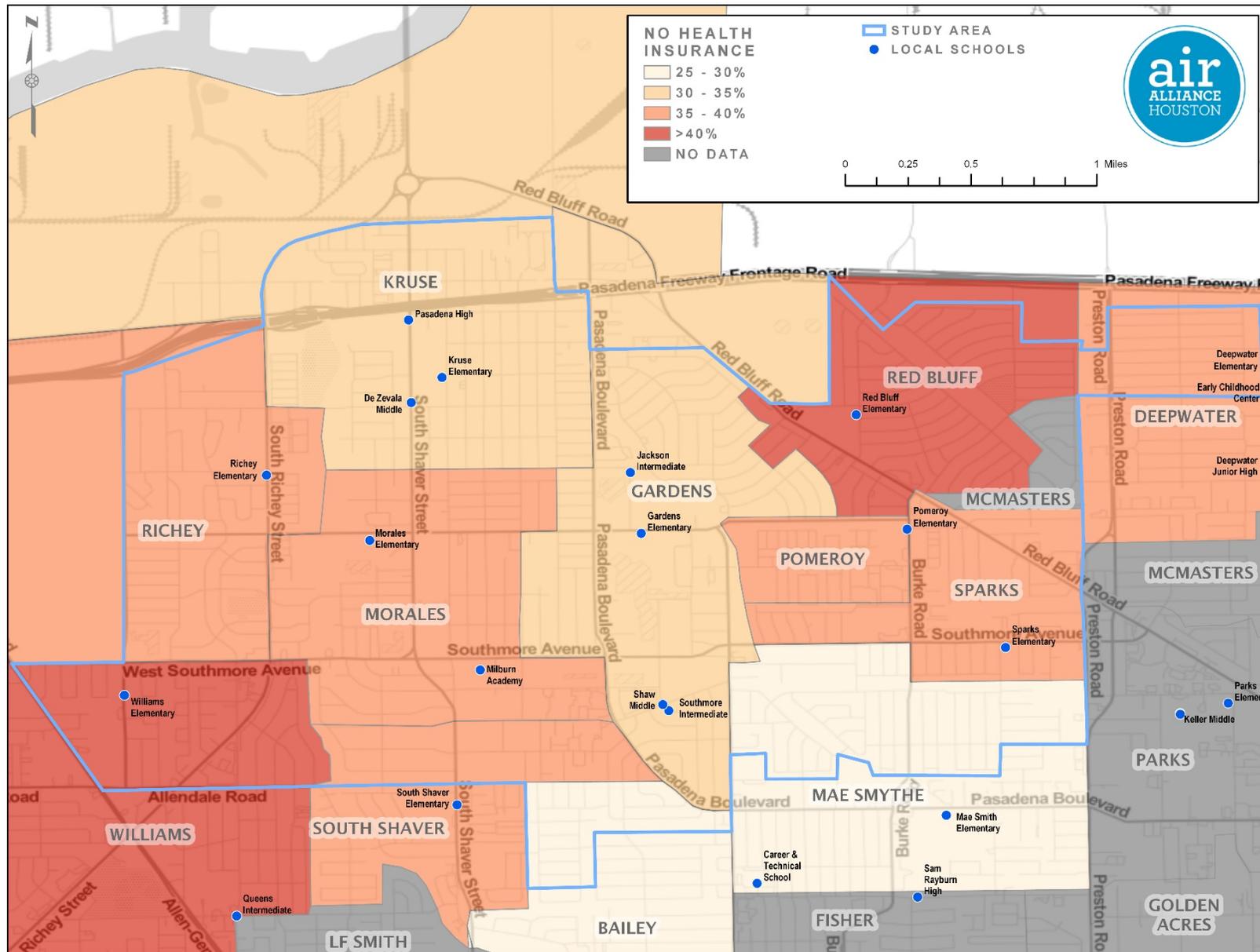




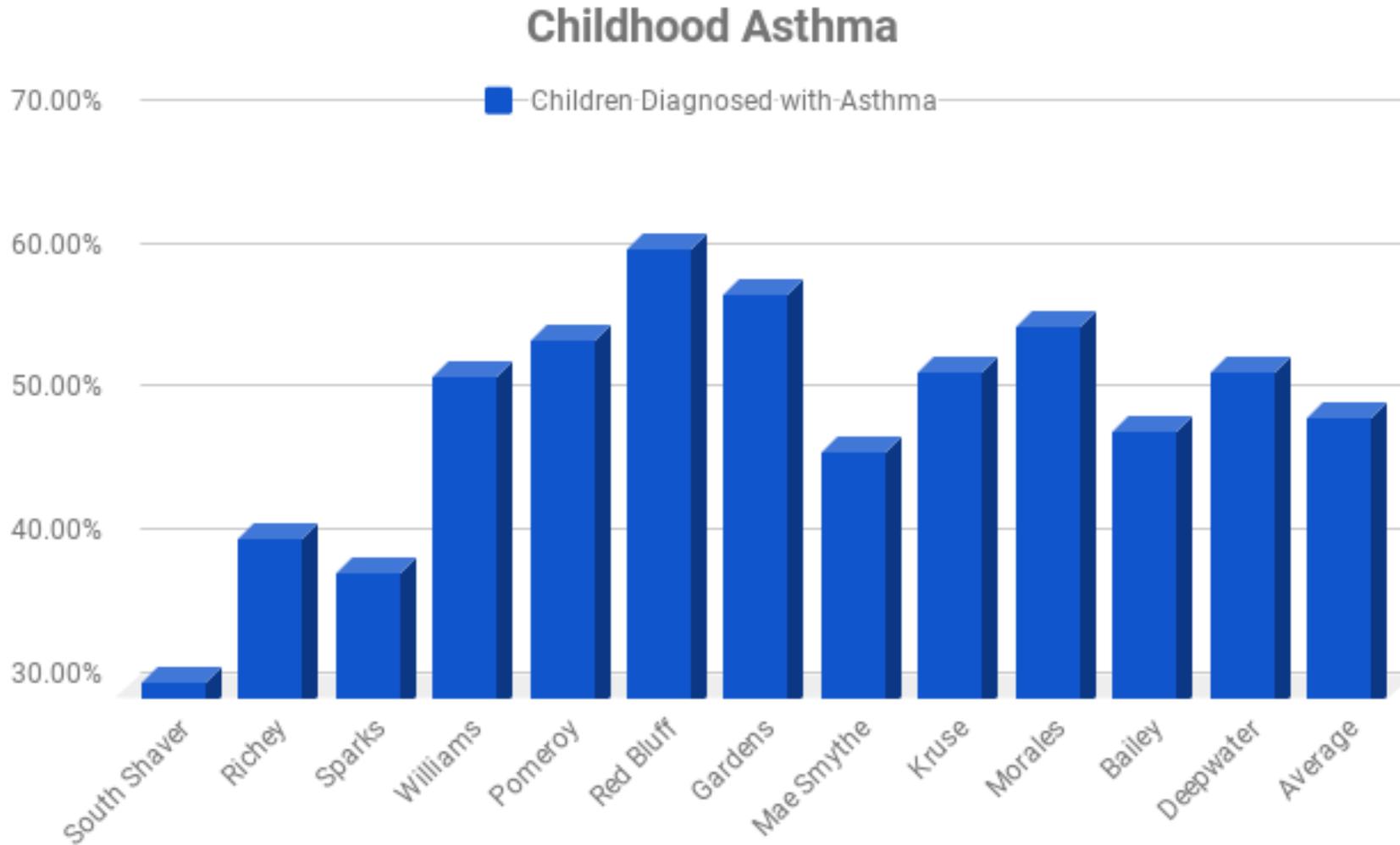
# Are you and your family currently covered by health insurance or a managed care program?



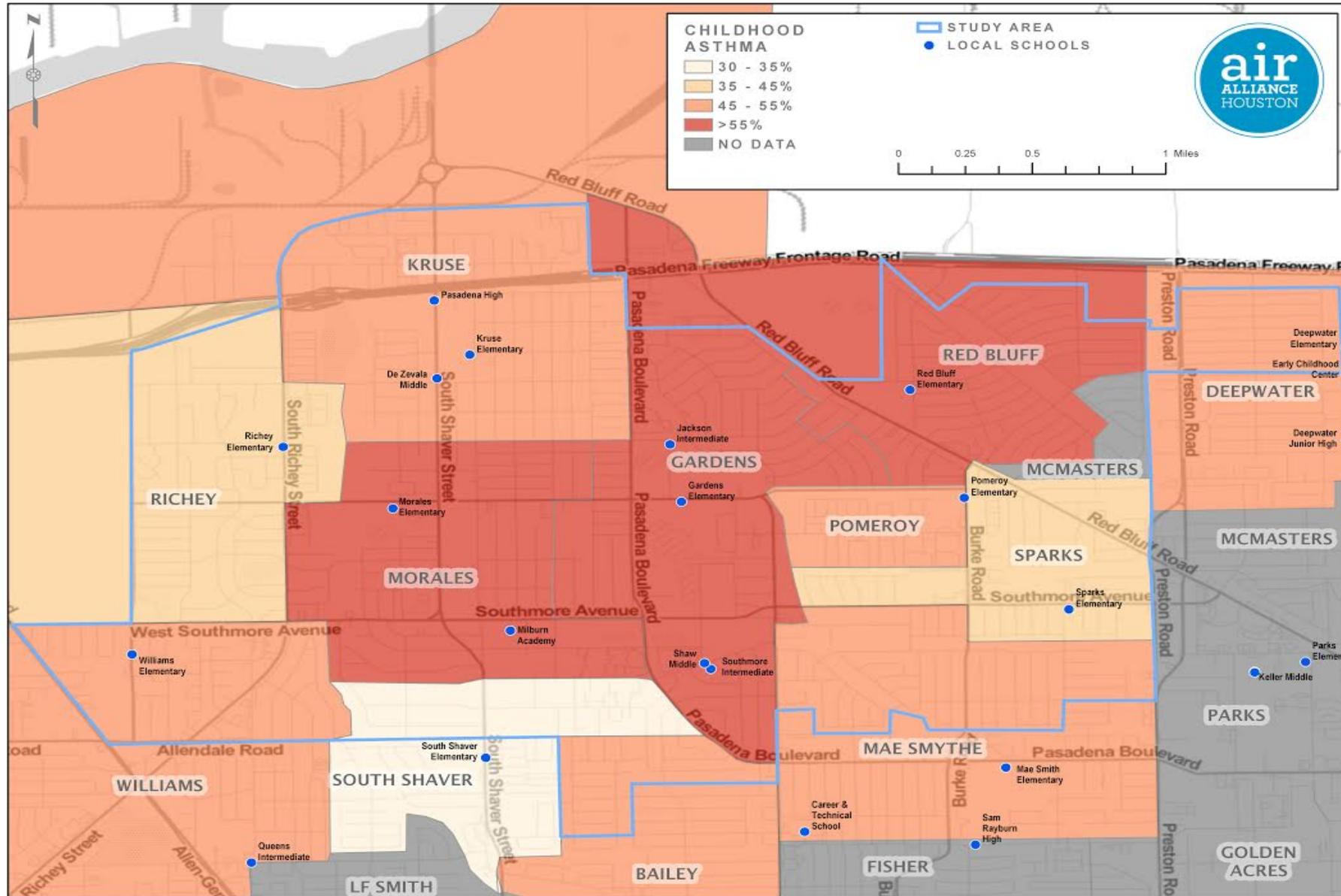
# Insurance or Medicare Coverage Rates



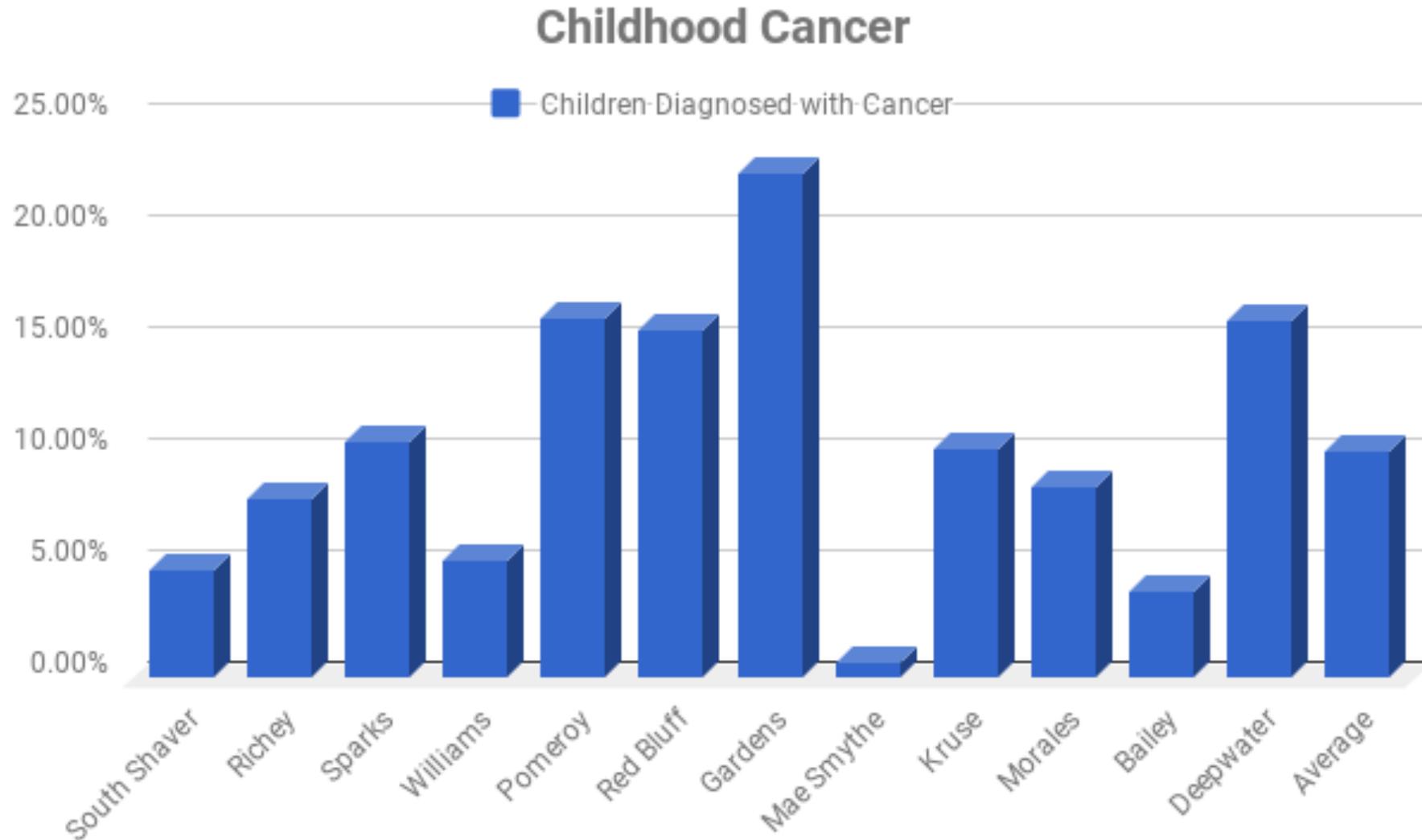
# Has your child been diagnosed with asthma or other respiratory conditions?



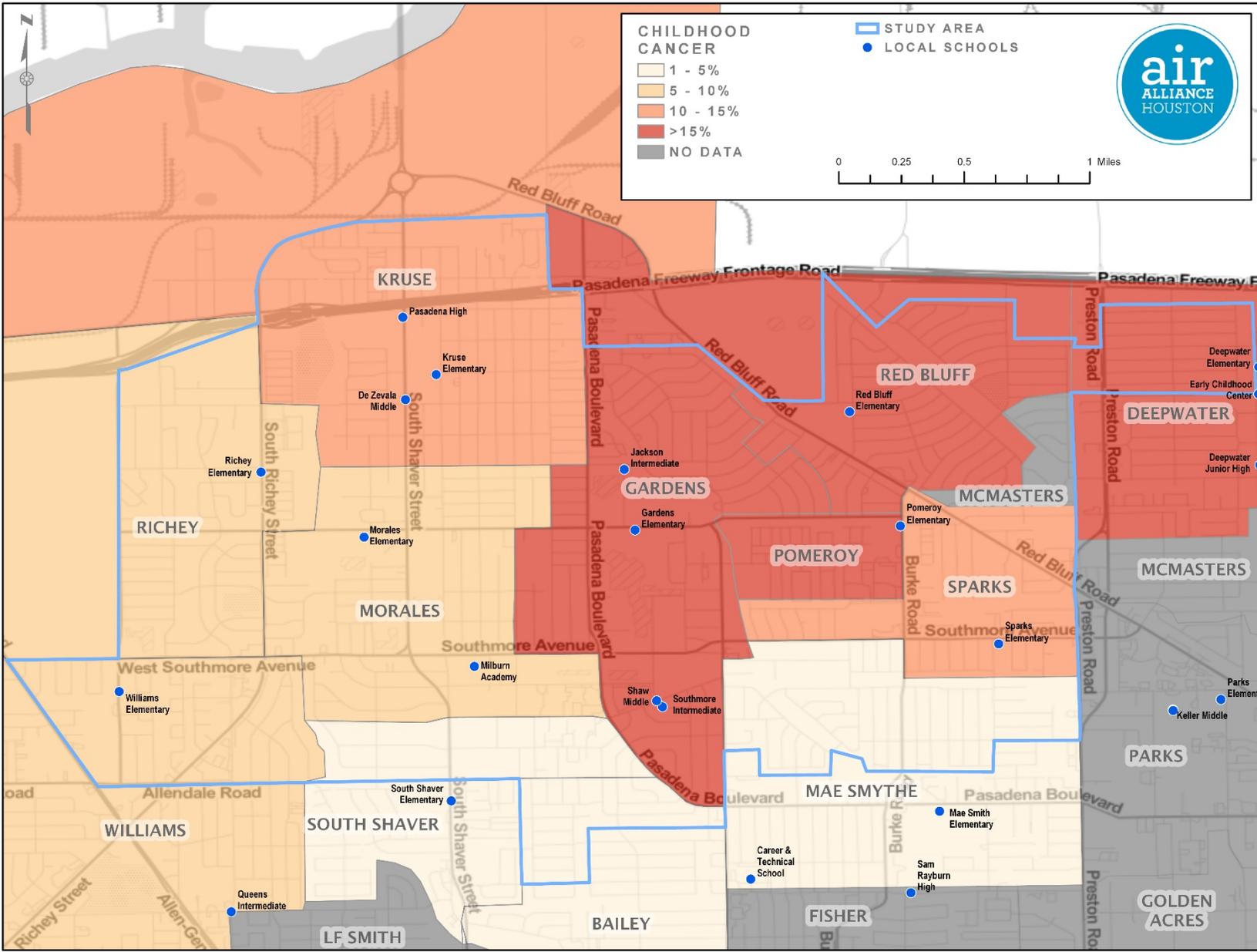
# Childhood Asthma Rates



# Has your child been diagnosed with cancer?



# Childhood Cancer Rates



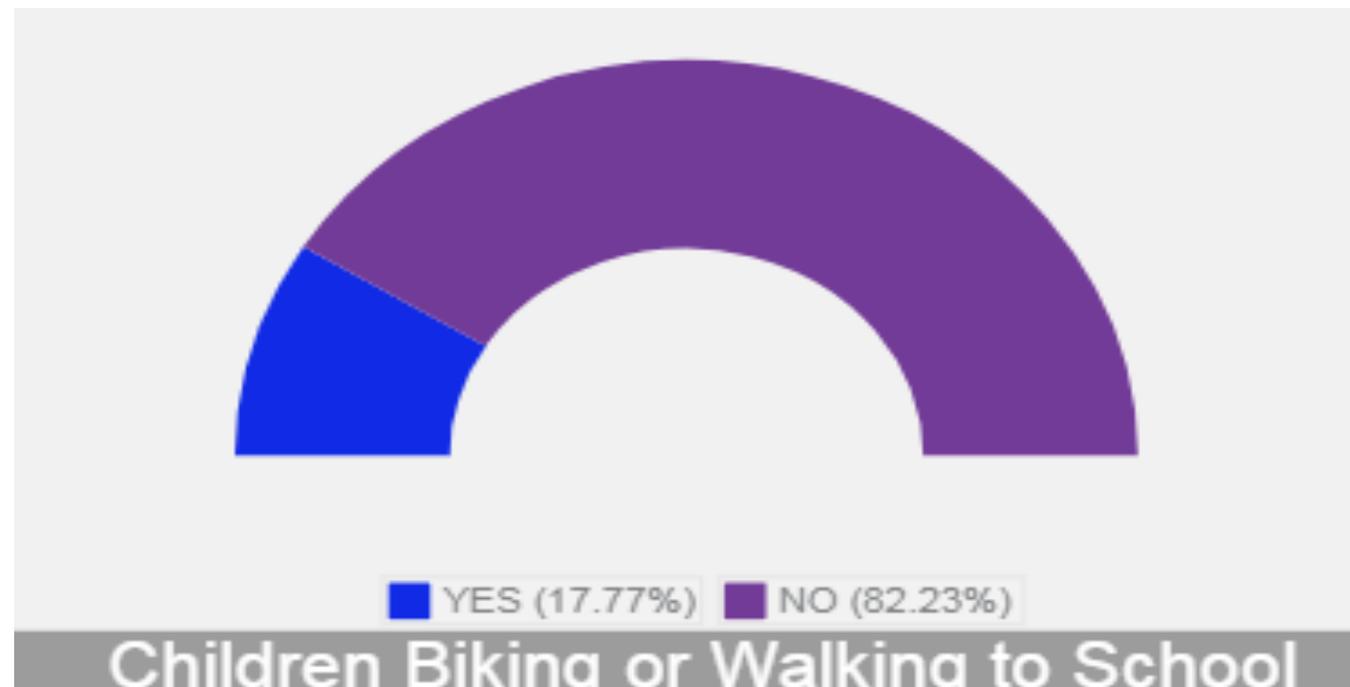
# Children's School Transportation Assessment



# General Overview of School Transportation Obstacles

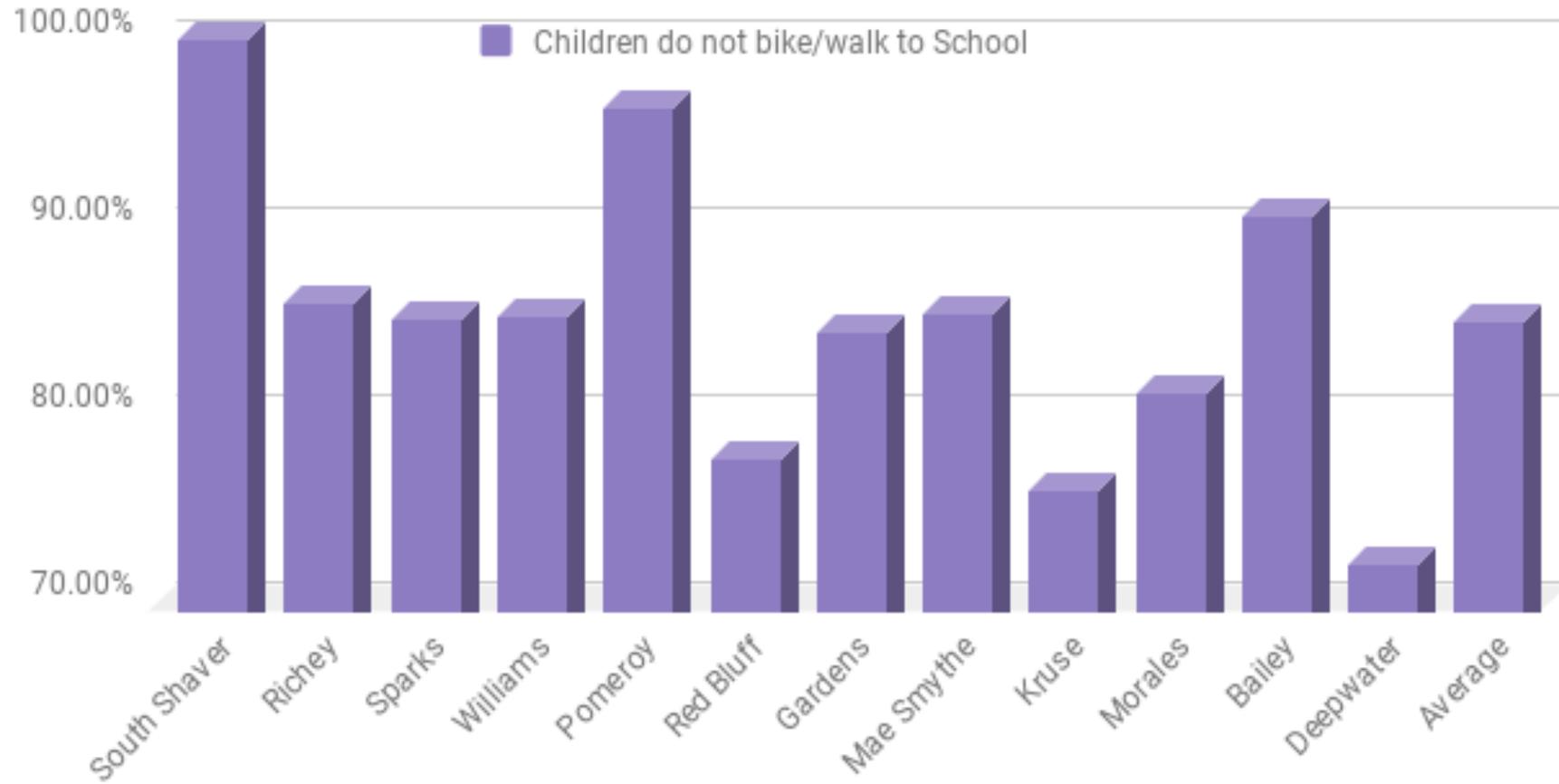
In north Pasadena neighborhoods, 611 of 925 parents reported that their children do NOT walk or bike to school. Some of the obstacles they face when it comes to biking and walking in their neighborhoods include the distance to cover, the convenience of driving, area crime levels and poor quality sidewalks.

Studies have shown that children who ride the bus and or get to school through their families' cars are exposed to 5-25 times more air pollution caused by idling than those who bike and walk to school.

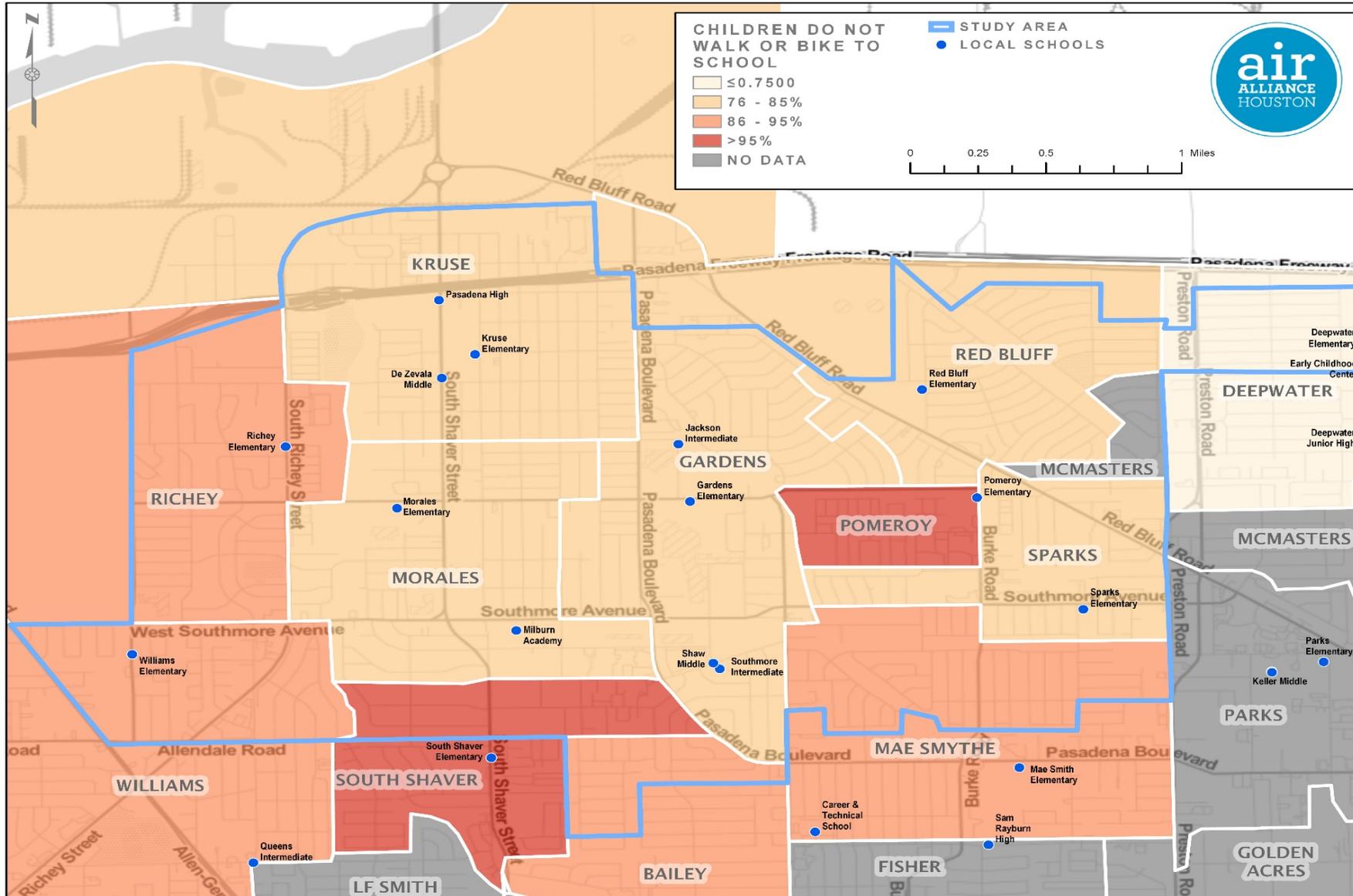


# Does your child bike or walk to school?

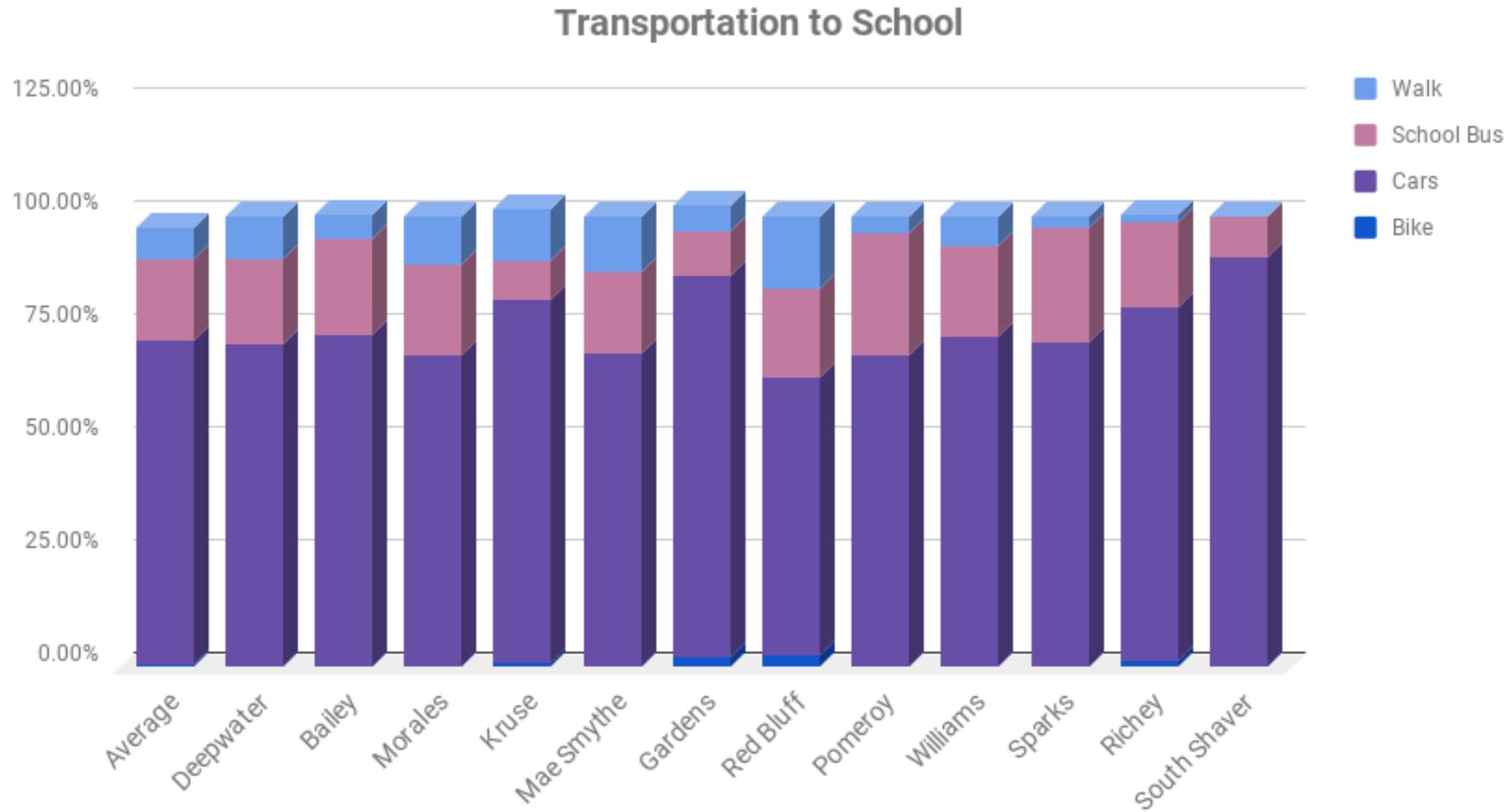
## Bike or Walk to School Assessment



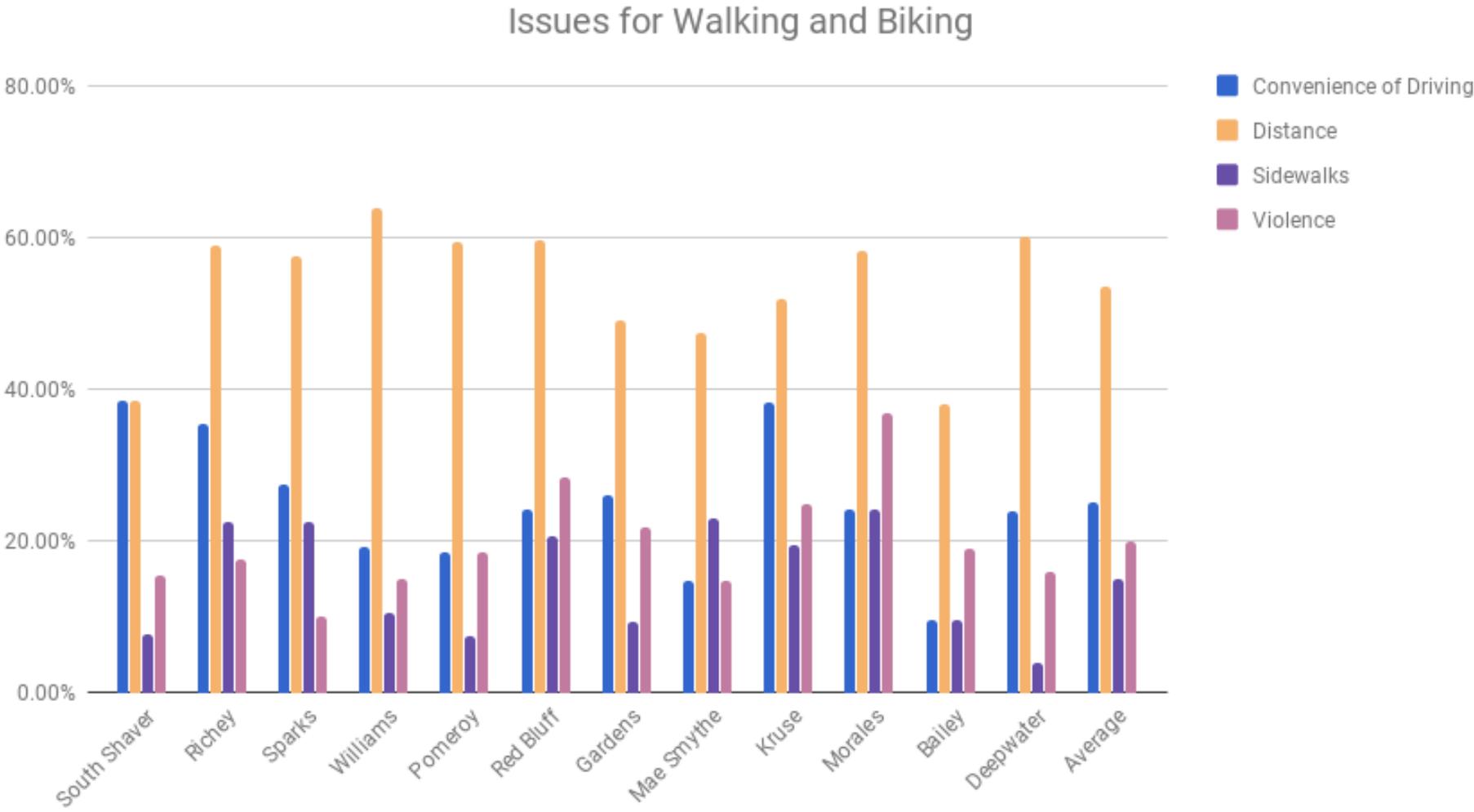
# Bike and Walk to School Assessment



# On a typical day, how do your children get to school?



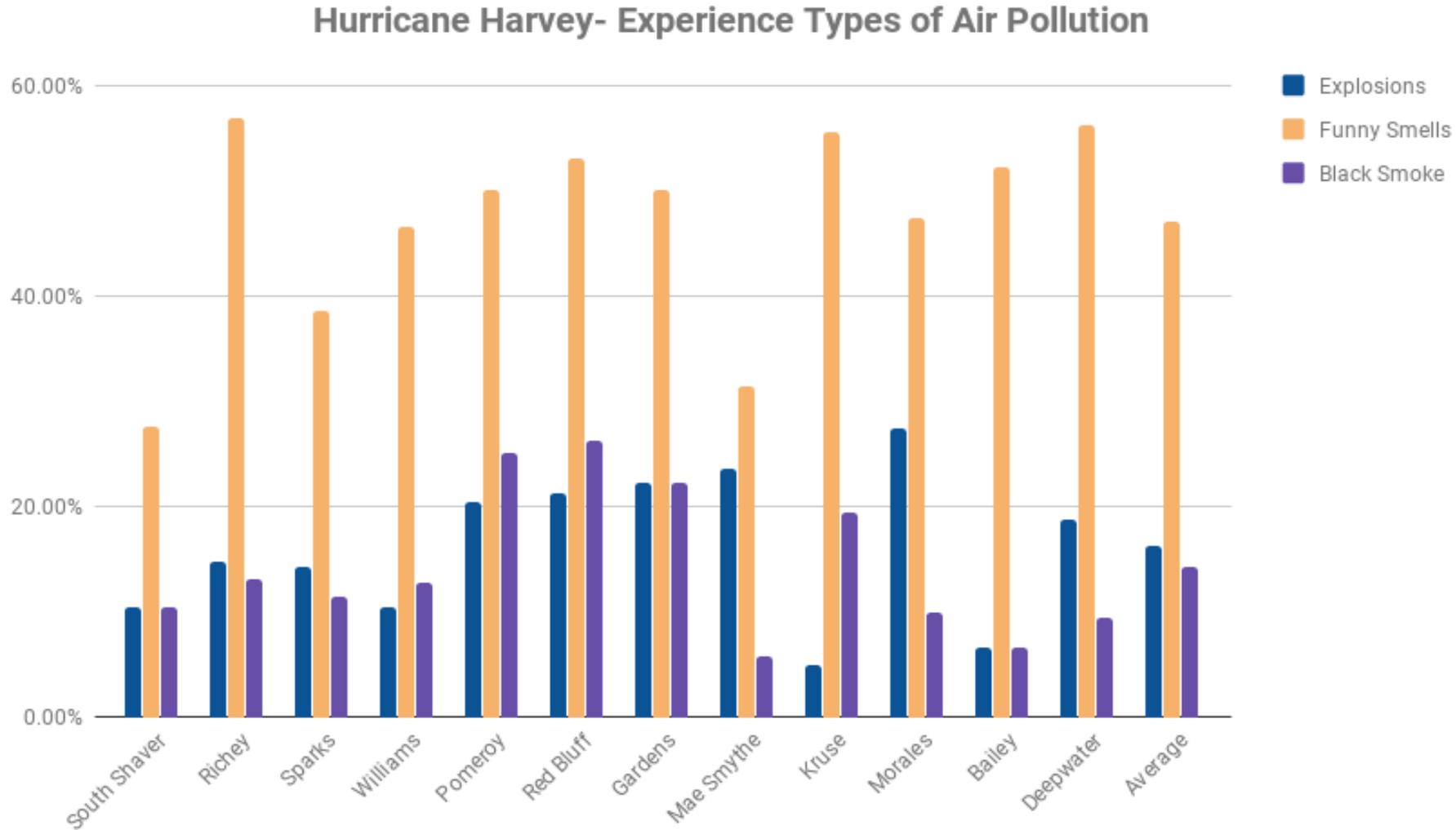
# Which of the following issues may affect your decision to allow your child to bike or walk to school?



# Hurricane Harvey Assessment

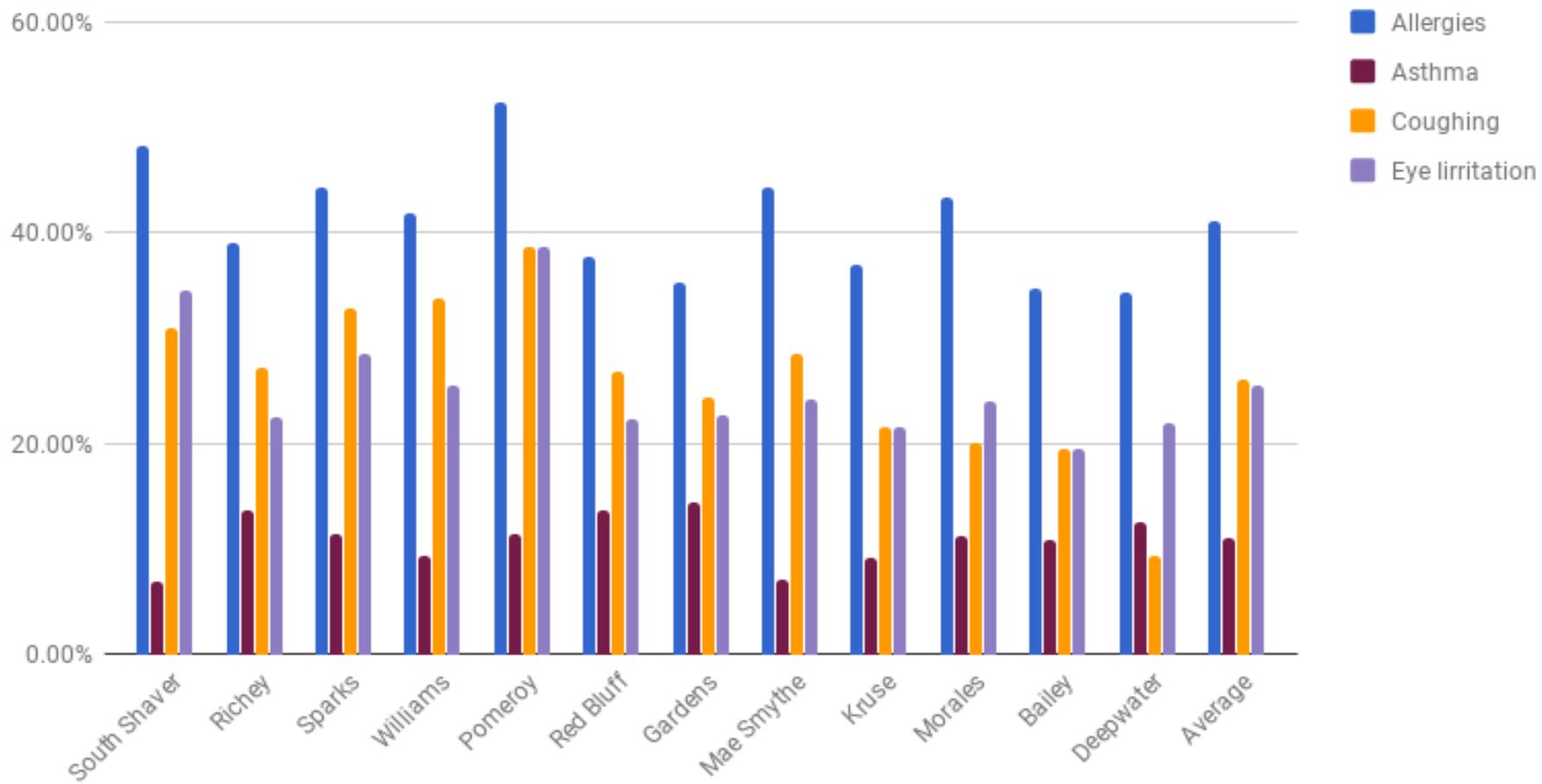


# During and after Hurricane Harvey, which of the following types of air pollution did you notice?



# During and after Hurricane Harvey, did you experience any of the following symptoms?

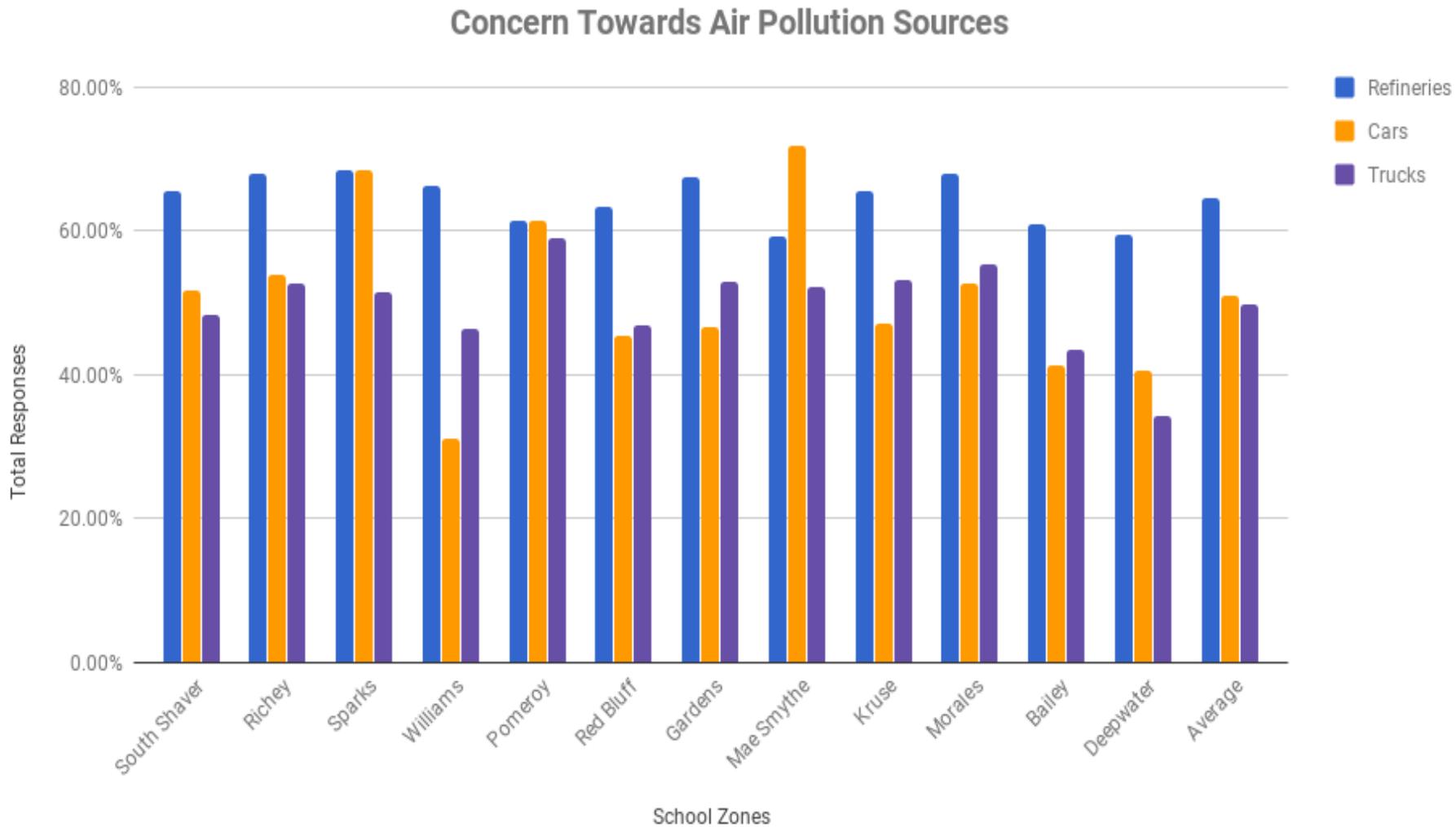
## Hurricane Harvey- Health Impacts



# Air Pollution Concerns

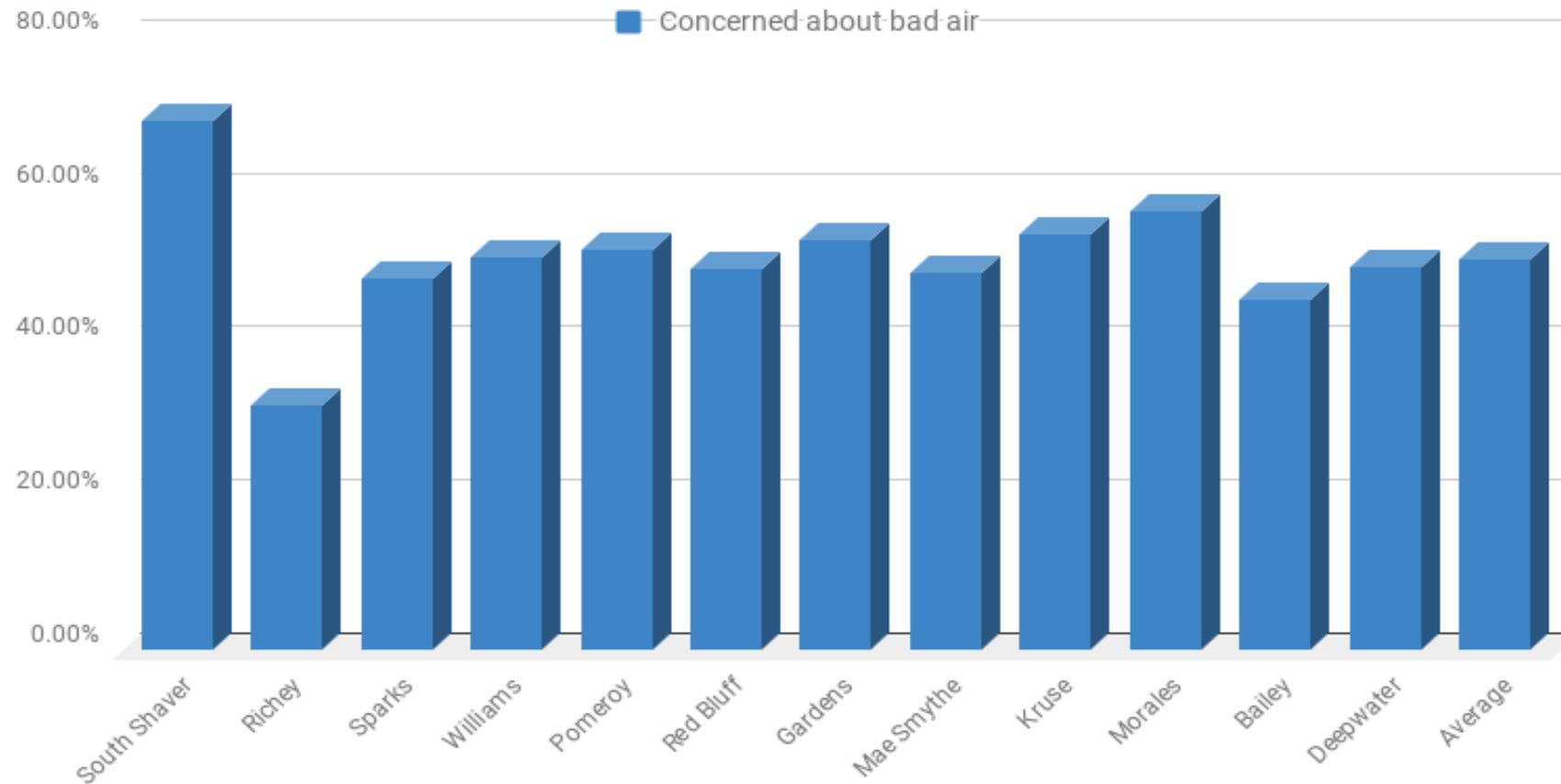


# Concerns Regarding Air Pollution from Refineries, Cars and Trucks



# Residents concern towards exposure to bad air when they spend time outside their neighborhoods.

## Air Pollution Exposure in the Streets

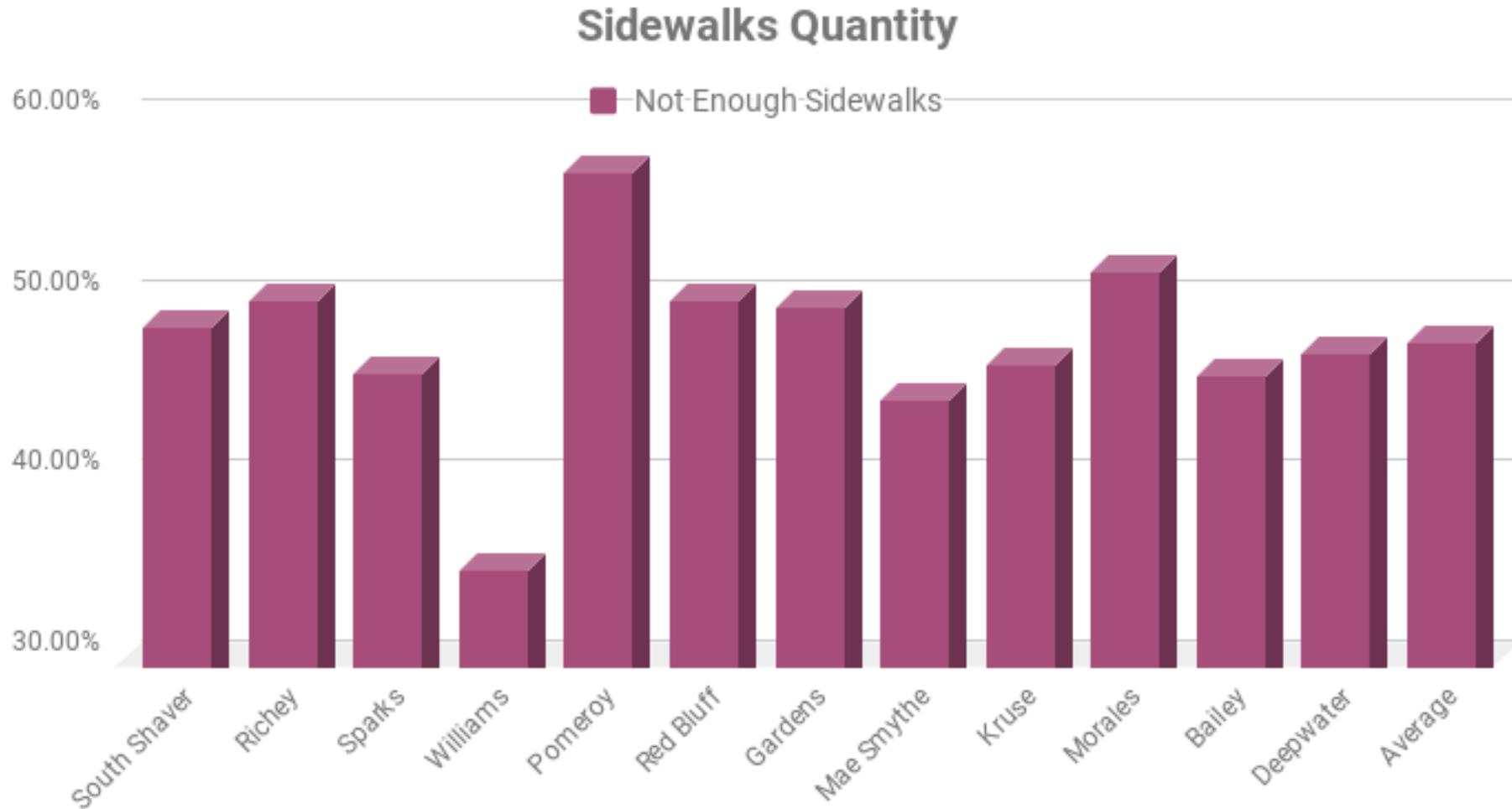




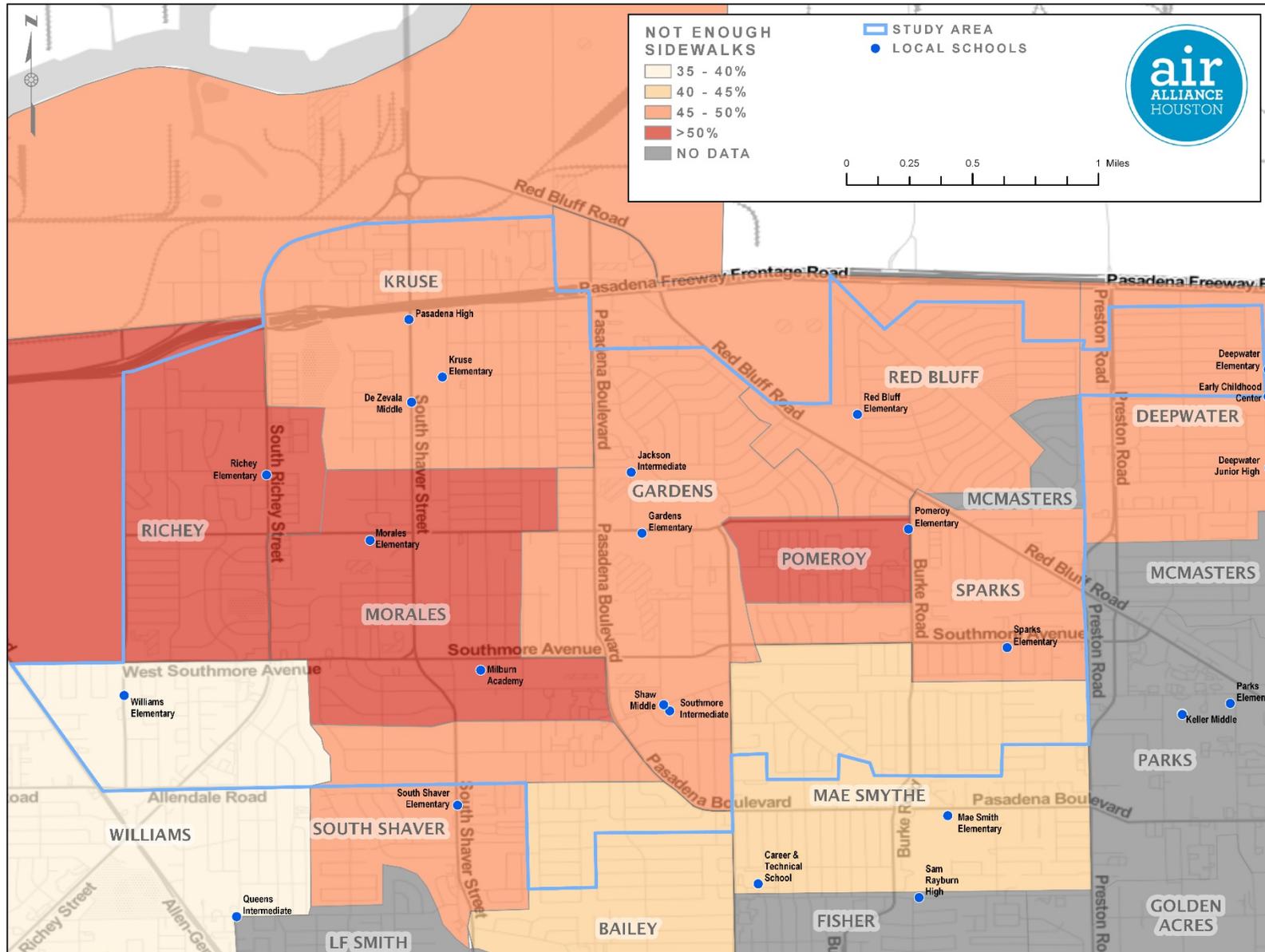
# Quality of Life Assessment



There are not enough sidewalks or trails in these neighborhoods to allow residents to walk or bike.



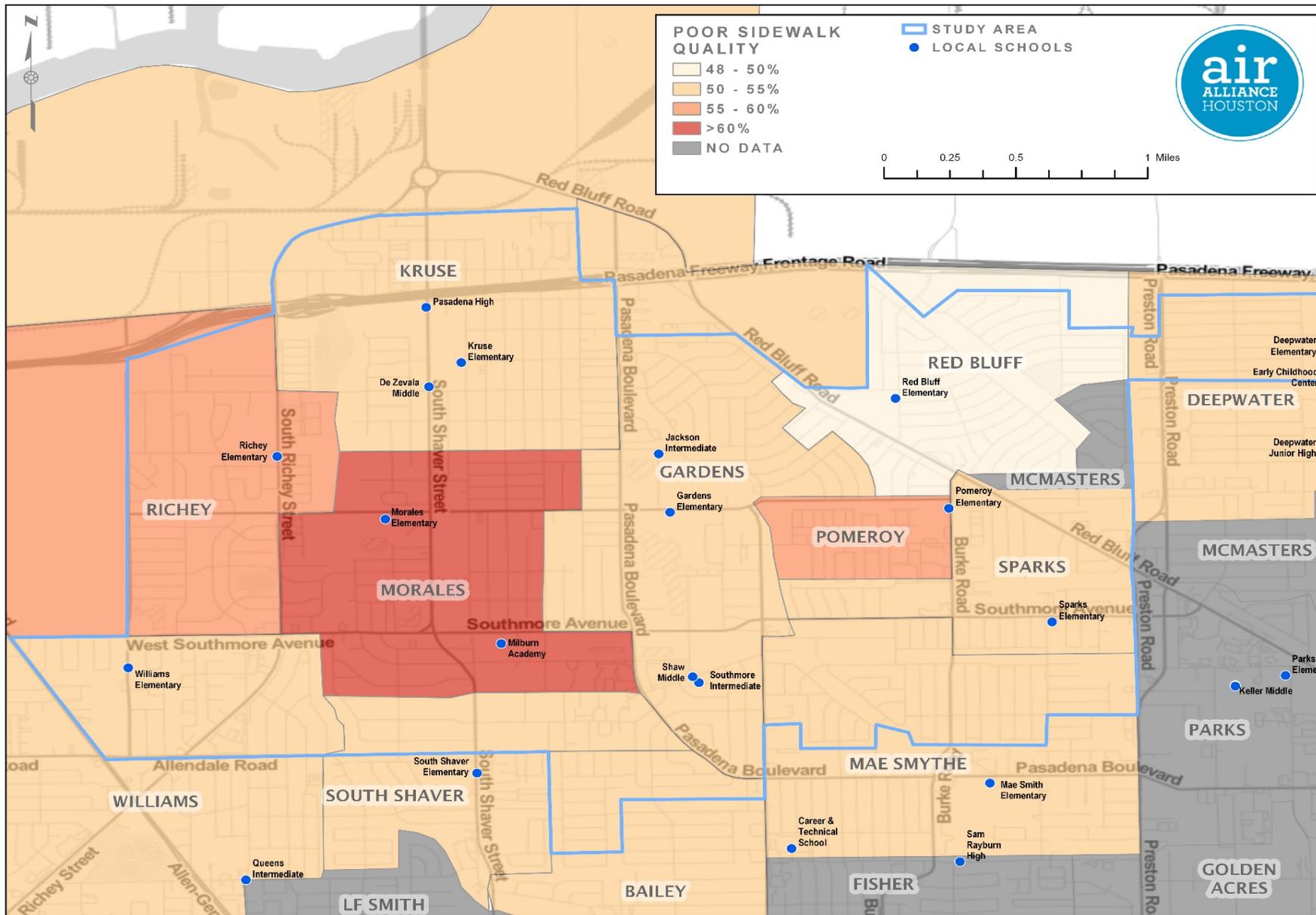
# Quantity of Sidewalks



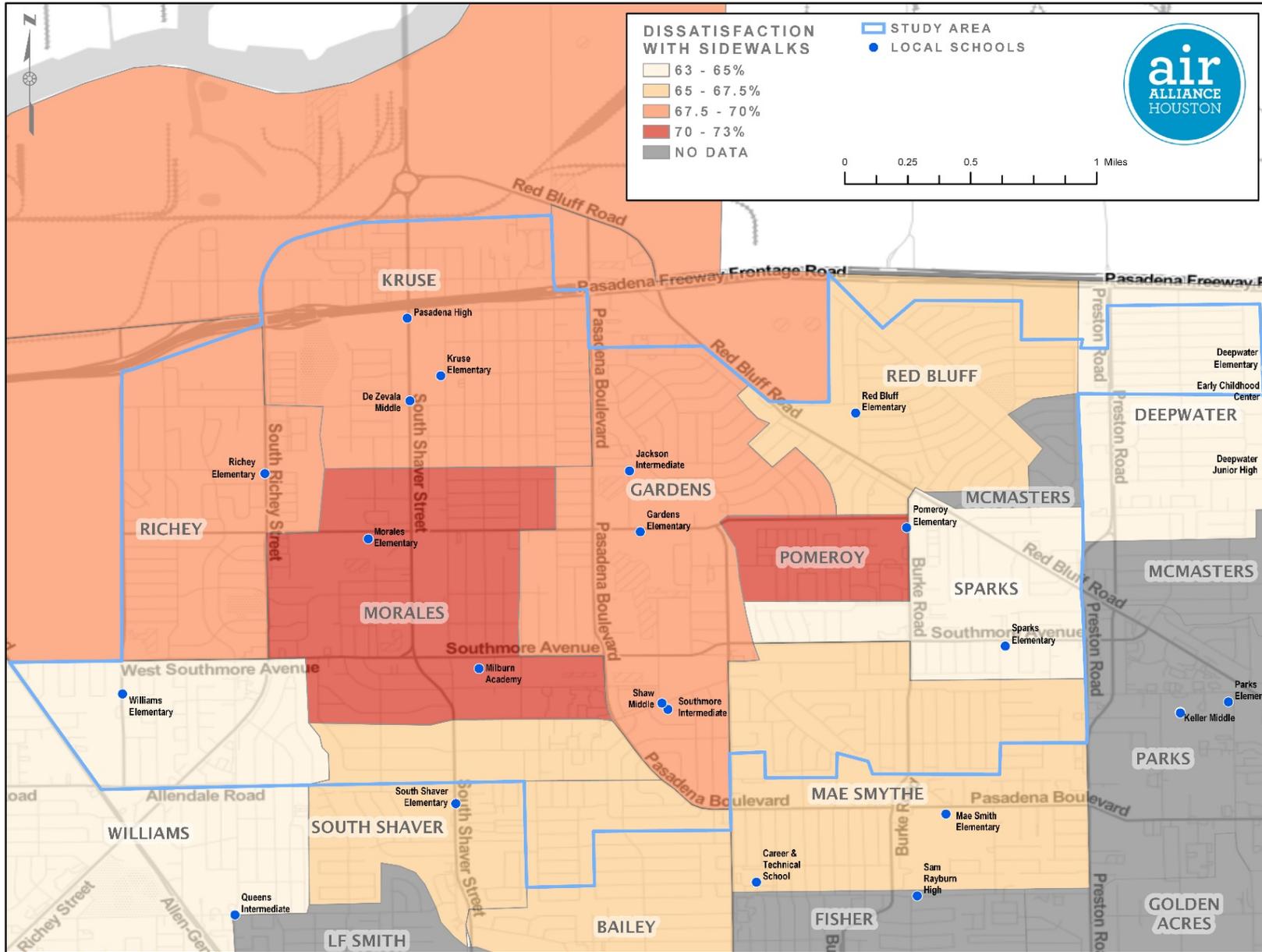
The sidewalks in these neighborhoods are not easy to walk on due to cracks, bumps, and/or missing parts.



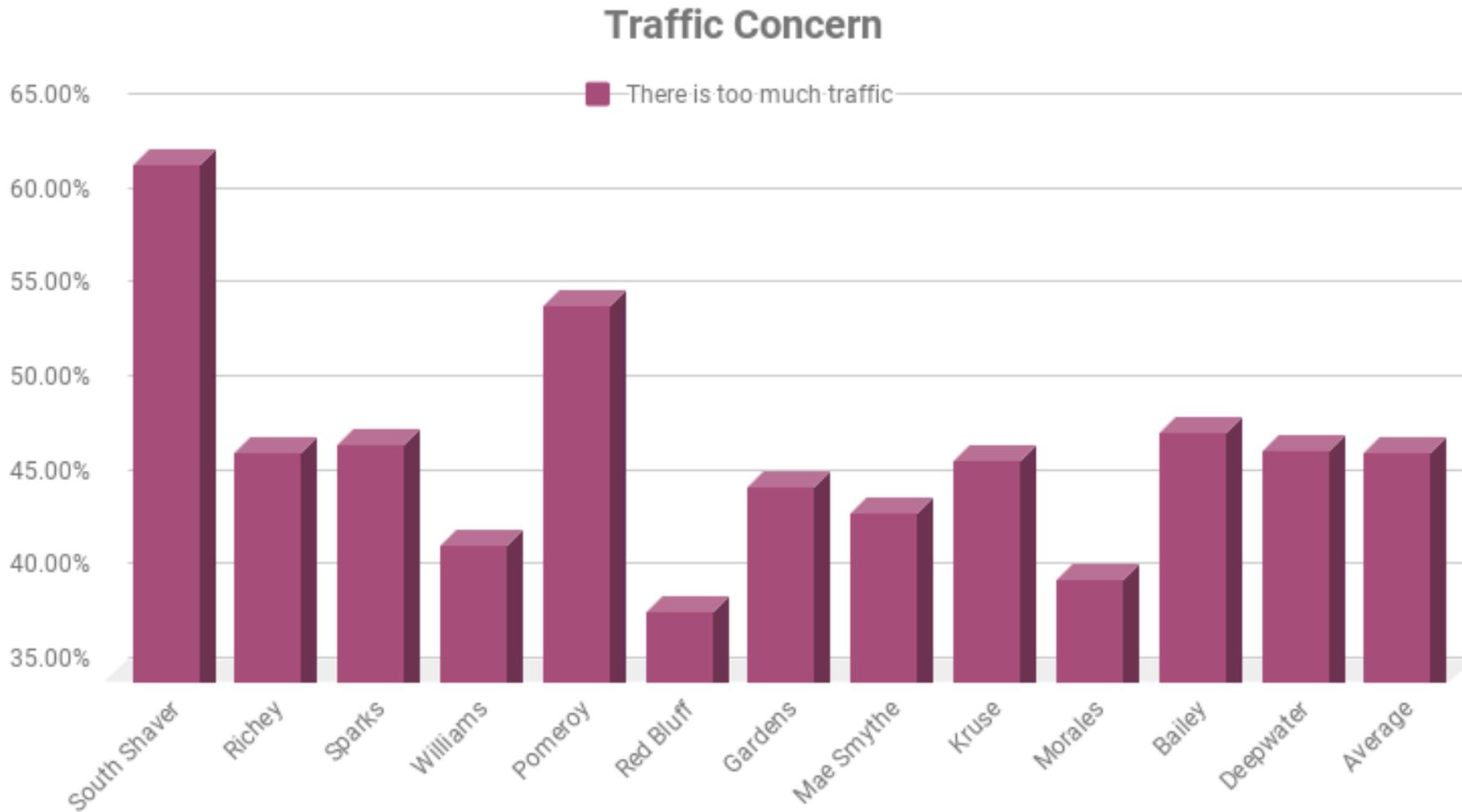
# Quality of Sidewalks



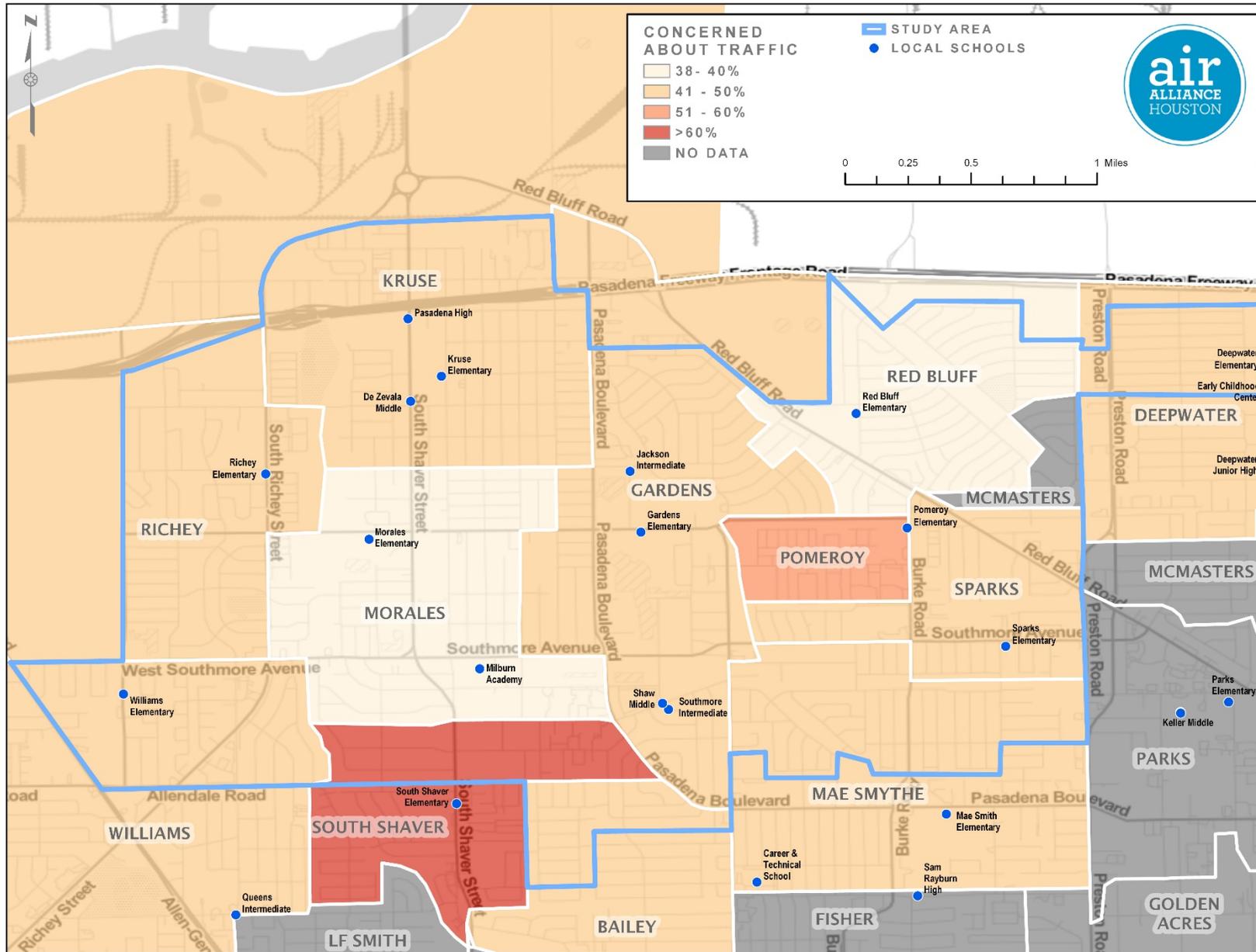
# Overall Dissatisfaction with Sidewalks



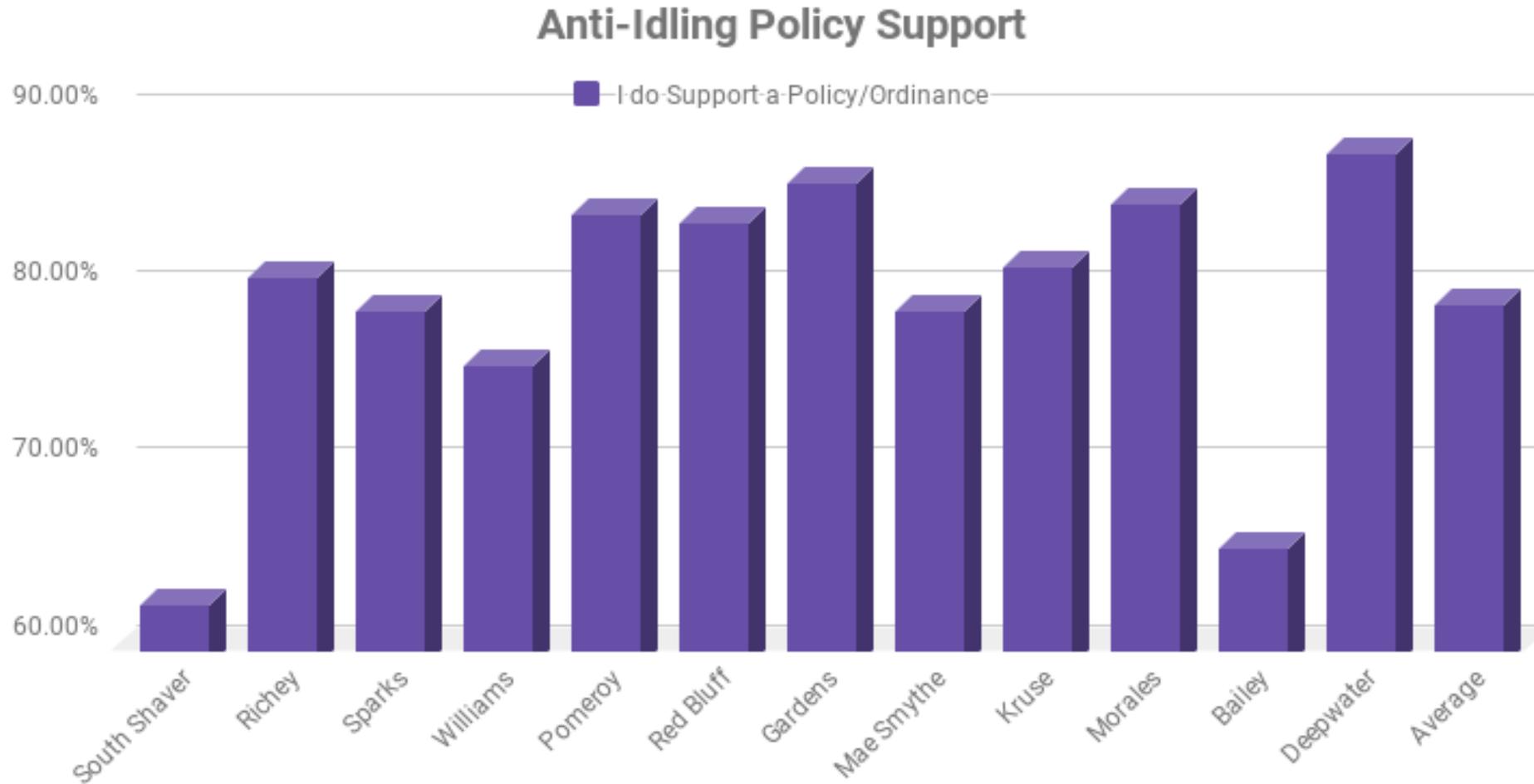
There is too much street traffic, which makes it difficult or unpleasant to walk in these neighborhoods.



# Traffic is a Concern



# Would you support an anti-idling ordinance or policy for the City of Pasadena and the school district?





# ANTI-IDLING ORDINANCE

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# ANTI-IDLING ORDINANCE

Idle reduction involves technologies and practices that minimize the amount of time drivers idle their engines. Avoiding idling time has multiple benefits, including savings in fuel and maintenance costs, improving community health and reducing air pollution exposure.



# BENEFITS OF REDUCING IDLING

## COST

- The EPA estimates that one heavy-duty truck burns as much as 1,830 gallons of fuel annually due to unnecessary idling. That is equal to over \$4,750 per year that could be saved by eliminating idling.
- The added wear of restarting a car engine is much less costly than that of wasted fuel. Idling actually increases overall engine wear by causing the car to operate longer than is necessary.



# BENEFITS OF REDUCING IDLING

## ENVIRONMENTAL

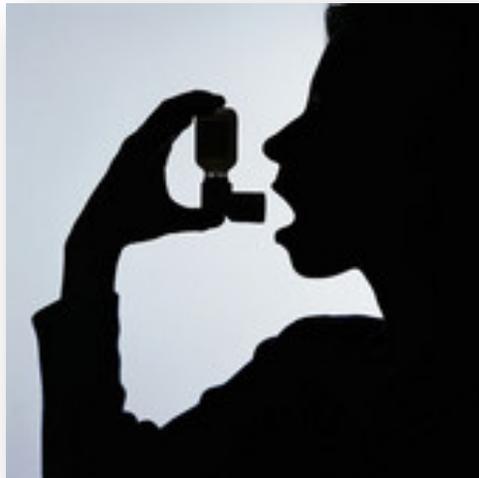
- The average truck produces about 21 tons of carbon dioxide annually while idling. For every 10 minutes your engine is off, you will prevent one pound of carbon dioxide emissions.
- Diesel truck idling produces a complex mixture of thousands air pollutants, including fine particulate matter, nitrogen oxides, carbon monoxide, and volatile organic compounds, which are precursors to ozone formation.



# BENEFITS OF REDUCING IDLING

## HEALTH

- Idling tailpipes spew out the same pollutants as moving cars, which have been linked to serious illnesses including asthma, heart disease, chronic bronchitis and cancer.
- Diesel particulates have been classified as an air toxic, can cause chronic disease, and carry the highest cancer risk of any other air toxic in the Houston region.



# DIESEL EXHAUST EXPOSURE RISK FOR STUDENTS

- Texas school children are exposed to diesel exhaust while riding on school buses, while boarding or exiting school buses, while waiting for their parents to pick them up in areas adjacent to idling school buses, and while indoors at school. Numerous studies have shown that diesel exhaust concentrations inside a bus are much higher than levels outside of them.
- Research and Recommendation on School Bus and Automobile Idling March 3, 2008 to The Texas Department of State Health Services and Texas School Health Advisory Committee (TSHAC). Yale University researchers, in conjunction with Environment and Human Health, Inc., recorded pollution levels during school bus trips using a monitor attached to a child's backpack. The study revealed that students on school buses were exposed to levels of particulate pollution and diesel that were 5-15 times higher than ground levels where other children walk and bike to school.

Wargo, J., Brown, D., "Children's Exposure to Diesel Exhaust on School Buses," Yale University and Environment & Human Health, Inc., New Haven, CT, February 2002.

[www.ehhi.org/reports/diesel/diesel.pdf](http://www.ehhi.org/reports/diesel/diesel.pdf)



# Elevated Pollution Levels Around Schools During Pick-Up Hours

## BUCKET BRIGADE AIR SAMPLING



The Bucket Brigade testes for total particulate matter and volatile organic compounds, which are pollutants caused by idling car engines.

In November, Air Alliance Houston took air samples at Red Bluff Elementary during a Walk To School Day, and at Richey Elementary during pick up hours.

We found that children are regularly exposed to many harmful pollutants that can cause chronic diseases, such as asthma, during pick-up hours.

# Elevated Pollution Levels Around Schools During Pick Up Hours

## RESULTS OF ANALYSIS

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**Client:** Air Alliance Houston  
**Client Sample ID:** Richey Elementary at 610 S. Richey St Pasadena TX, 77506  
**Client Project ID:** Pasadena Walk to School Day

**ALS Project ID:** P1704953  
**ALS Sample ID:** P1704953-001

### Tentatively Identified Compounds

**Test Code:** EPA TO-15 Modified  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 10 L Tedlar Bag  
**Test Notes:** H3, T

**Date Collected:** 10/4/17  
**Date Received:** 10/9/17  
**Date Analyzed:** 10/9/17  
**Volume(s) Analyzed:** 0.10 Liter(s)

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
4.31	Acetaldehyde	190	
4.44	Methyl Alcohol	100	
4.54	2-Methylpropene	230	
5.84	2-Methylbutane	450	
7.77	Methacrolein	44	
8.27	2-Methylpentane	1,600	
8.82	2-Methyl-1-pentene	45	
12.96	2,5-Dimethylhexane	65	

The results found a 1,600 parts per billion (PPB) concentration of 2-methylpentane, which is a by product of gasoline combustion. These levels are higher than the EPA and TCEQ's limits of 990 PPB. When levels surpass these limits, there is a higher risk for asthma, cardiovascular diseases, and respiratory infections among area residents.



# ANTI-IDLING ORDINANCES GALENA PARK, JACINTO CITY AND THE CITY OF HOUSTON



# WHAT DO WE PLAN TO DO?

- Work on the Safer Routes To School project with Healthy living Matters
- Work to implement a school idling reduction program as a PISD School district policy
- Advocate for an anti-idling ordinance for the City of Pasadena





**ANTI-IDLING  
ORDINANCE  
IMPLEMENTATION  
PLAN**

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In Schools and the City



# Clean School Bus National Idling Reduction Campaign

## 1. Establish an Idling Reduction Policy Campaign:

At a minimum, the policy should include the following:

- Buses should typically be moving whenever the engine is on.
- Engines should be turned off as soon as possible after arriving at pick-up and drop-off areas.
- School buses should not be restarted until they are ready to depart.



# Tips To Help an Idling Reduction Policy Succeed

- Train bus drivers to understand and follow idling reduction policies.
- Provide a comfortable space where bus drivers can wait.

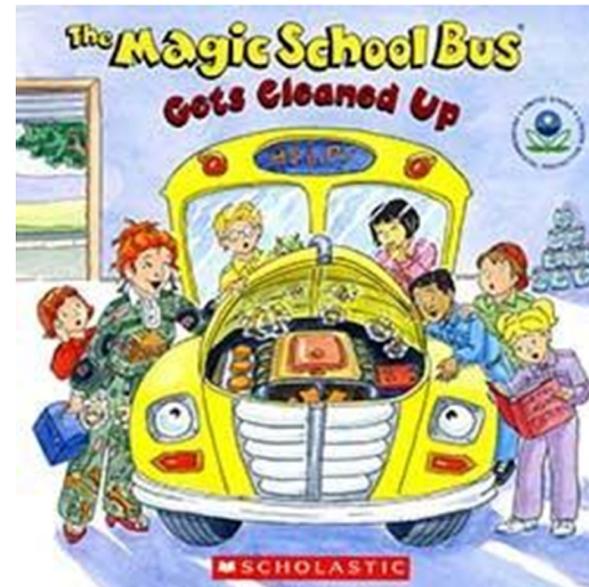


# Clean School Bus National Idling Reduction Campaign

## 2. Promote Idling Reduction Campaign:

*Clean School Bus's* National Idling Reduction Campaign offers a selection of materials that can be ordered from the National Service Center of Environmental Publications.

- Children's books
  - Free copy of “The Magic School Bus Gets Cleaned Up” from the EPA in English/Spanish
- Sending letters/pledges to parents



# Clean School Bus National Idling Reduction Campaign

## Current School Projects:

- “Air Pollution Week” or curriculum integration
- “Be Air Aware Week” at Pasadena High School and Pasadena Memorial High School to promote cleaner air through student civic engagement



# Creating Clean Air Zones

- Kids Clean Air Zone
- Idle-Free Zones
- At schools and city parks





**TAKE ACTION**

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# Things to Do to Keep Up With Air Pollution and Other Issues In Your City

1. Download the CAER app and keep up with industry happenings. CAER Online is a community resource that provides information about industrial incidents and events. Its messages offer basic information such as descriptions of what the incidents or events are, where they happened, and whether any action should be taken by area residents.



2. You can take action by signing up to receive alerts and report polluters in your area. Report a Polluter at Neighborhood Witness, [www.neighborhoodwitness.org](http://www.neighborhoodwitness.org).



# Things to Do to Take Action in Your City

3. Call the Pasadena Action Line at **713-475-5555** to report sidewalk issues, suspicious cars and air pollution concerns.



4. Contact your elected officials directly and tell them about your concerns related to air pollution, such as idling cars.

Mayor	Jeff A. Wagner	713-475-5545
District A	Council Member Felipe Villarreal	<a href="mailto:fvillarreal@ci.pasadena.tx.us">fvillarreal@ci.pasadena.tx.us</a>
District B	Council Member Bruce Leamon	<a href="mailto:bleamon@ci.pasadena.tx.us">bleamon@ci.pasadena.tx.us</a>
District C	Council Member Don Harrison	<a href="mailto:dharrison@ci.pasadena.tx.us">dharrison@ci.pasadena.tx.us</a>
District D	Council Member Sammy Casados	<a href="mailto:scasados@ci.pasadena.tx.us">scasados@ci.pasadena.tx.us</a>
District E	Council Member Cody Wheeler	<a href="mailto:cwheeler@ci.pasadena.tx.us">cwheeler@ci.pasadena.tx.us</a>
District F	Council Member Phyl Cayten	(281) 788-7980
District G	Council Member Cary Bass	<a href="mailto:cbass@ci.pasadena.tx.us">cbass@ci.pasadena.tx.us</a>
District H	Council Member Thomas Schoenbein	<a href="mailto:tschoenbein@ci.pasadena.tx.us">tschoenbein@ci.pasadena.tx.us</a>



# REFERENCES

Initiative, Y. N. (n.d.). The Effect of Vehicular Emissions on Human Health. Retrieved August 03, 2017, from [http://teachers.yale.edu/curriculum/viewer/initiative\\_08.07.09\\_u](http://teachers.yale.edu/curriculum/viewer/initiative_08.07.09_u)

Learn About Idling Reduction Technologies (IRTs) for Trucks. (2016, November 18). Retrieved August 03, 2017, from <https://www.epa.gov/verified-diesel-tech/learn-about-idling-reduction-technologies-irts-trucks>

Vehicle Idling Restrictions. (n.d.). Retrieved August 03, 2017, from <https://www.tceq.texas.gov/airquality/mobilesource/vehicleidling.html>

Wargo, J., Brown, D., “Children’s Exposure to Diesel Exhaust on School Buses,” Yale University and Environment & Human Health, Inc., New Haven, CT, February 2002.  
[www.ehhi.org/reports/diesel/diesel.pdf](http://www.ehhi.org/reports/diesel/diesel.pdf)



Air Alliance Houston's mission is to protect public health by improving air quality through research, education, and advocacy.

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