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Waco Human Environmental Exposure to Lead

[www.wacolead.org](http://www.wacolead.org)

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# Tackling the Problem of Environmental Lead Exposures in Waco and McLennan County

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# Background

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## McLennan County:

- 22 incorporated cities
- 236,028 residents, more than 50% in Waco
- 39,000+ children, ~35% in poverty

## Environmental Lead in McLennan County:

- 1.3% of children have lead concentrations in their blood higher than 10  $\mu\text{g}/\text{dL}$ 
  - Texas: 0.6%
- 60.2% of housing was built before 1980
  - Texas: 46.8%

# Background

## McLennan County:

2011 population: 238,564

2010, children 0-6: 19,856

Tested for lead: 6,374 (32%)

Above guideline: 84 (1.3%)

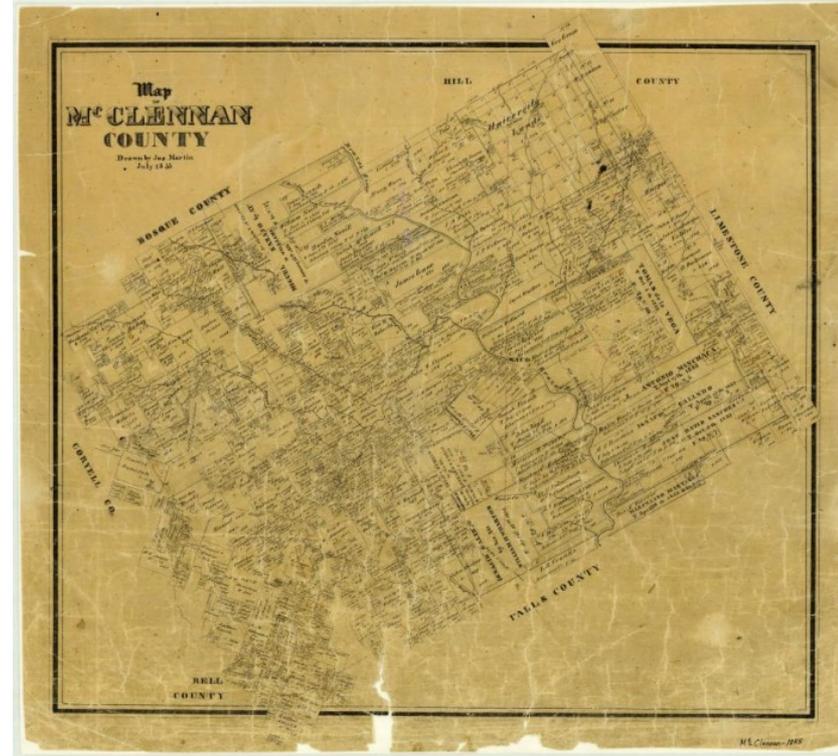
(State average is 0.6%)

Bexar County: 0.8%

Harris County: 0.4%

El Paso: 0.5%

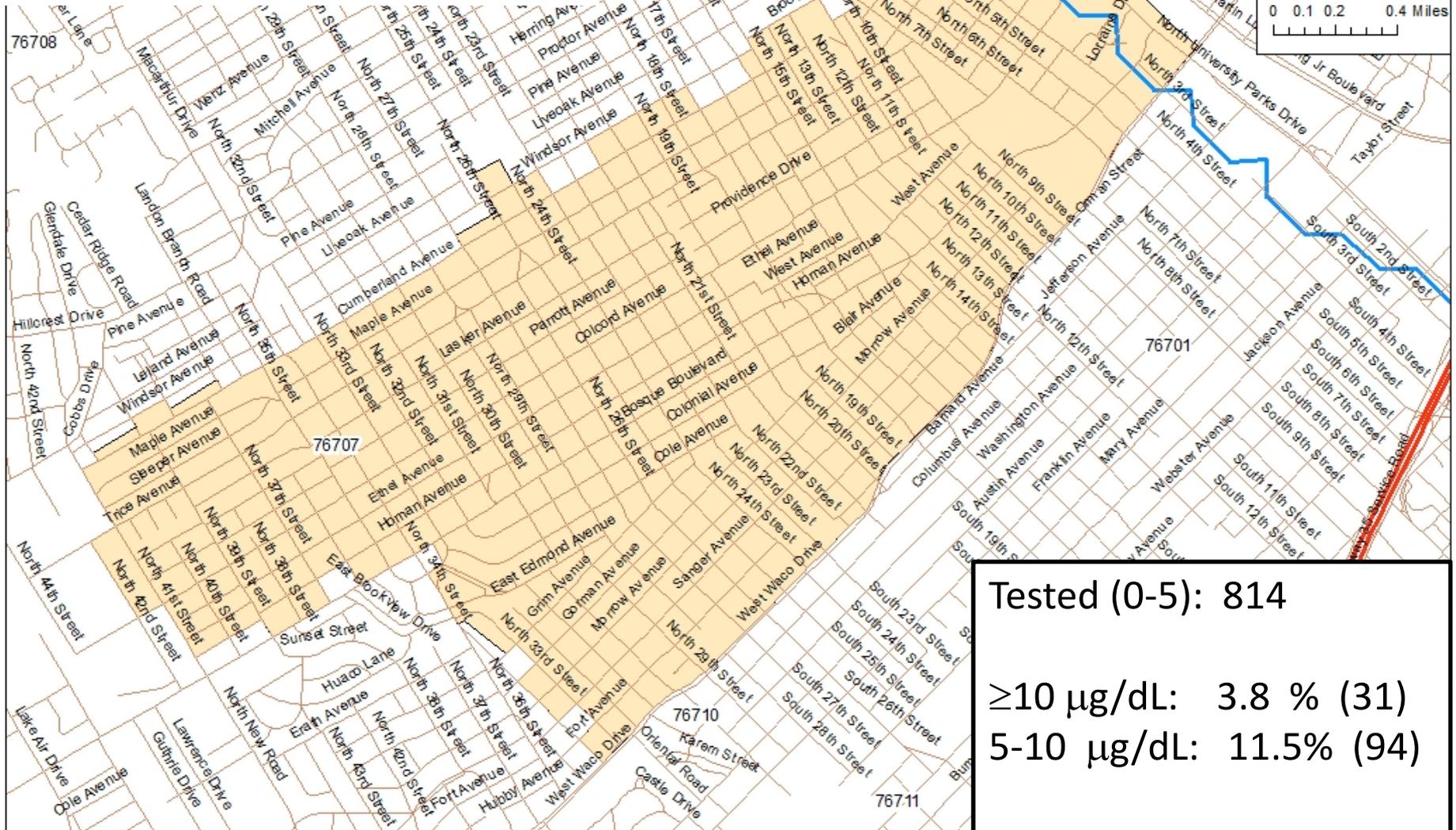
Tarrant: 0.4%



# WHEEL initiative

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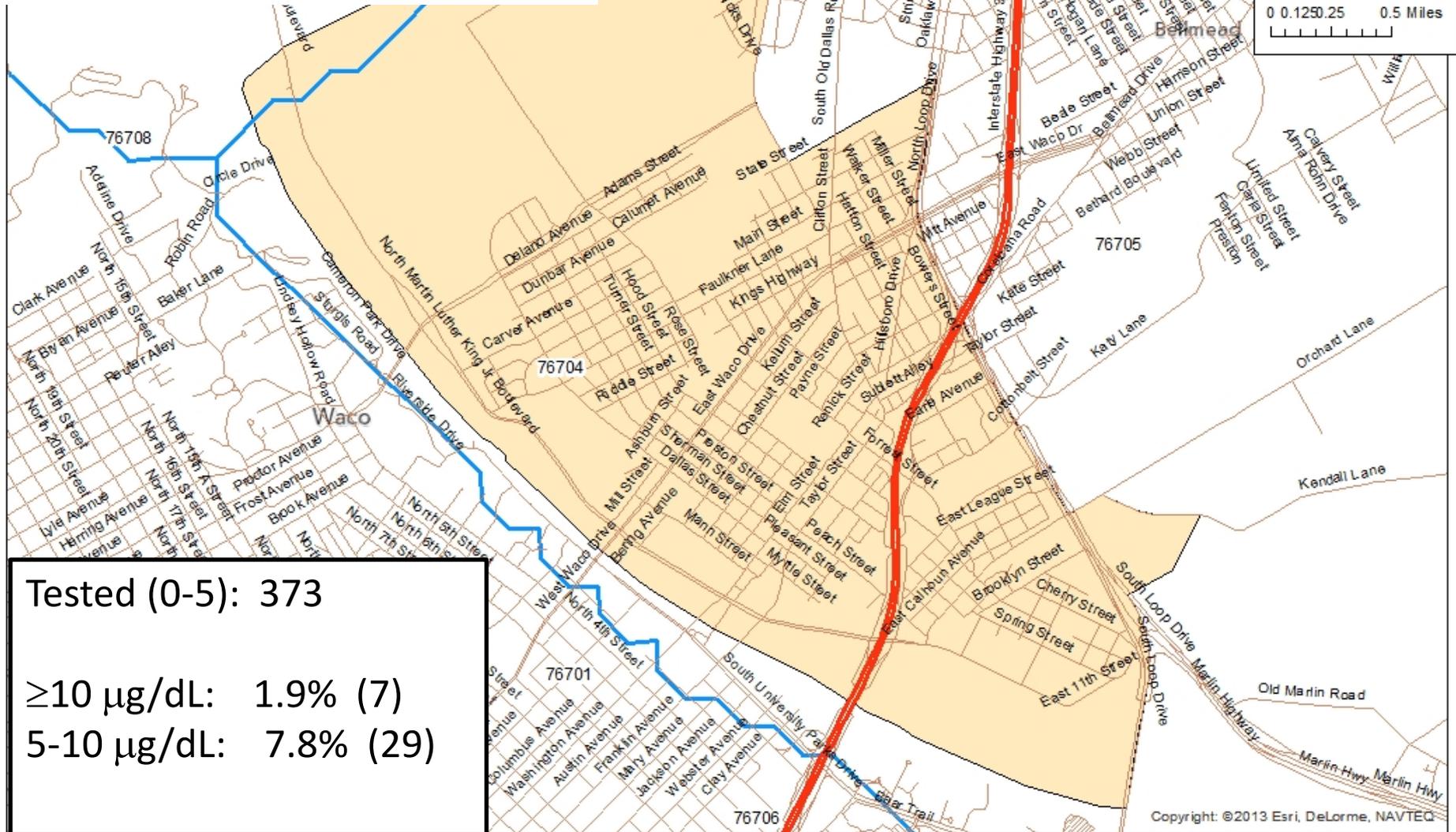
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# WHEEL initiative

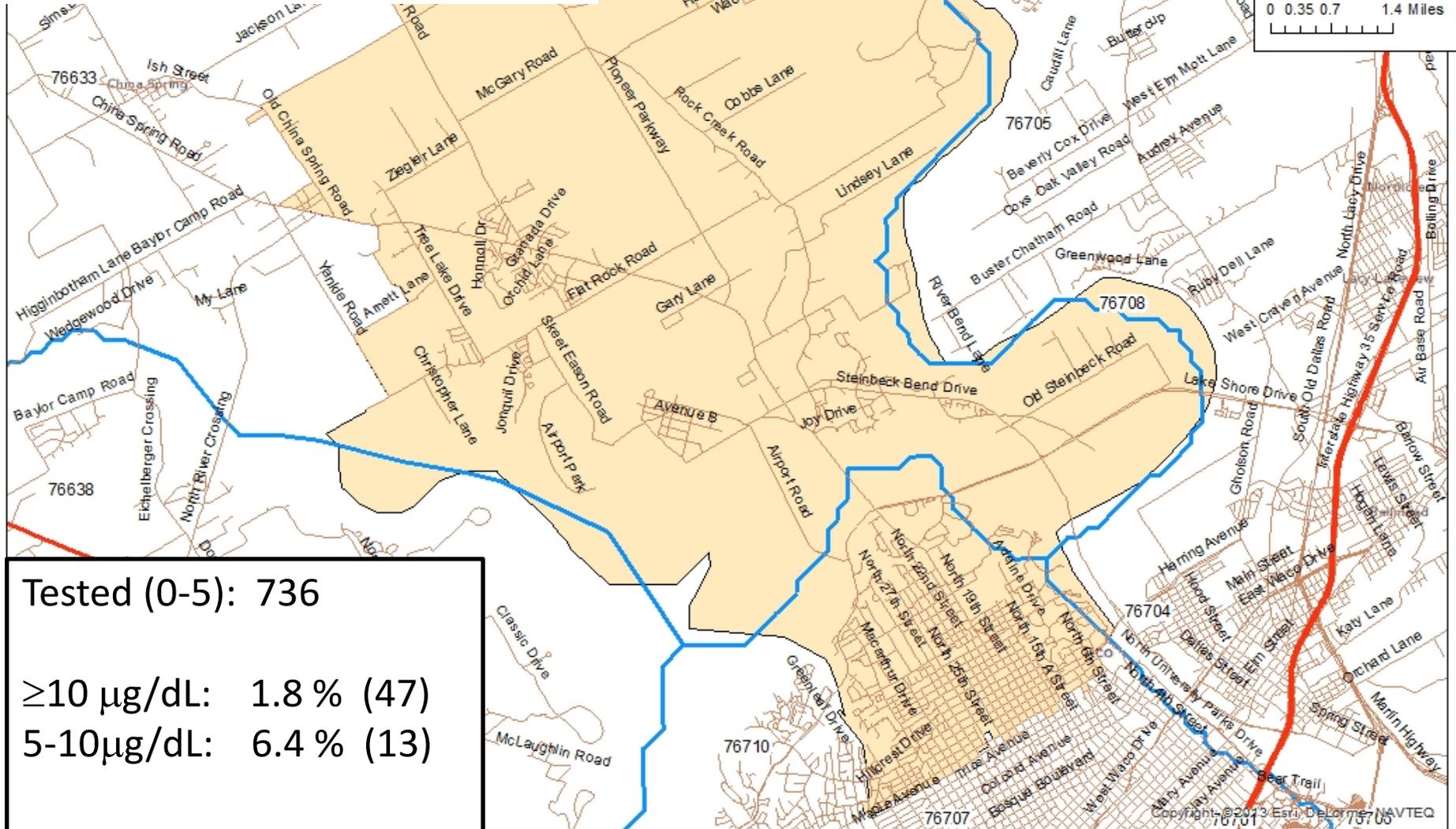
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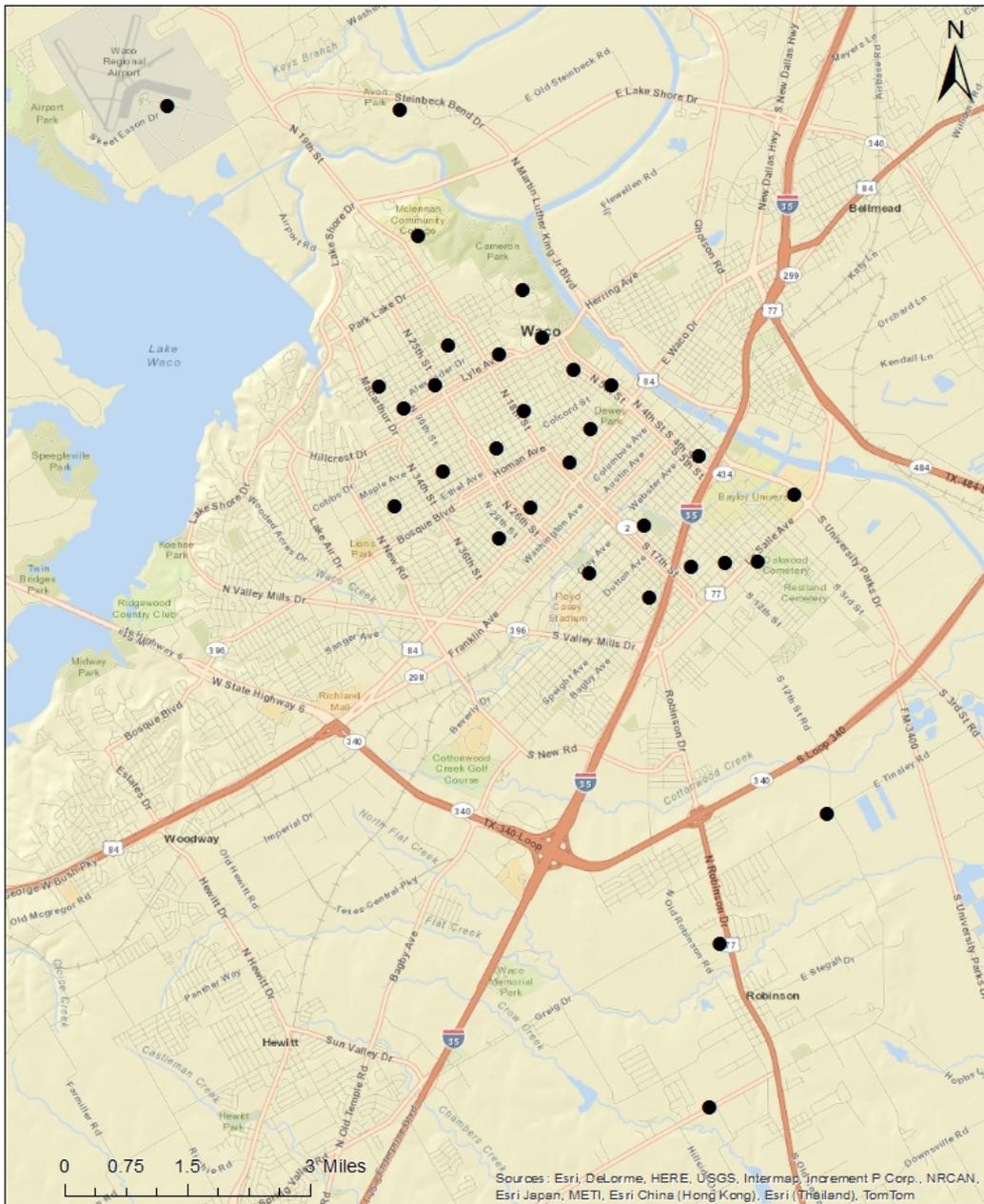
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# Pilot Sampling for McLennan County

- Focused on areas where rates are highest
- “Shotgun” approach



## Legend

- Sample Points

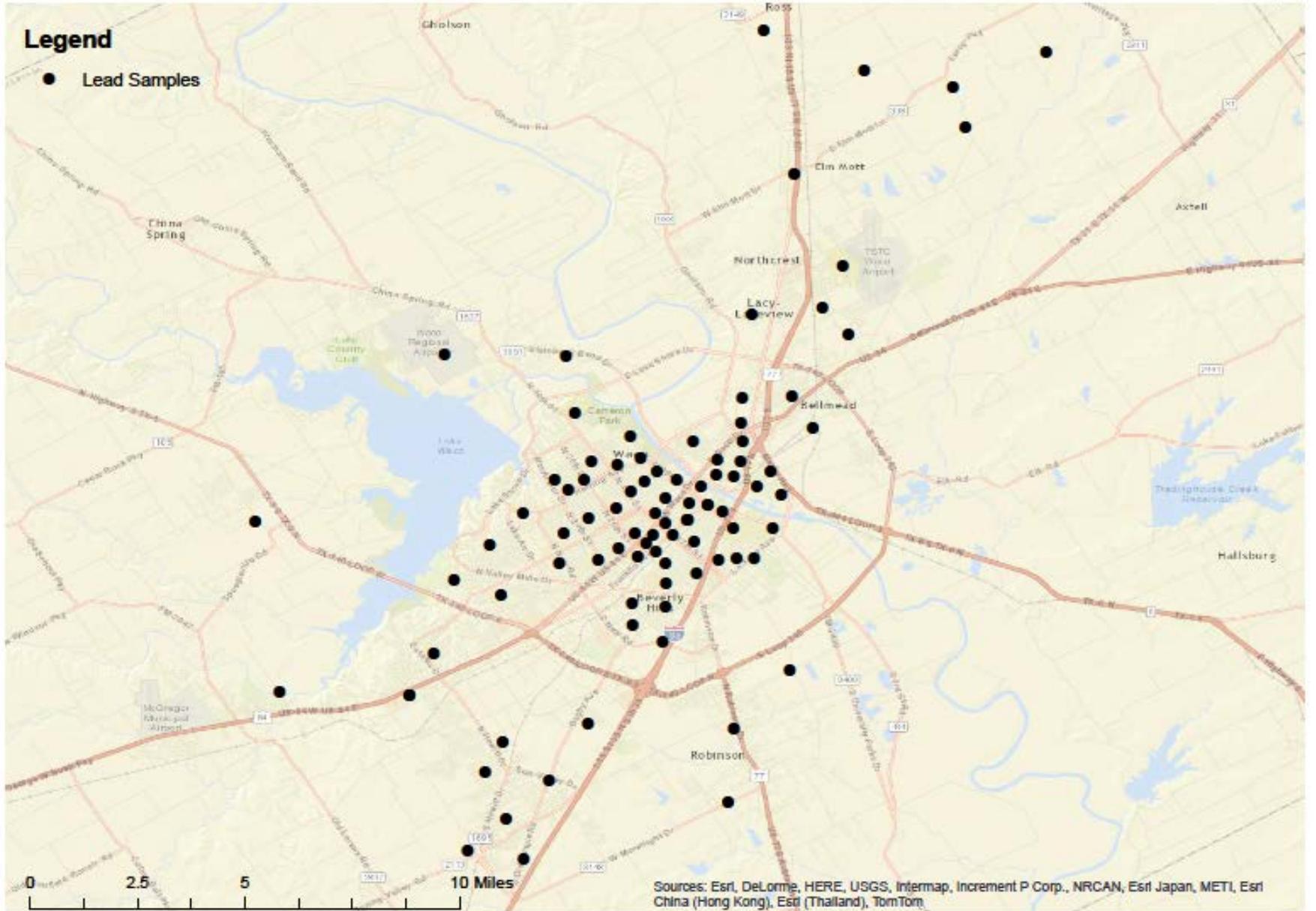


# Lead Sample Points



## Legend

- Lead Samples



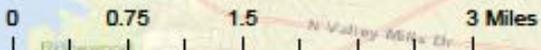
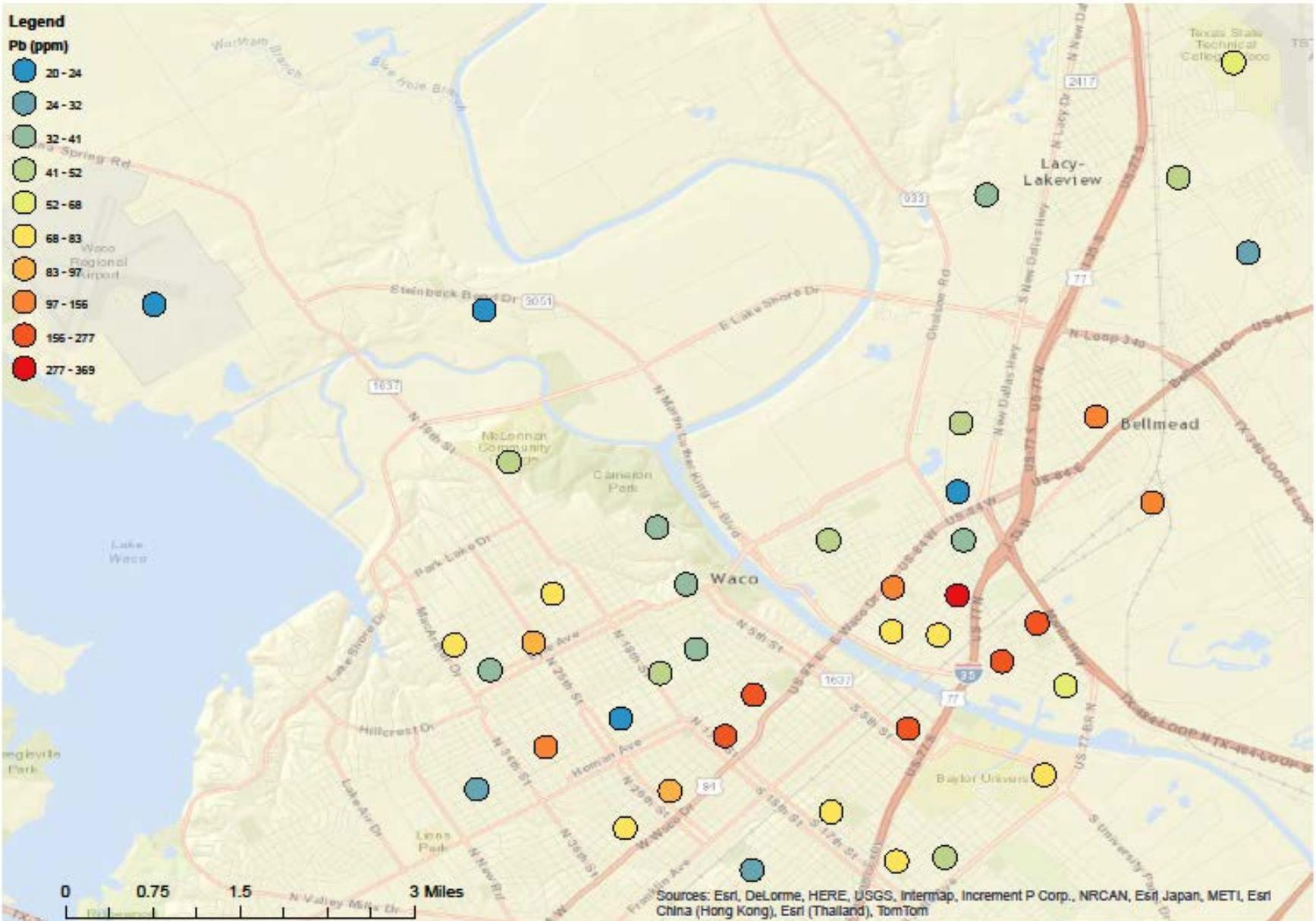
# Lead Sample Points



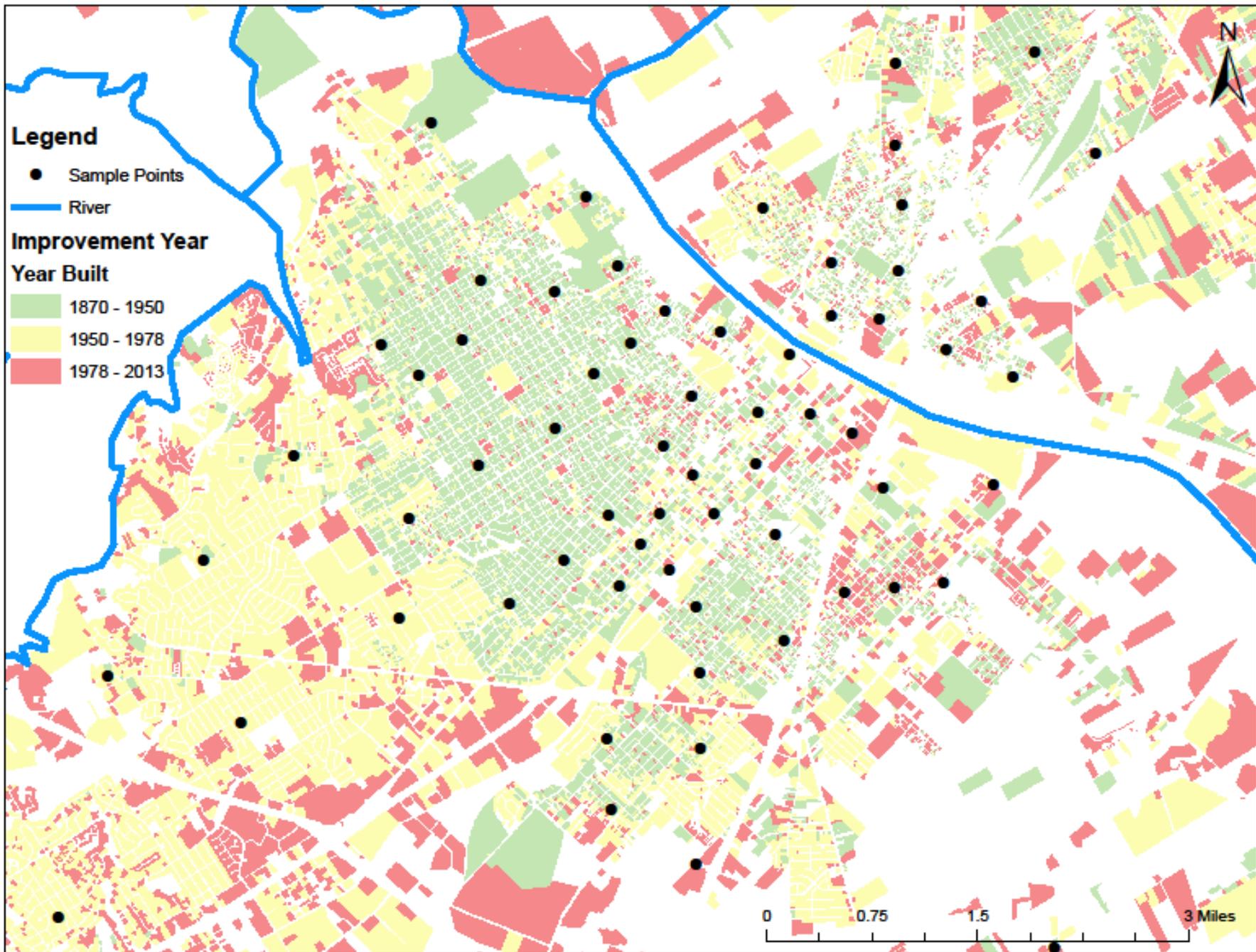
## Legend

### Pb (ppm)

- 20 - 24
- 24 - 32
- 32 - 41
- 41 - 52
- 52 - 68
- 68 - 83
- 83 - 97
- 97 - 156
- 156 - 277
- 277 - 369



Sources: Esri, DeLorme, HERE, USGS, Intermap, Increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom





# Outreach Program

- **Goal**: to design and implement an outreach model for educating at-risk communities about lead poisoning prevention
- Partners
  - Baylor University, Piper Center for Child Development
  - Waco McLennan County Health District
  - Economic Opportunities Advancement Corporation
    - Head Start/Early Head Start
  - Waco Family Health Center



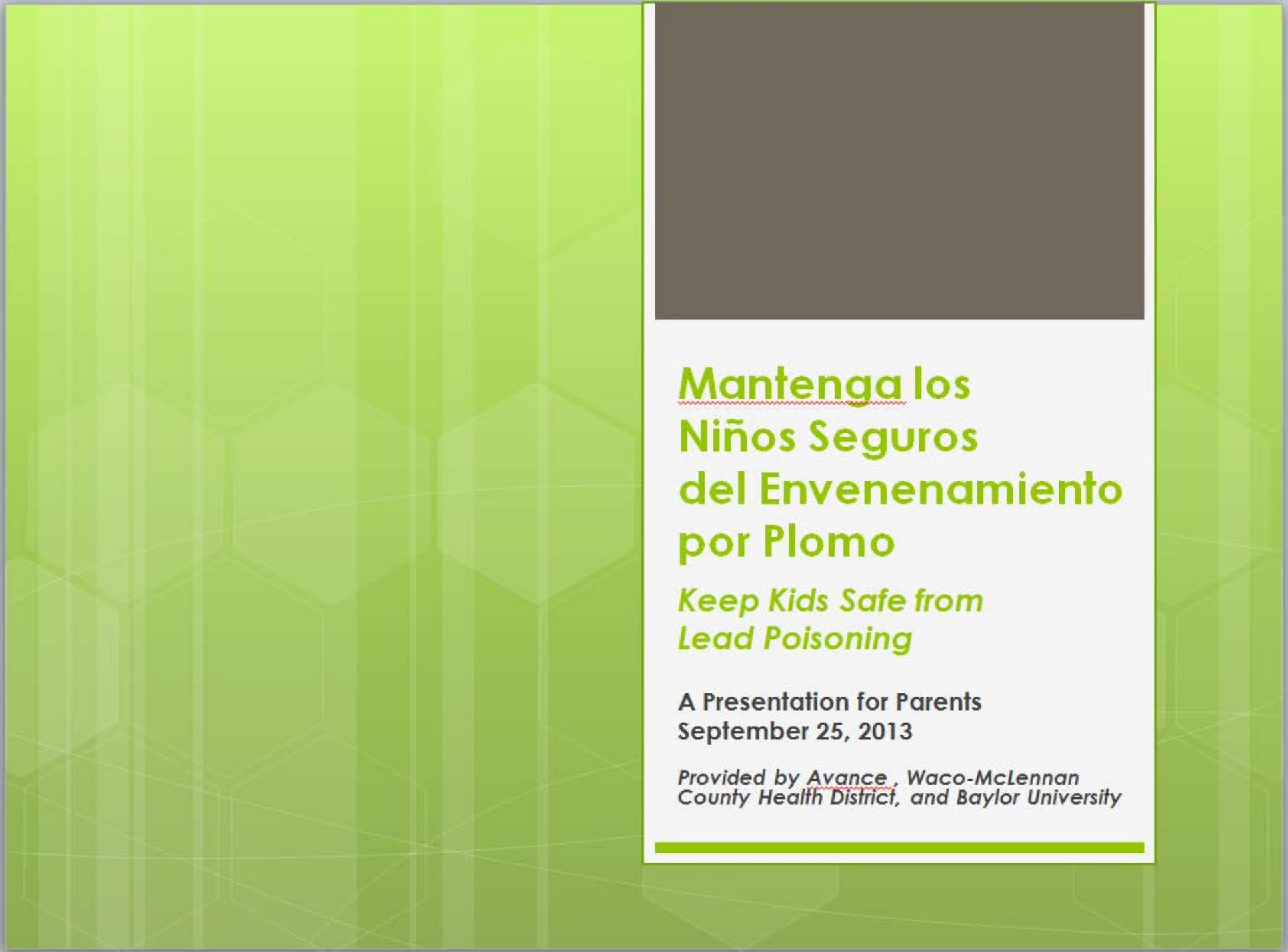
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# Outreach Program

- **Training events:**
  - Child and Family Advocates
  - Head Start Instructors
  - Environmental Health Inspectors
  - Medical Residents
  
- Parents of at-risk children
  - Avance
  - Head Start parents



**Mantenga los  
Niños Seguros  
del Envenenamiento  
por Plomo**

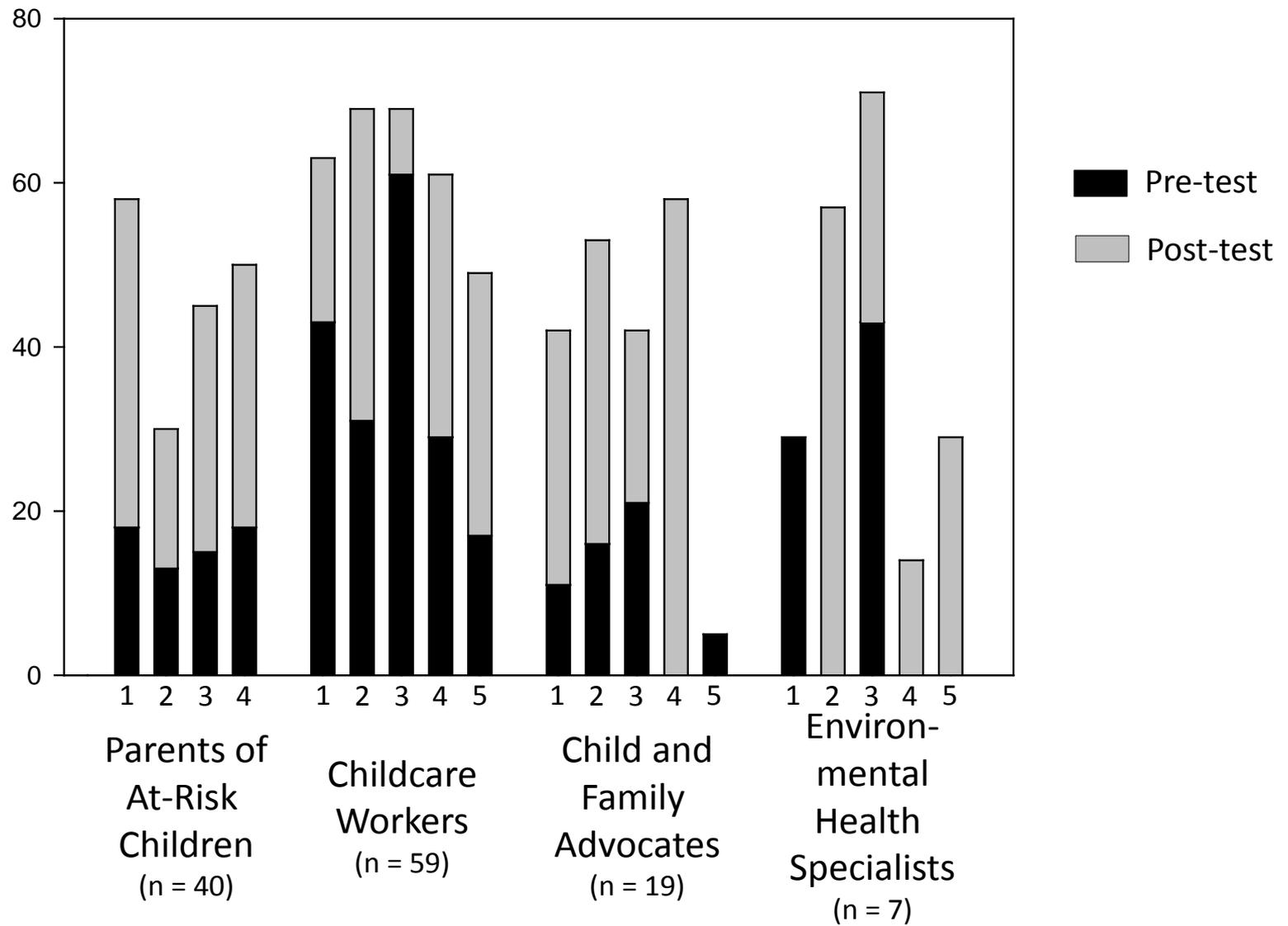
***Keep Kids Safe from  
Lead Poisoning***

**A Presentation for Parents  
September 25, 2013**

***Provided by Avance , Waco-McLennan  
County Health District, and Baylor University***

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Percent (%) of participants meeting minimum response requirement



- 1: Name at least 3 ways lead poisoning affects children
- 2: Name at least 3 sources of lead
- 3: Name at least 2 ways children get lead in their bodies
- 4: Name at least 3 things parents can do to protect

# Upcoming Projects

## Community-Based Participatory Research

1. Environmental lead levels in McLennan County and recruitment of a study group
2. Understanding how children come into contact with lead, and ending these exposures
3. Collaboration among community organizations and other stakeholders to disseminate information

# Upcoming Projects

## Community-Based Participatory Research

1. Environmental lead levels in McLennan County and recruitment of a study group
  - Examine previous studies on children's blood lead
  - Conduct wide-scale studies of lead in the environment

Goal: Identify and recruit specific children and families who have contact with lead in their environment



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# Upcoming

# Projects

## Community-Based Participatory Research

2. Understanding how children come into contact with lead, and ending these exposures
  - Identify sources of lead
  - Work to remove sources of lead
  - Measure success in children and environment

Goal: Identify the places where lead is a problem, and change the equation for children in Waco



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# Upcoming Projects

## Community-Based Participatory Research

3. Collaboration among community organizations and other stakeholders to disseminate information
  - Build community relationships
  - Connect families at risk to support
  - Permeate the community with lead awareness

Goal: Empower the community at large, at-risk populations, and stakeholders to make broad-scale changes in environmental public health