

# Lead in Homes with Domestic Wells in Illinois

## About the Project

In order to determine the possible causes of the elevated blood lead levels in rural Illinois children, the Illinois State Water Survey has teamed up with the University of Illinois at Chicago and Northern Illinois University to do a pilot study in three rural Illinois counties on homeowners using well water. The team hypothesizes that the lead may be coming from lead well packers in older wells and lead pipes in older homes.

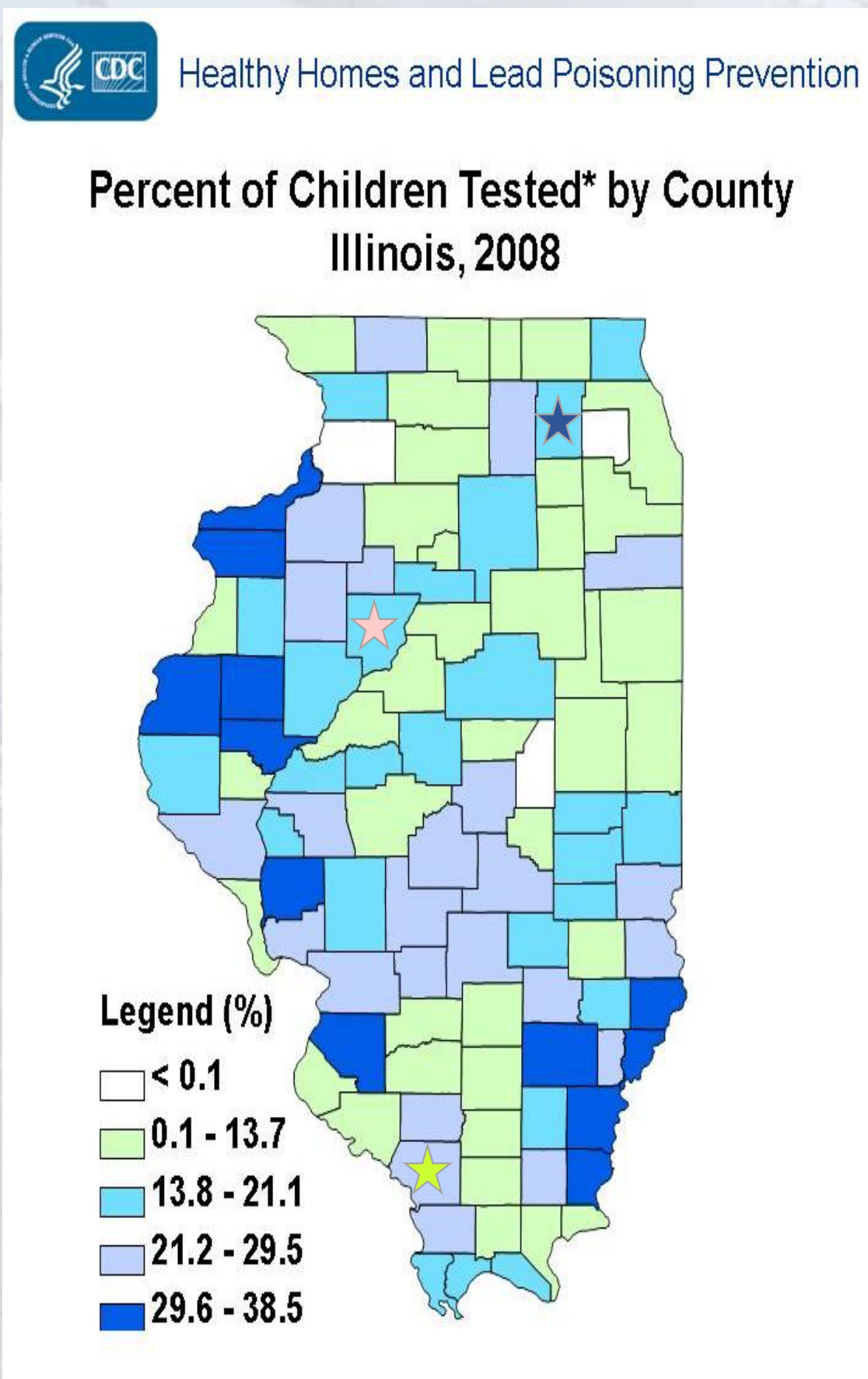
## Three Illinois Counties

The team proposed to study residences in Peoria, Kane, and Jackson counties in Illinois based on previously recorded high blood lead levels in children, percent of houses built before 1978 (lead paint ban), and corrosivity index in previously tested domestic well water samples in those counties.

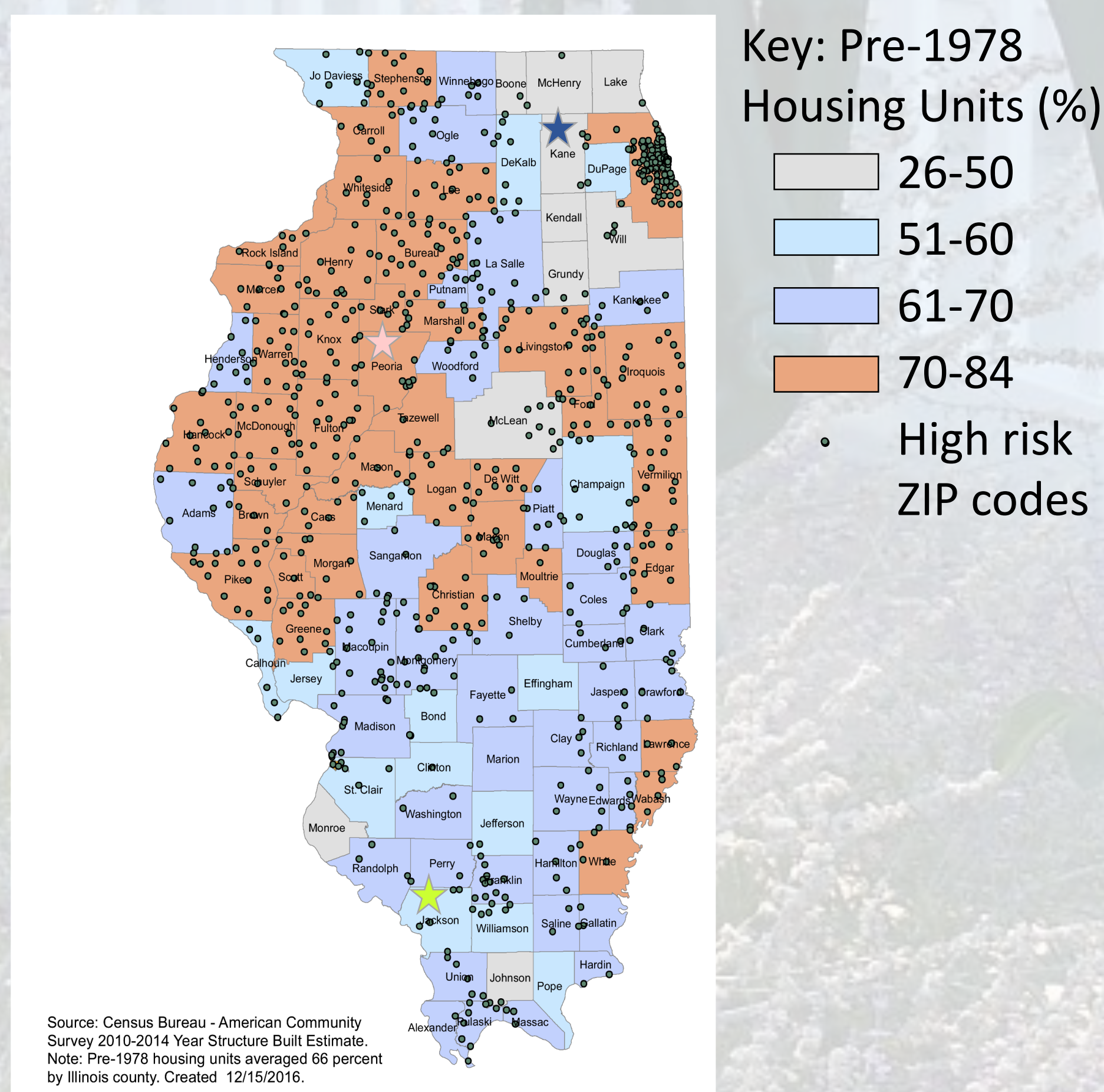
## Project Goals

1. Characterize the distribution of lead concentrations and water corrosivity in homes using domestic well water in three counties in Illinois.
2. Develop and evaluate health department partnerships, participant recruitment approaches, and home sampling methods in order to inform the design of a scaled-up study.
3. If water lead levels (WLLs) are found to be elevated, options for mitigating sources of lead and/or corrosivity will be explored with owners of impacted homes and with health departments.
4. Determine if a larger study and additional interventions are needed to reduce WLLs in homes that utilize private wells. If WLLs are consistently far below 15 micrograms per liter (EPA drinking water standard) even in wells with corrosive water, further investigation may not be warranted.

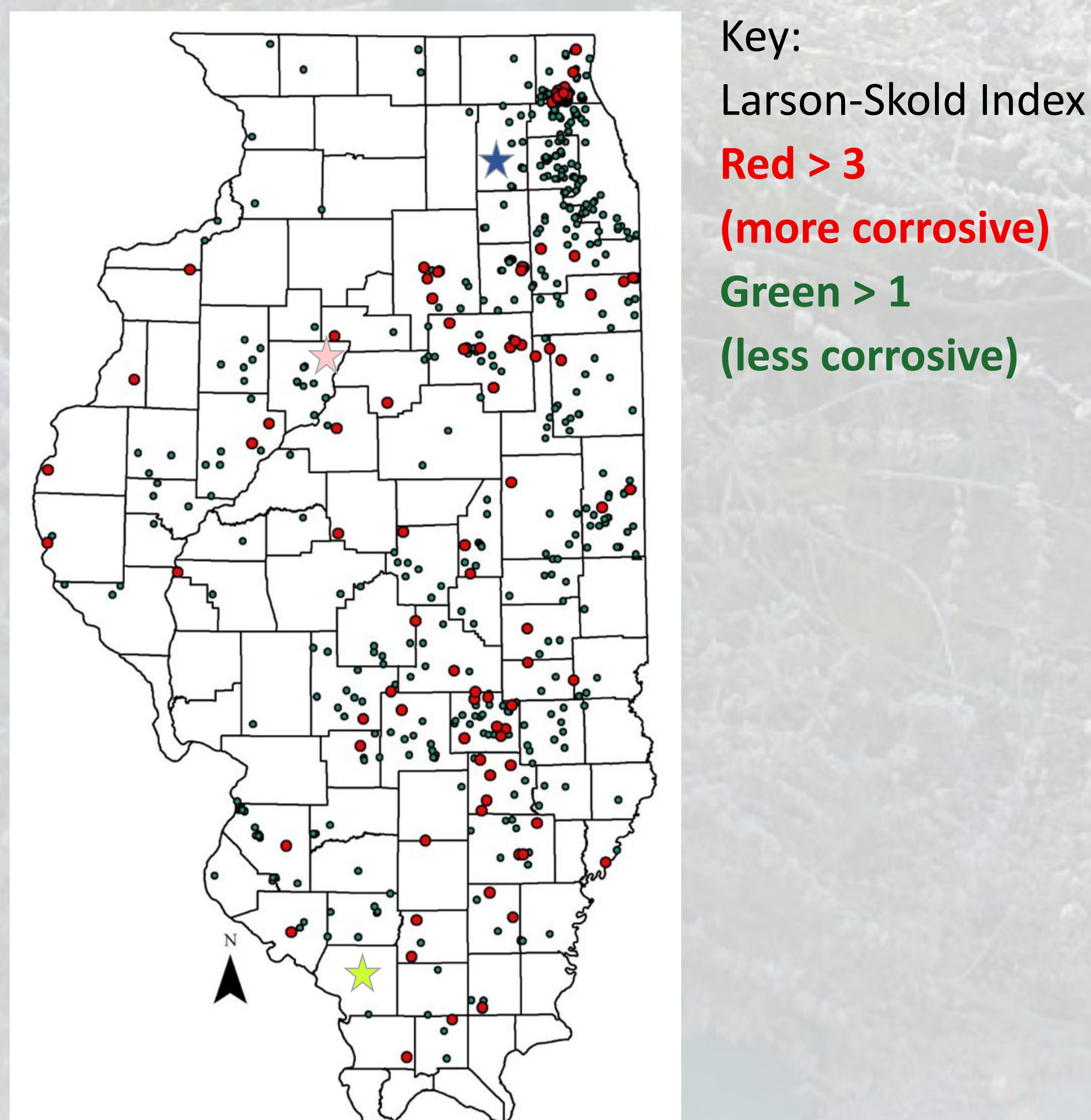
### Child Blood Lead Level Tests



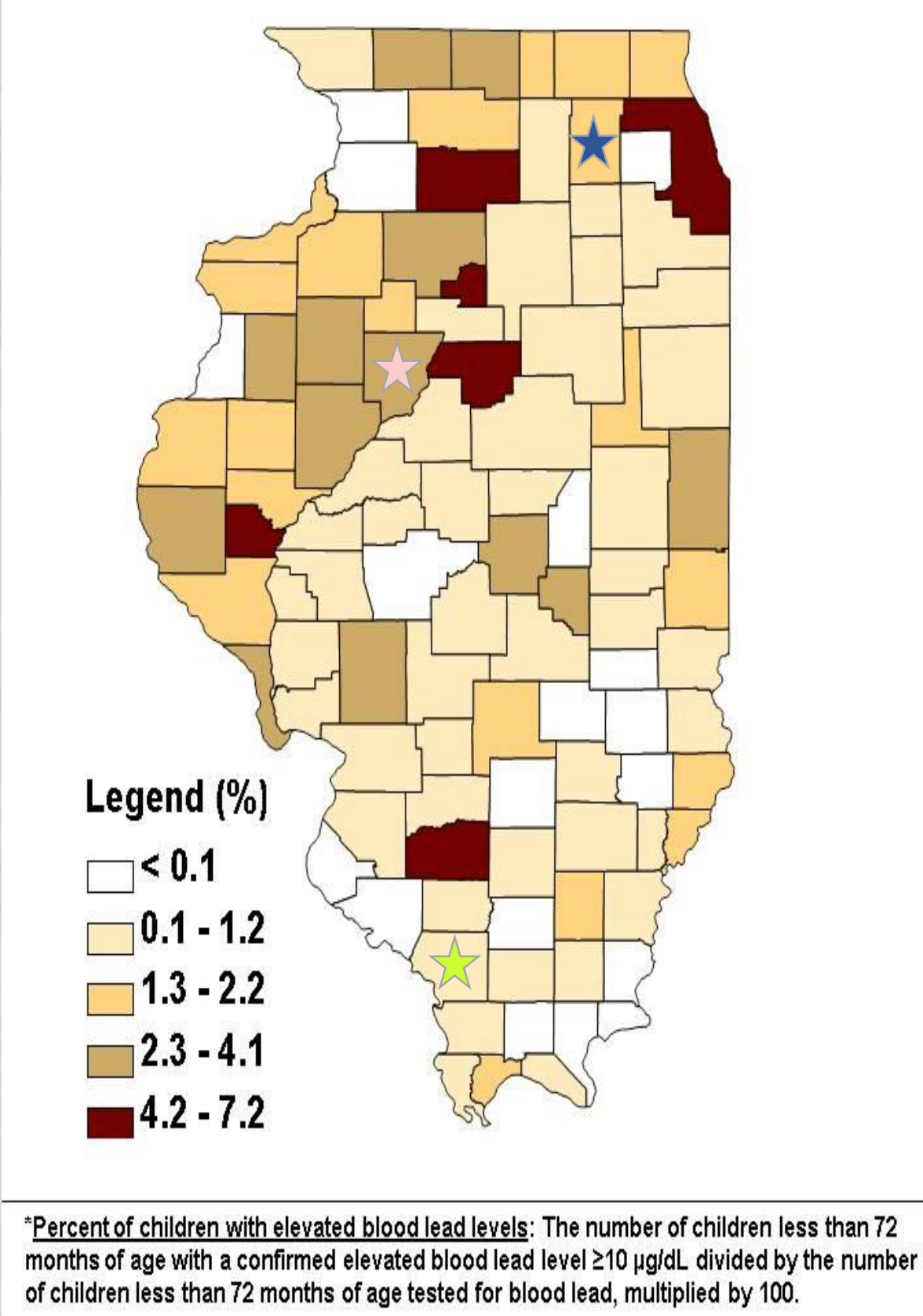
### Old Housing and High-Risk Zip Codes in Illinois



### Corrosivity in Domestic Well Water Samples



### Percent of Children with Elevated Blood Lead Levels\* by County Illinois, 2008



## Key Team Members



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