

# Risky Business: Housing Data, Vacancy and Abandonment

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Neighborhood Indicators for Recovery

Federal Reserve Bank of Cleveland  
Pittsburgh Office  
Pittsburgh, Pennsylvania  
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# The Plan

- Individual indicators
  - “The good ol’ days” – or – “Back in the day”
  - Looking at the now
    - ❖ Cleveland, OH
- Composite indicator
  - New housing reality
  - Looking forward
    - ❖ Vacant and abandoned property
- Balancing Risk vs. Reward

## Center for Housing Research and Policy

The Center for Housing Research and Policy (CHRP) was established in 1982 (originally as the Housing Policy Research Project). Its goals are to develop and maintain a database of housing related information, provide reports and analyses of significant housing trends and issues, and undertake and support research that contributes to the field of urban studies and the solution of housing problems in the Cleveland area. Local foundations have been major partners of the CHRP by providing funding support for its startup and for a range of projects focused on strengthening neighborhoods and developing housing in the city of Cleveland.

The CHRP's primary database consists of computerized files produced by local county government concerning real estate. These files, acquired annually, include records of deed transfers, property characteristics, taxes, and mortgages. The Center has conducted numerous studies spanning local, state, and national topics. (Click [here](#) for a full list.) Studies of particular note are studies of the movement of home sellers and buyers, which, in 1996, resulted in a change to the IRS code governing home seller capital gains. The data files are used for research by students and faculty at Cleveland State and other universities.

The CHRP's data are augmented by census data, computerized land parcel maps, and GIS capabilities maintained by the Northern Ohio Data & Information Service, another of the Levin College's research centers.

The CHRP emphasizes the production of studies and reports for use by elected officials, policy analysts, planners, nonprofit development corporations, and the private sector (developers, lenders, appraisers, real estate brokers). Special efforts are given to working with members of the media to facilitate communication of housing issues to the general public.



## Center for Housing Research and Policy

The Center for Housing Research and Policy (CHRP) was established in 1982, long may as

- Market tracking

is to collect and maintain a database of analyses of significant housing trends and

issues and undertake and support research that contributes to the field of urban studies and the solution of housing problems in the Cleveland area. Local foundations have been major patrons of the CHRP by providing financial support for its start-up and for a range of projects focused on strategies.

- Information Generation

The CHRP's primary database consists of computerized files produced by local, county, government concerning real estate. These files, acquired annually, include records of deed transfers, property characteristics, taxes, and mortgages. The Center has conducted numerous studies, both at local, state, and national levels.

Of particular note are studies of the movement of home sales resulted in a change to the IRS code governing home sales. [www.gencol.com/cleveland](http://www.gencol.com/cleveland) used for research by students and faculty at Cleveland State and other universities.

- Information Confirmation

- Individual Indicators

enced and parcel maps, and GIS capabilities maintained by the Northern Ohio Data & Information Centers.

The CHRP and the city communities

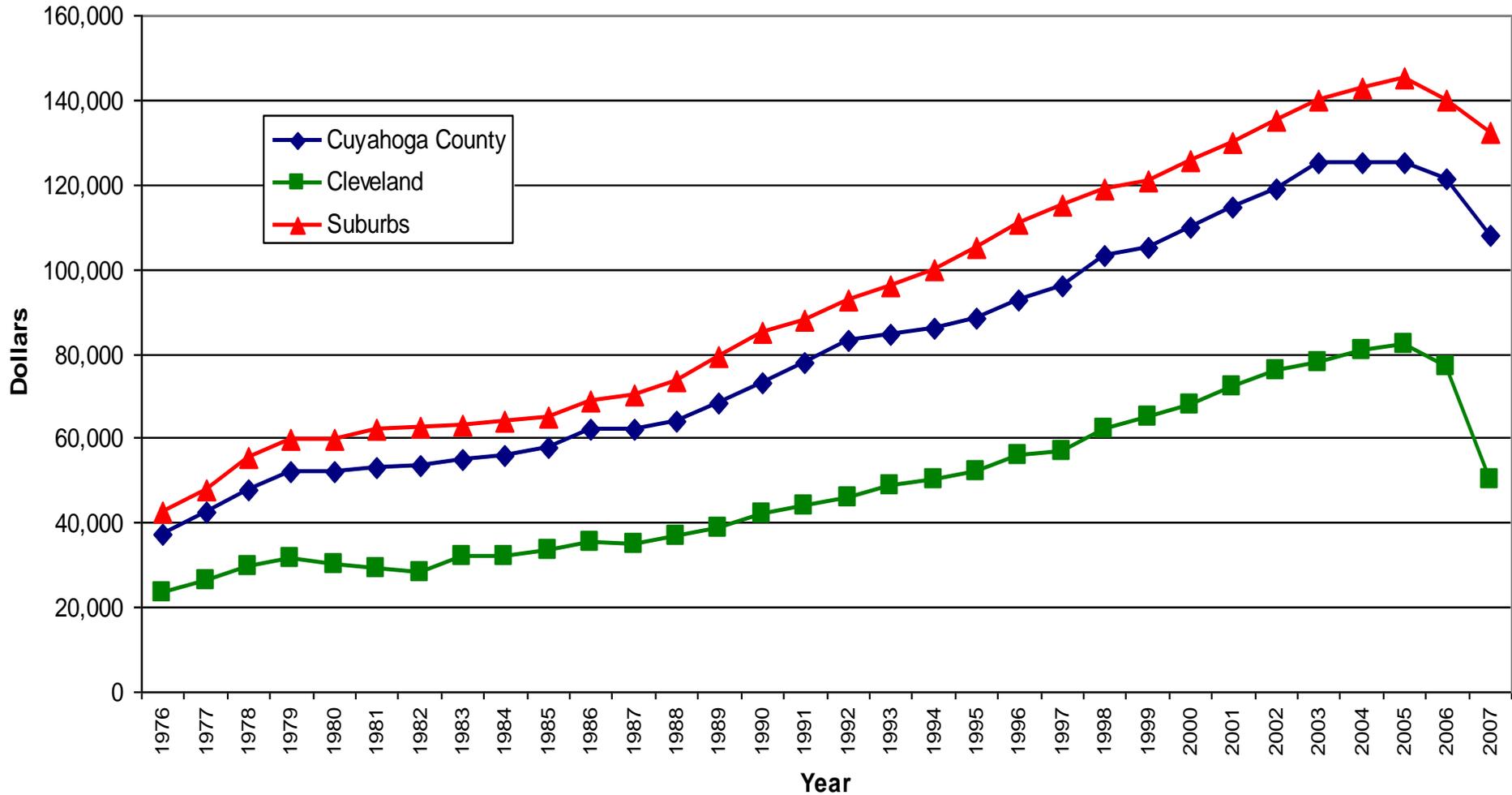
- Value

its for use by elected officials, policy analysts, planners, nonprofit development organizations, and estate planners. Special efforts are given to working with members of the media to facilitate

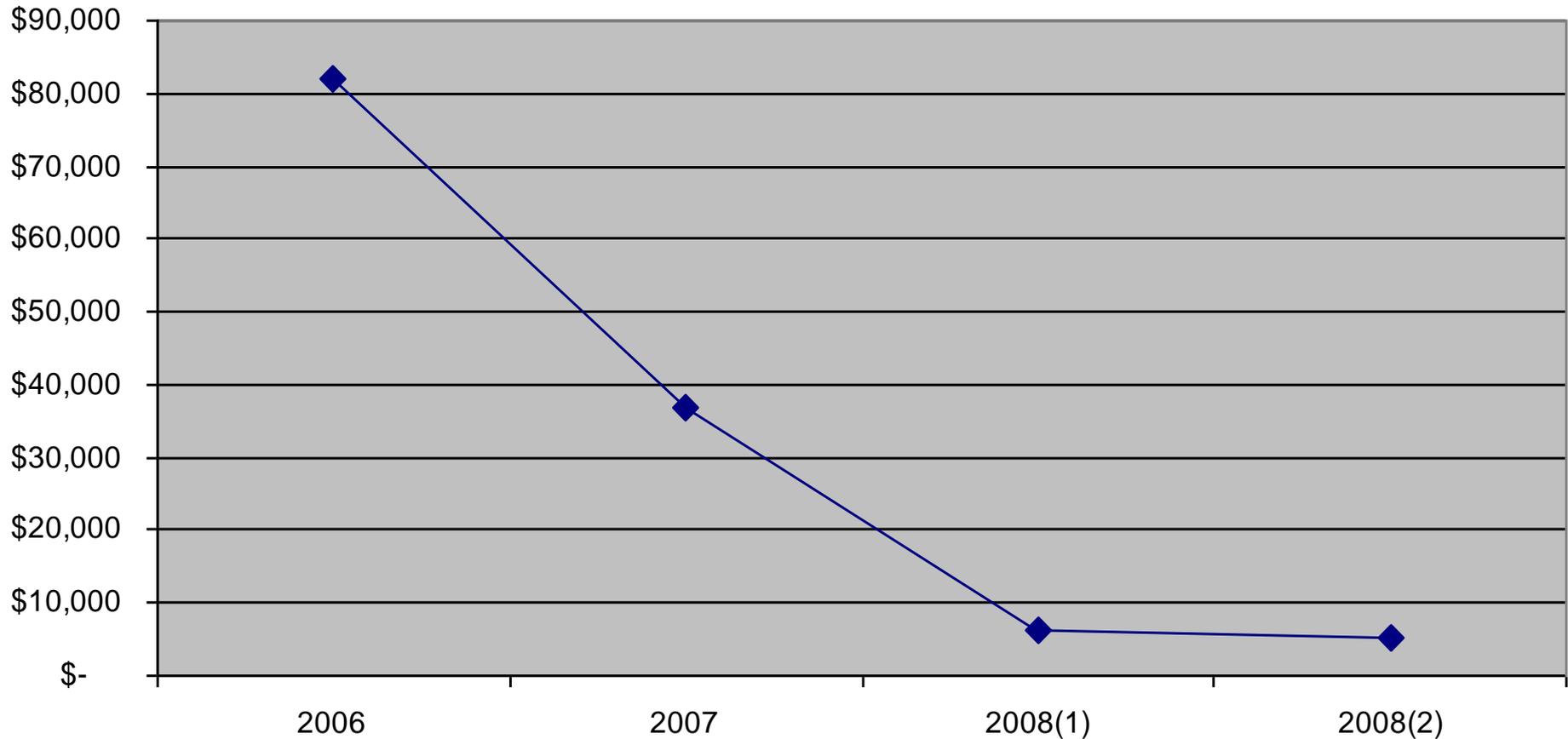
- Redevelopment



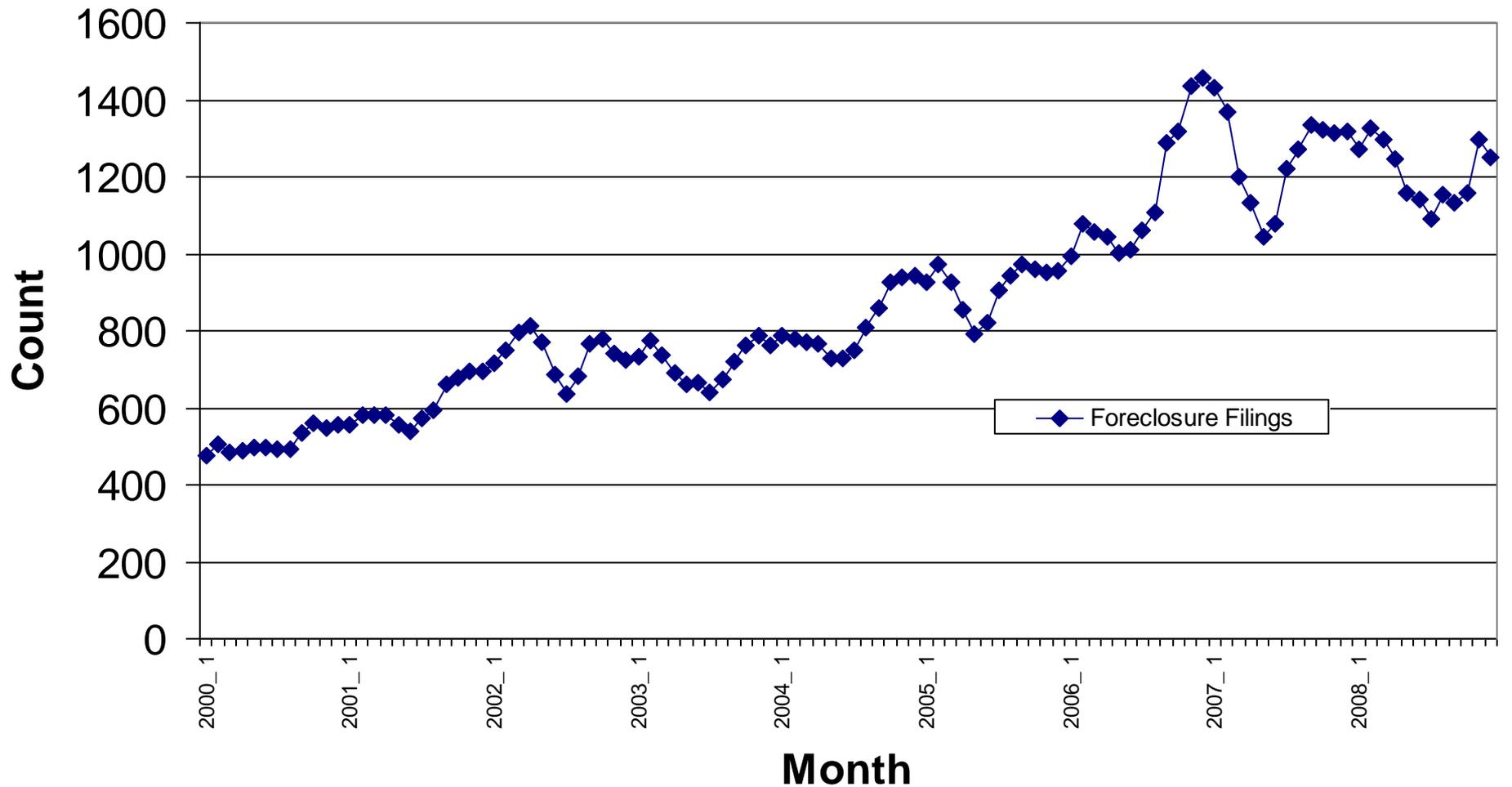
# Median Price, Single Family Houses Cuyahoga County, 1976-2007



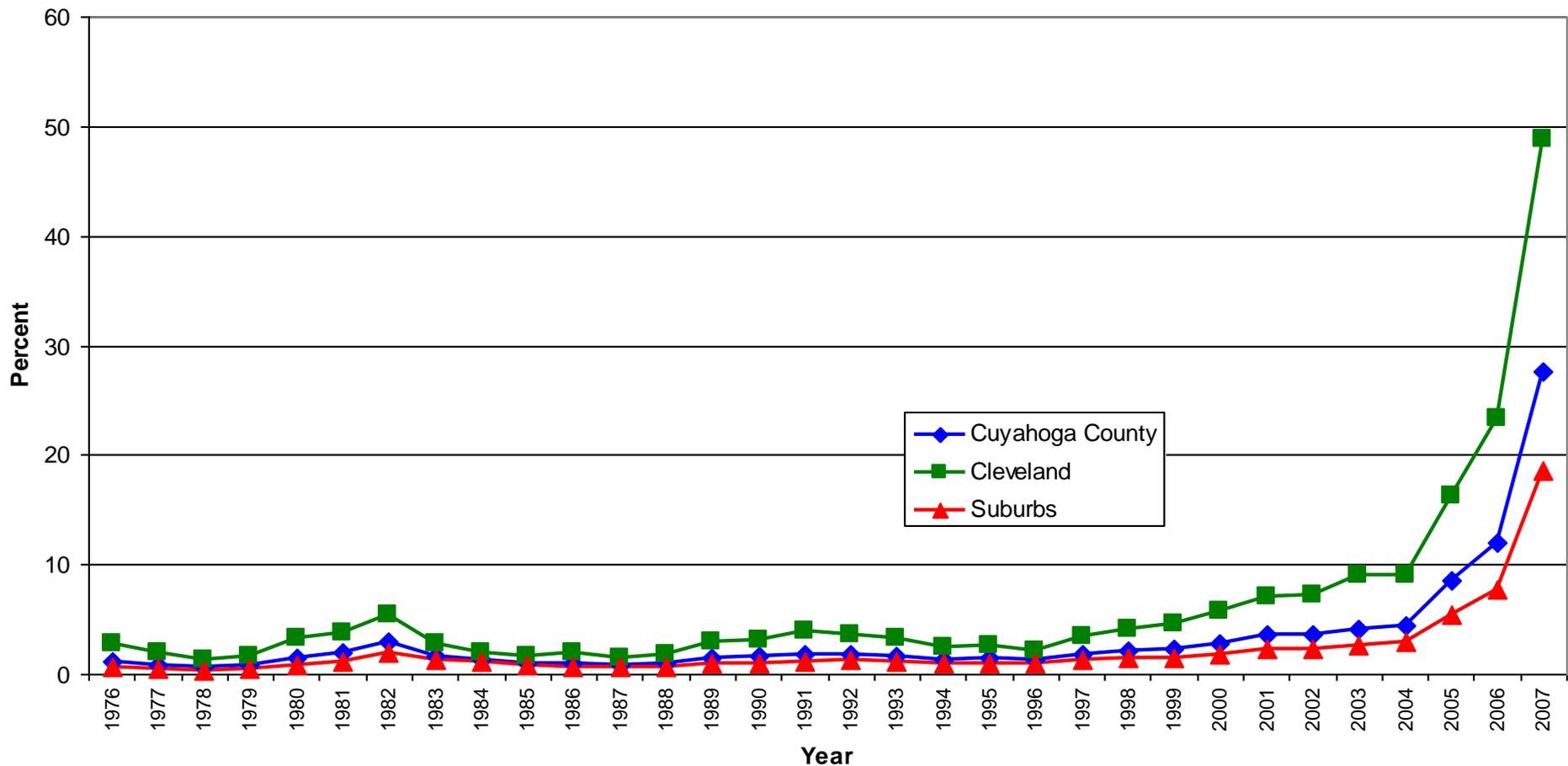
# Median Price, Quick Resale Cleveland, OH



# Foreclosure Filings Cuyahoga County, 2000-2008



# Sheriff Sales, as a Percent of all Single-Family Sales, 1976-2007



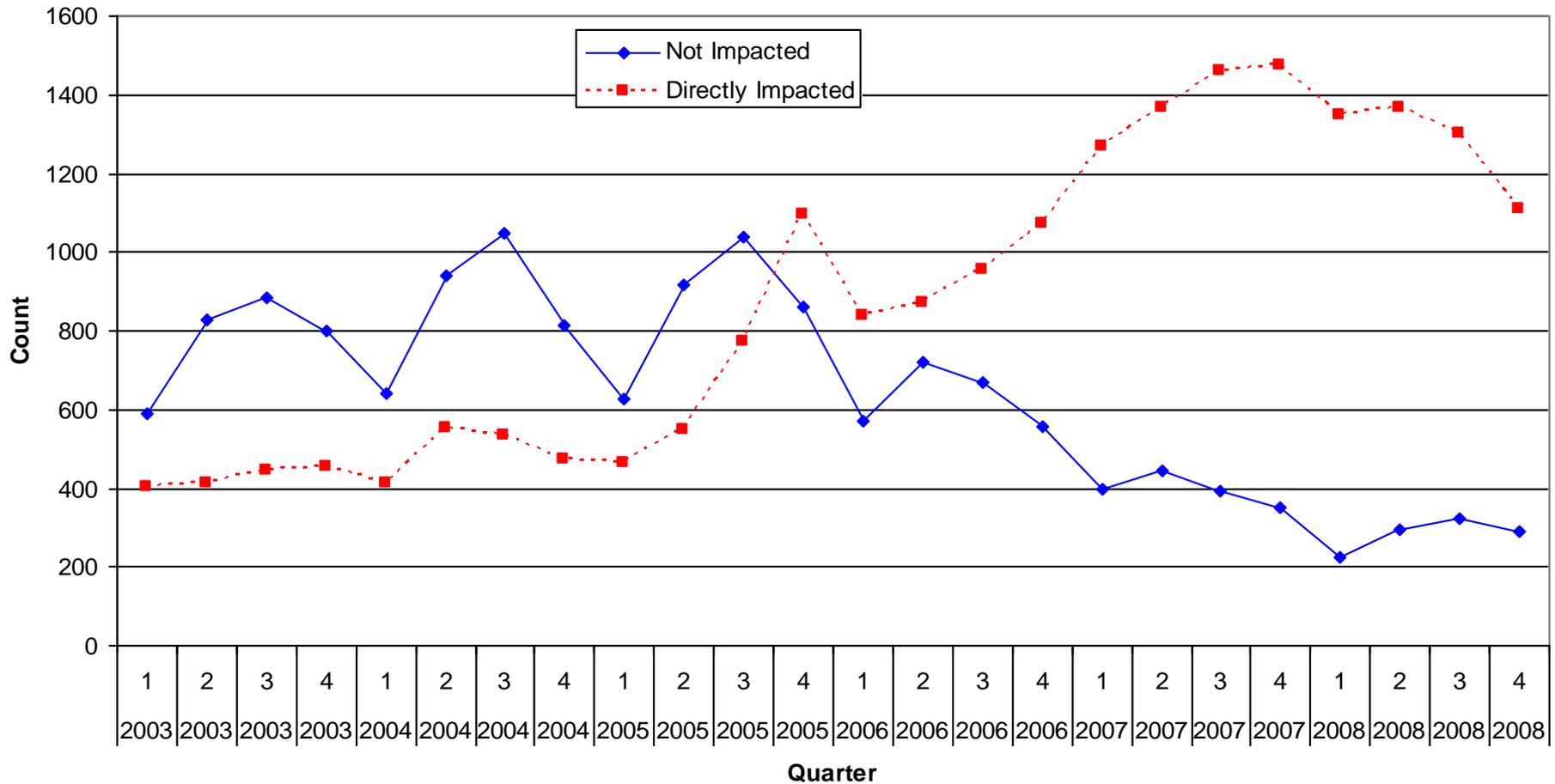
# New Indicator: Directly Impacted by Foreclosure

- The current sale is a sheriff sale; OR
- The property was auctioned at a sheriff sale within the past two years; OR
- The property was involved in a foreclosure filing within the past two years

# Impacted vs. Not Impacted Sales

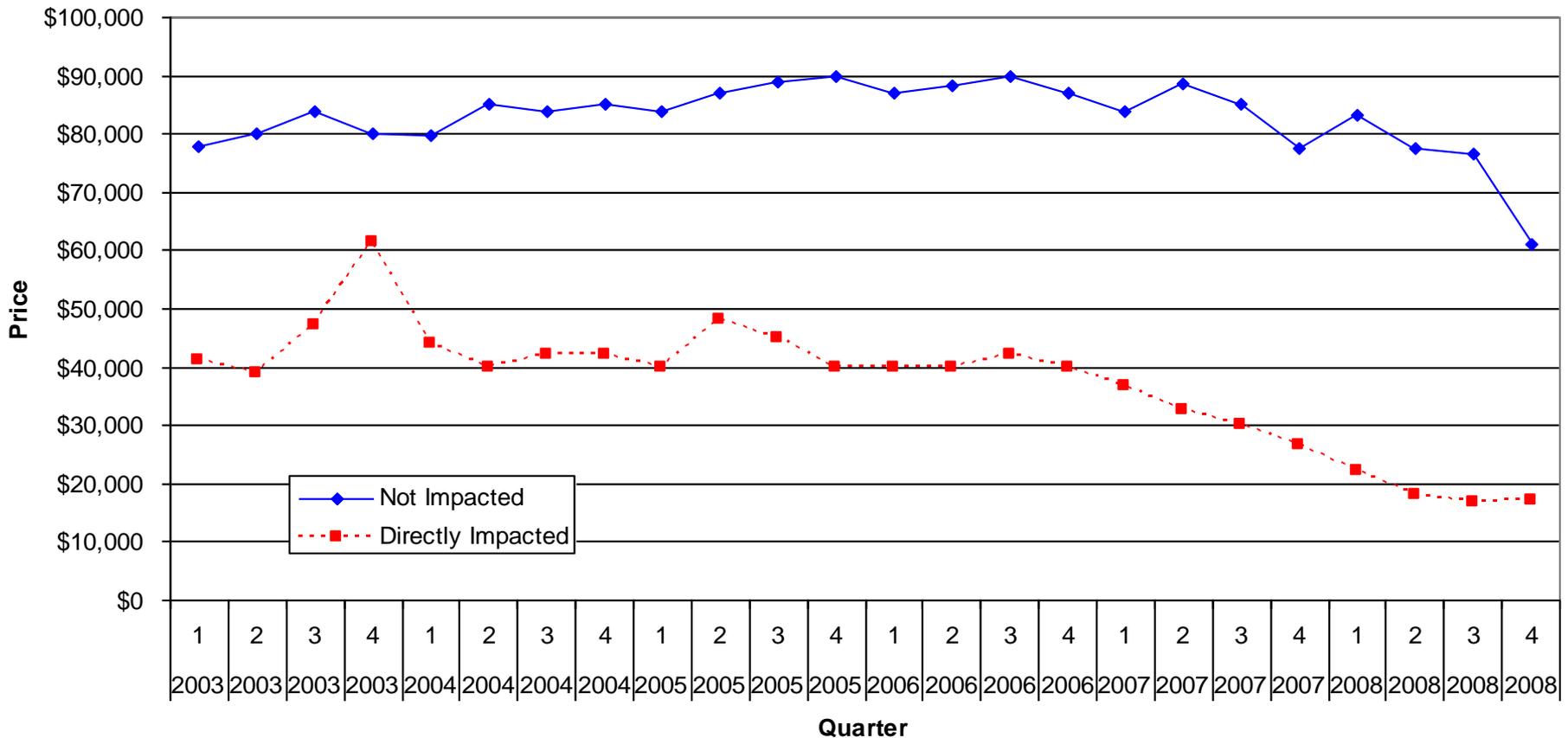
## City of Cleveland, 2003-2008

Cleveland Single Family Sales Counts, Existing Homes



# Price of Impacted vs. Not Impacted Sales City of Cleveland, 2003-2008

Cleveland Single Family Median Sale Prices, Existing Homes



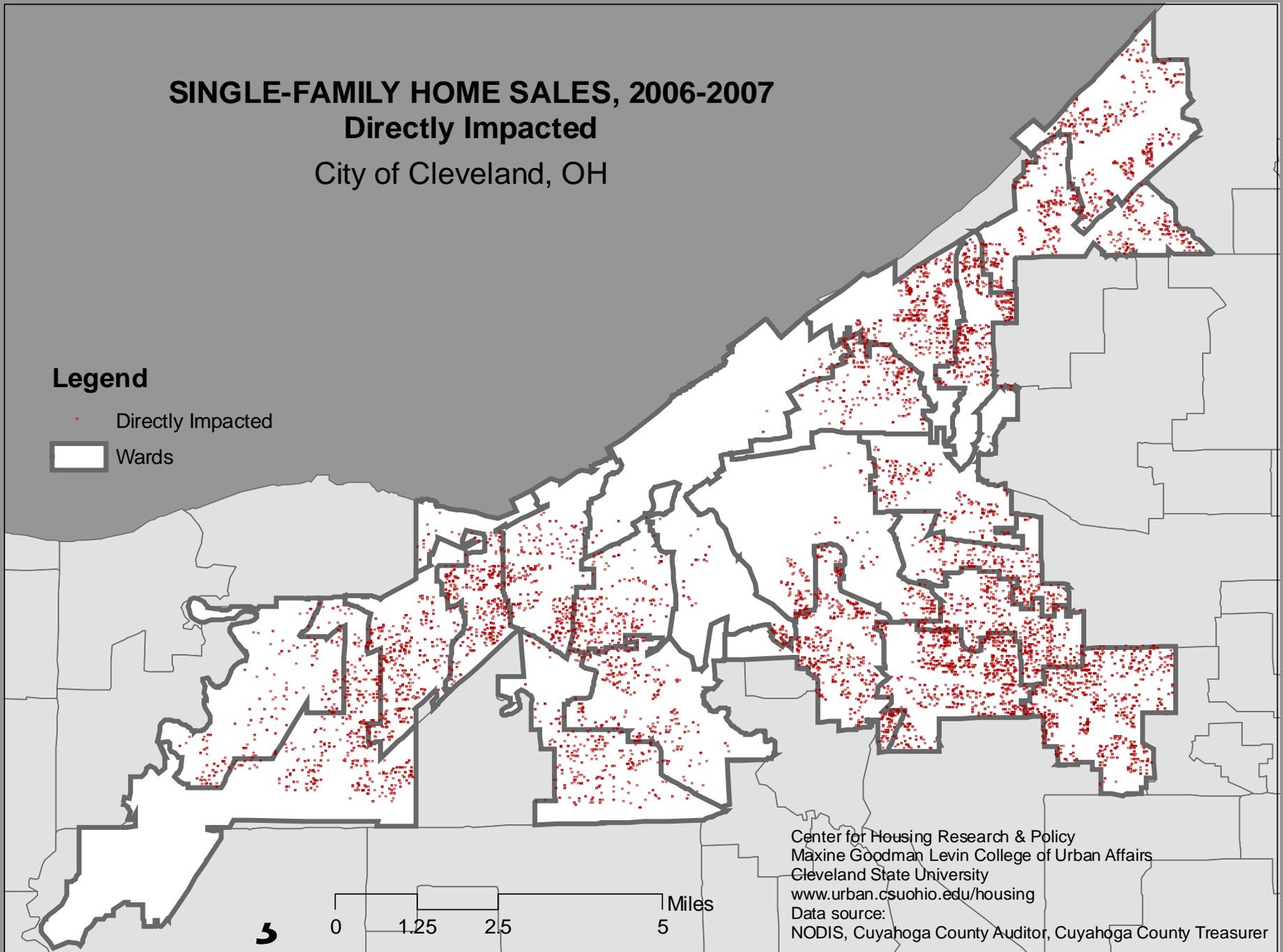
# SINGLE-FAMILY HOME SALES, 2006-2007

## Directly Impacted

### City of Cleveland, OH

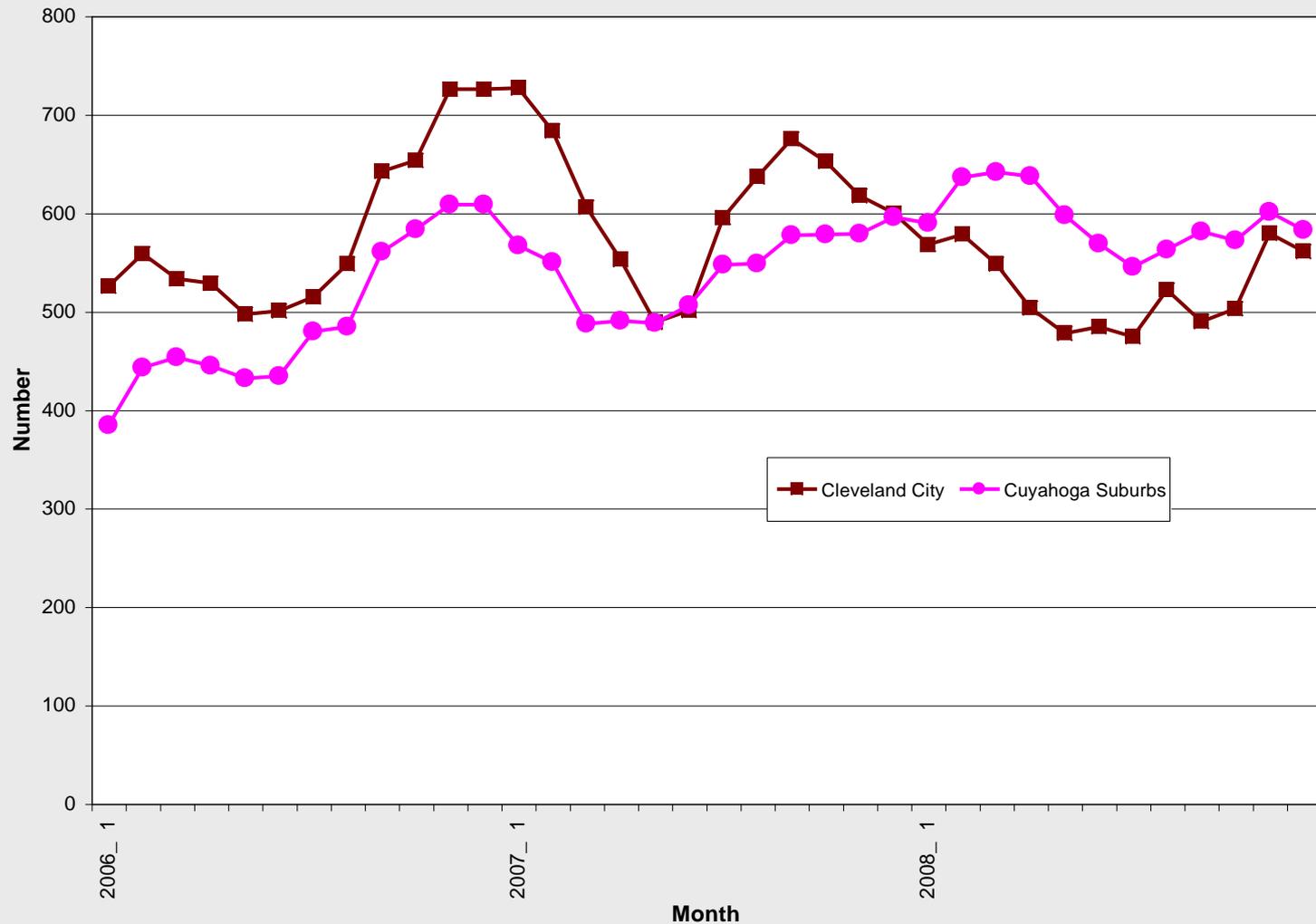
#### Legend

- Directly Impacted
- ▭ Wards



Center for Housing Research & Policy  
Maxine Goodman Levin College of Urban Affairs  
Cleveland State University  
[www.urban.csuohio.edu/housing](http://www.urban.csuohio.edu/housing)  
Data source:  
NODIS, Cuyahoga County Auditor, Cuyahoga County Treasurer

# Residential Foreclosure Filings Cuyahoga County, 2006-2008



# Individual Indicators

- Market tracking
  - Sales price, redevelopment activity
- Information confirmation
  - Foreclosure filings, sheriff sales
- Information generation
  - Composition of the market
    - ❖ Directly impacted sales
  - Not restricted to specific parts of the city
  - Not even restricted to the city

# Composite Indicator

- Two extremes
  - Data at the ready
  - Limited resources and data resources
- Where to start with limited resources ?
- Demonstrate the construction of a parcel-level V&A property indicator database



## **\$60 Million and Counting:** The cost of vacant and abandoned properties to eight Ohio cities

February 2008

Executive Summary



# Composite Indicator of Vacancy/Abandonment: Design Questions

- Purpose
- Geography
- Data
- Method

# Purpose: The “Why?”

- Specific: Why
  - Identify geographies at-risk of V&A
  - Planning, targeting, outreach, intervention
- Broad: Why
  - Market tracking
  - Information generation
  - Information confirmation
  - Data reduction

# Geography: The “Where?”

- City-wide indicator system
- Built on multiple levels of geography
  - ...and scaleable
- House value and externality research
  - Parcel
  - Nearby parcel
  - Neighborhood

# Data: The “What?”

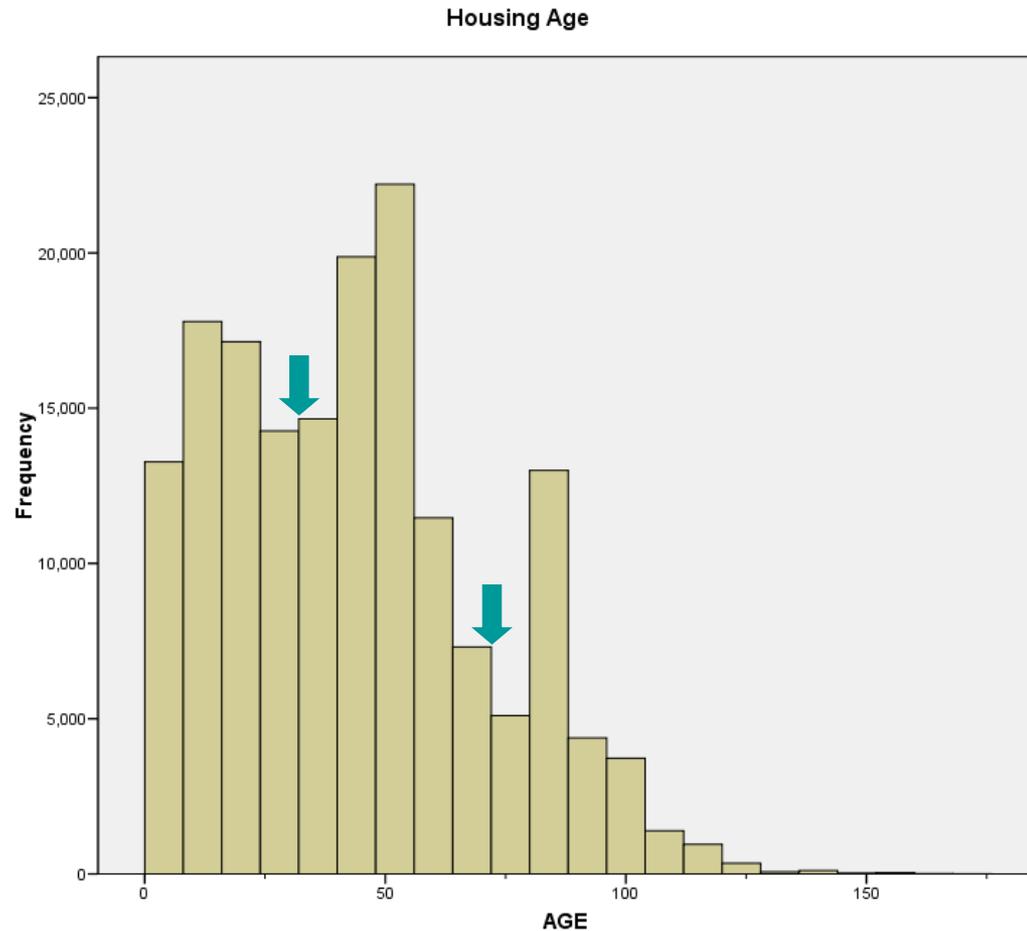
Or, The “What should we be measuring?”

- Parcel/Nearby Parcel
  - Structure
  - Economic information
  - Signs of trouble
- Neighborhood
  - Income/Demographics
  - Local housing dynamics
  - Lending characteristics
- Over 30 variables
- None are necessary; every variable contributes
- County Auditor, County Treasurer, U.S. Census, HMDA

# Method: How?

- **Input Variable** → **Indicator**...ranges from 0 to 1
  - Close to 0? V&A less likely
  - Close to 1? V&A more likely
- **Add**...the indicators for each parcel
- **Divide**...by number of indicators available for that parcel
- **Result**...a composite indicator for each parcel
  - Scaled from 0 (V&A less likely) to 1 (V&A more likely)

# Parcel Data: Housing Age



If the age of the house is...	The indicator value is...
Older than 70	1
Between 30 and 70 years old	0.5
Less than 30 years old	0

# Sample Parcel

<u>Variable</u>	<u>Variable Value</u>	<u>Indicator Value</u>				
		Not Likely	< -----	> -----	Very Likely	
		0	0.25	0.5	0.75	1.0
Age	75					*
Condition	Poor					*
Nearby low appreciation	0.24					
Nearby tax delinquency	0.03	*				
Neighborhood: Median Income	\$19,500					*
Neighborhood: High Price Loans	45%				*	
Neighborhood: Refinance by subprime lender	42%					*

Parcel level variables

Nearby parcel level variables

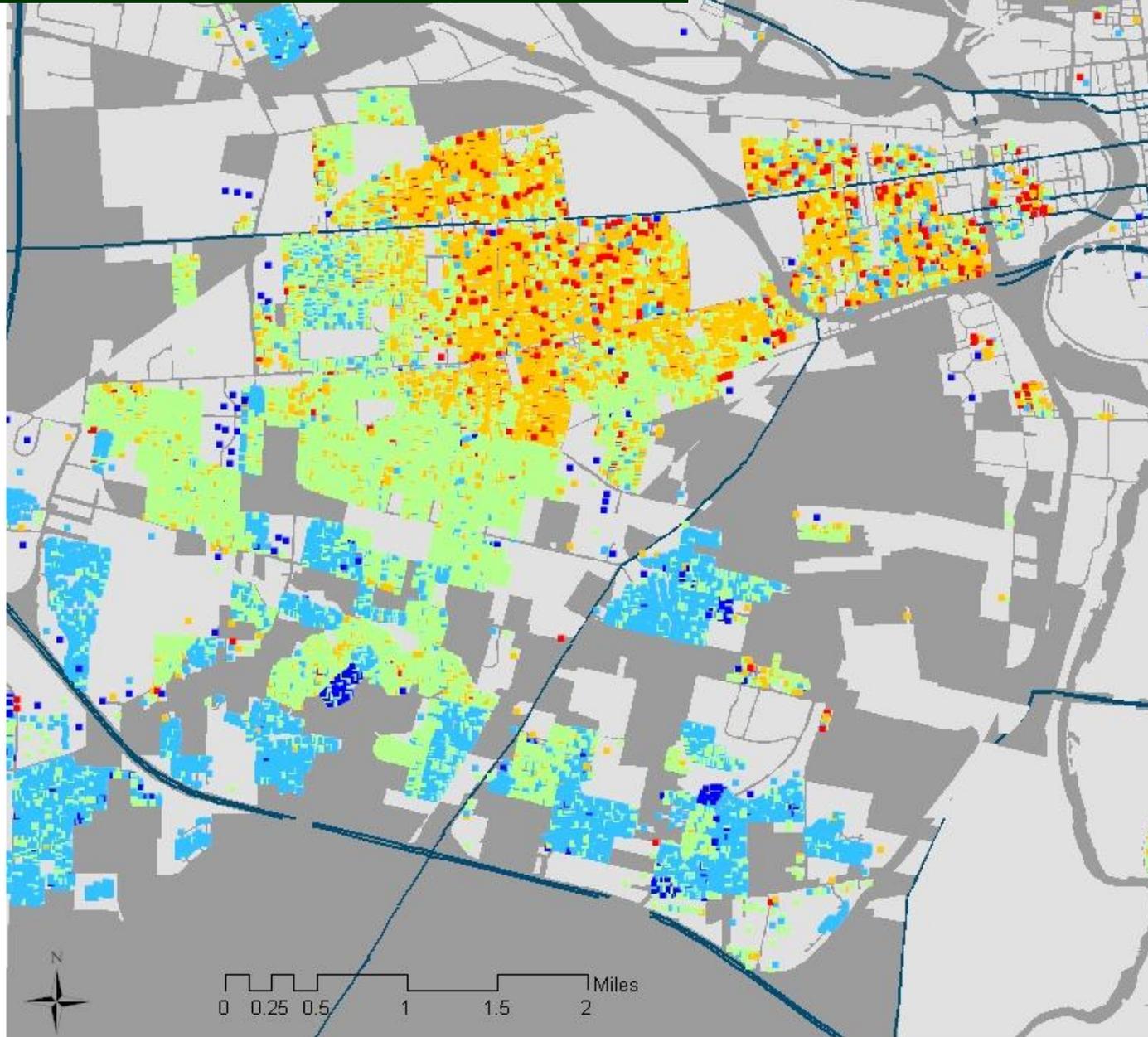
Neighborhood level variables



# Calculating the Overall Indicator

<u>Variable</u>	<u>Indicator Value</u>
Age	1.0
Condition	1.0
Nearby low appreciation	0.5
Nearby tax delinquency	0
Neighborhood: Median Income	1.0
Neighborhood: High Price Loans	0.75
Neighborhood: Refinance by subprime lender	1.0
<b>SUM</b>	<b>5.25</b>
<b>V&amp;A Indicator = SUM/ # of Indicators</b>	<b>0.75</b>

# Where: Parcels



Parcel Level  
Indicator

## Legend

### Parcel Indicator

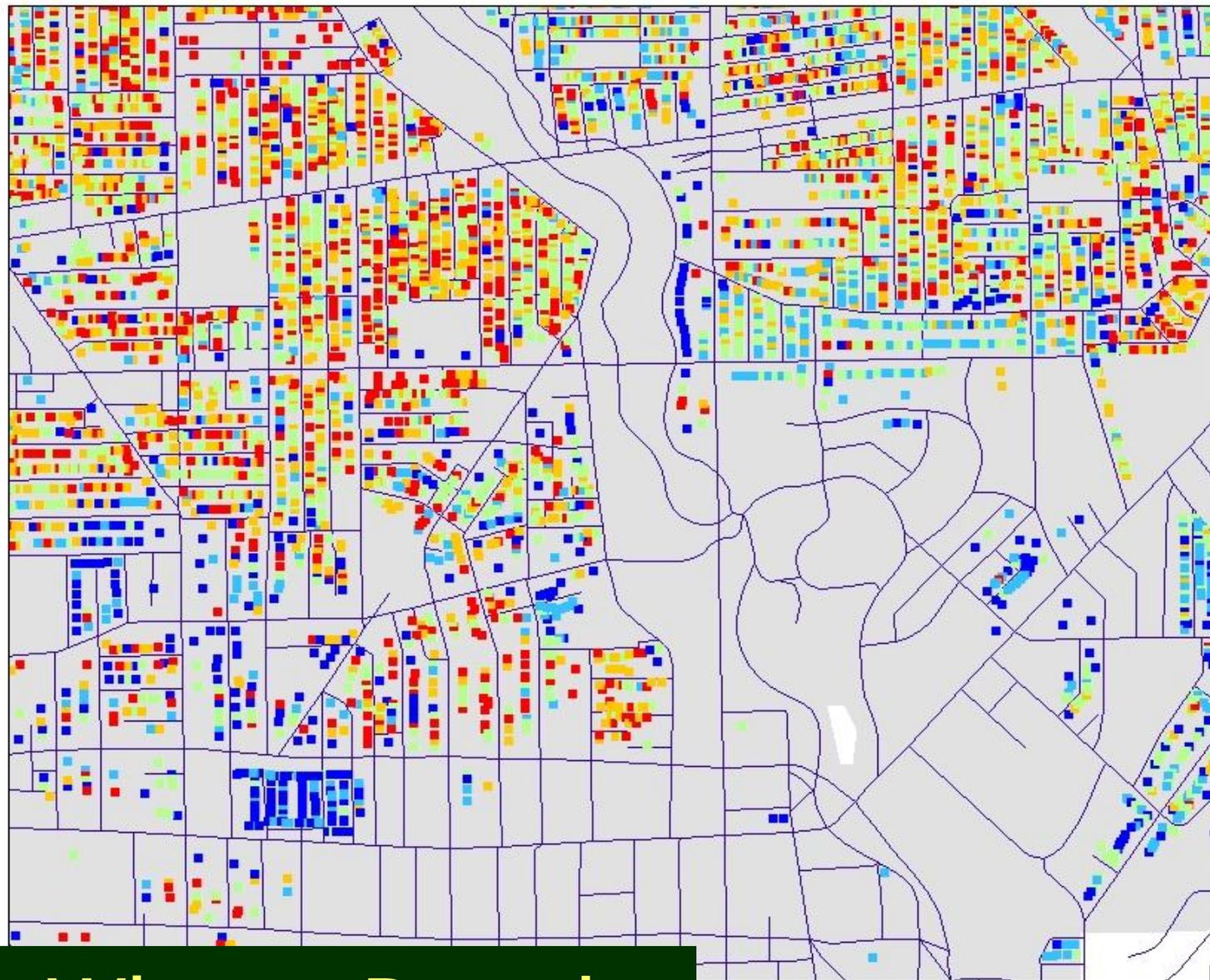
- 0.00 - 0.22
- 0.23 - 0.33
- 0.34 - 0.46
- 0.47 - 0.58
- 0.59 - 1.0

— Major Roads

■ Columbus

■ Franklin County

# Parcel Level Indicators: Cleveland



## Legend

### Parcel Indicator

- 0.00 - 0.27
- 0.28 - 0.40
- 0.41 - 0.51
- 0.52 - 0.65
- 0.66 - 1.00

- Cleveland
- Streets

Where: Parcels

0 0.1 0.2 0.4 0.6 0.8 Miles

# What are we measuring at the parcel level?

- Age
- Condition
- Construction quality
- Appraised value
- Market value ratio
- Appreciation
- Quick-resale
- Tax delinquency
- Utility service

Legend

Parcel Indicator

0.00 - 0.27

0.28 - 0.40

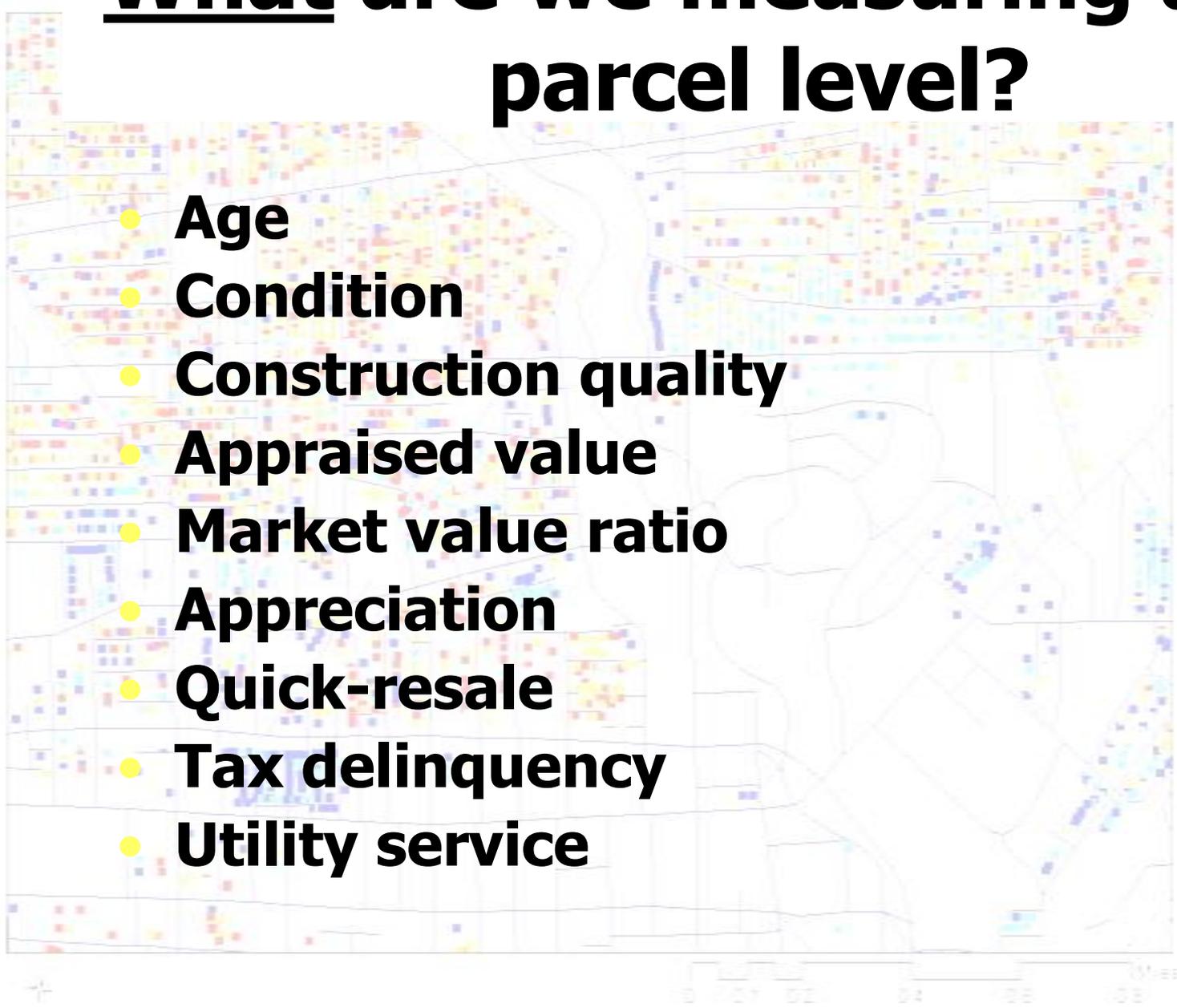
0.41 - 0.51

0.52 - 0.65

0.66 - 1.00

Cleveland

Streets



# Where: Nearby Parcel

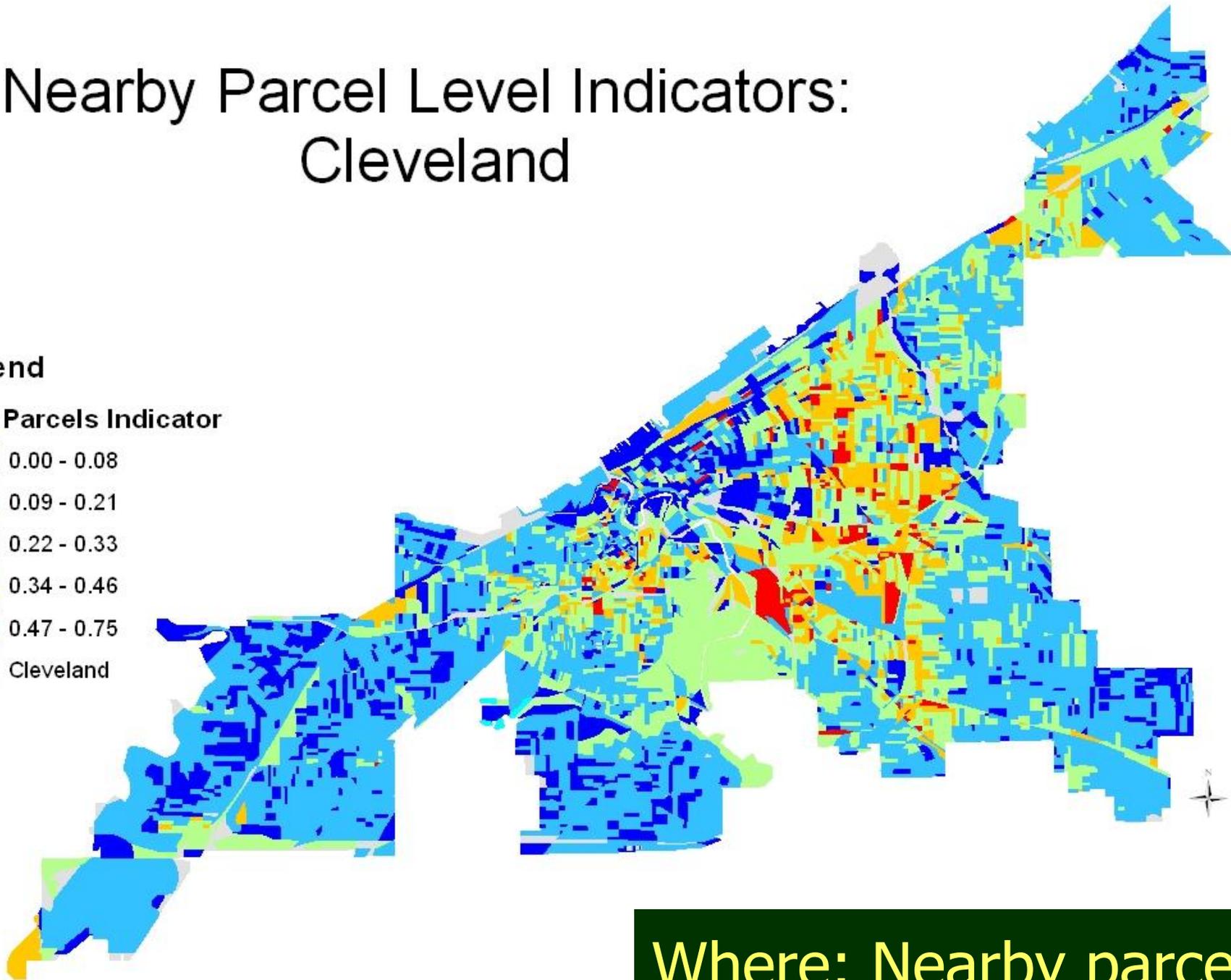
- Builds on every parcel level indicator
- For each parcel
  - What proportion of nearby parcels' indicators falls into the most severe category?
- What proportion of nearby parcels are
  - in the oldest category?
  - in the worst condition?
  - had the lowest appreciation?
  - etc...
- These proportions are the basis of the nearby parcel indicators
- Distinguish an individual parcel from its neighbors

# Nearby Parcel Level Indicators: Cleveland

## Legend

### Near Parcels Indicator

- 0.00 - 0.08
- 0.09 - 0.21
- 0.22 - 0.33
- 0.34 - 0.46
- 0.47 - 0.75
- Cleveland



Where: Nearby parcels

# What are we measuring at the nearby parcel level?

- Age
- Condition
- Construction quality
- Appraised value
- Market value ratio
- Appreciation
- Quick-resale
- Tax delinquency
- Utility service

Legend

Near Parcel

0.00 - 0.08

0.09 - 0.18

0.22 - 0.33

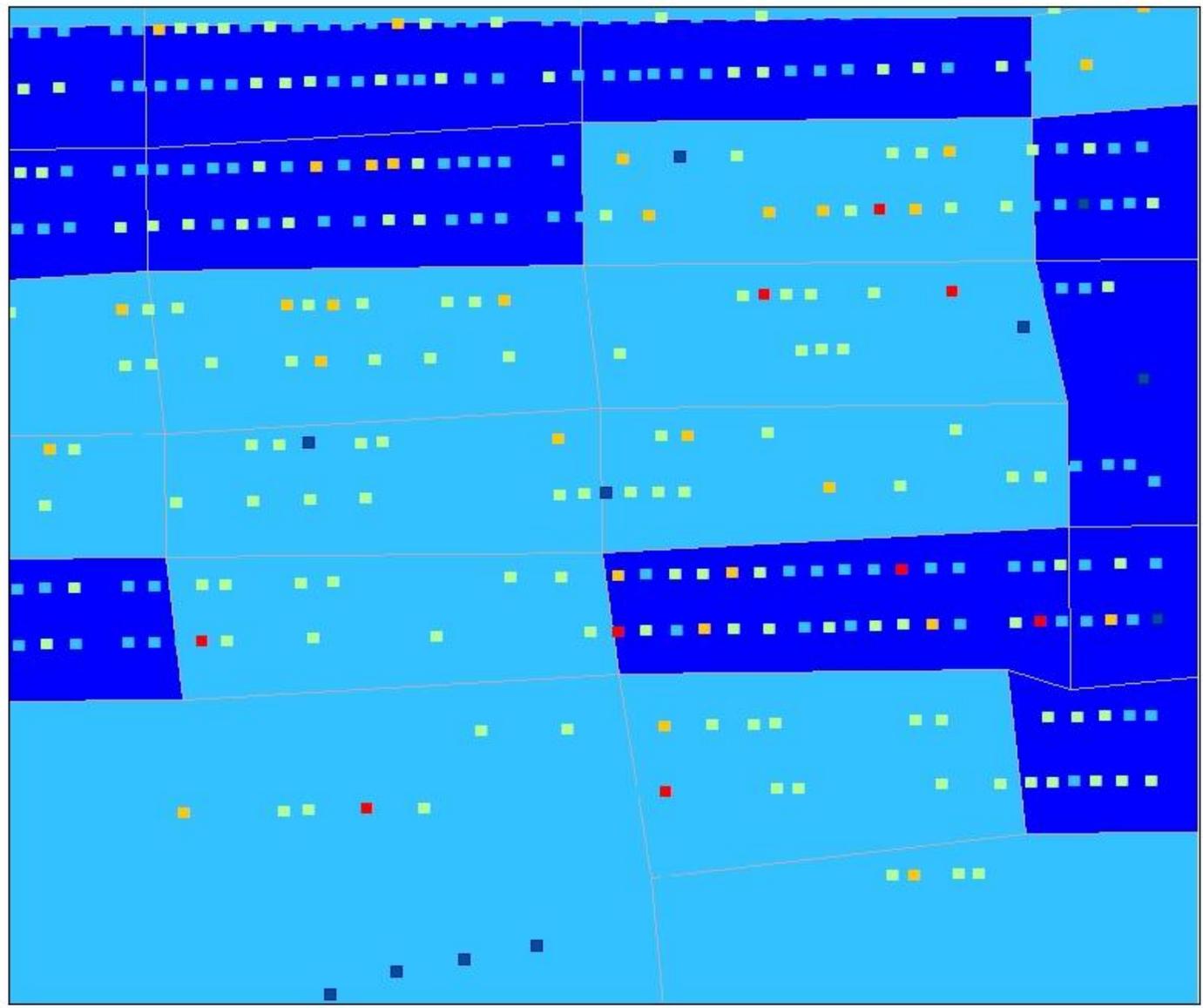
0.4 - 0.46

0.47 - 0.75

0.76 - 1.00



# Nearby Parcel Level Indicators: Cleveland



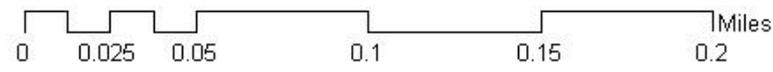
## Legend

### Parcel Indicator

- 0.00 - 0.27
- 0.28 - 0.40
- 0.41 - 0.51
- 0.52 - 0.65
- 0.66 - 1.00

### Near Parcels Indicator

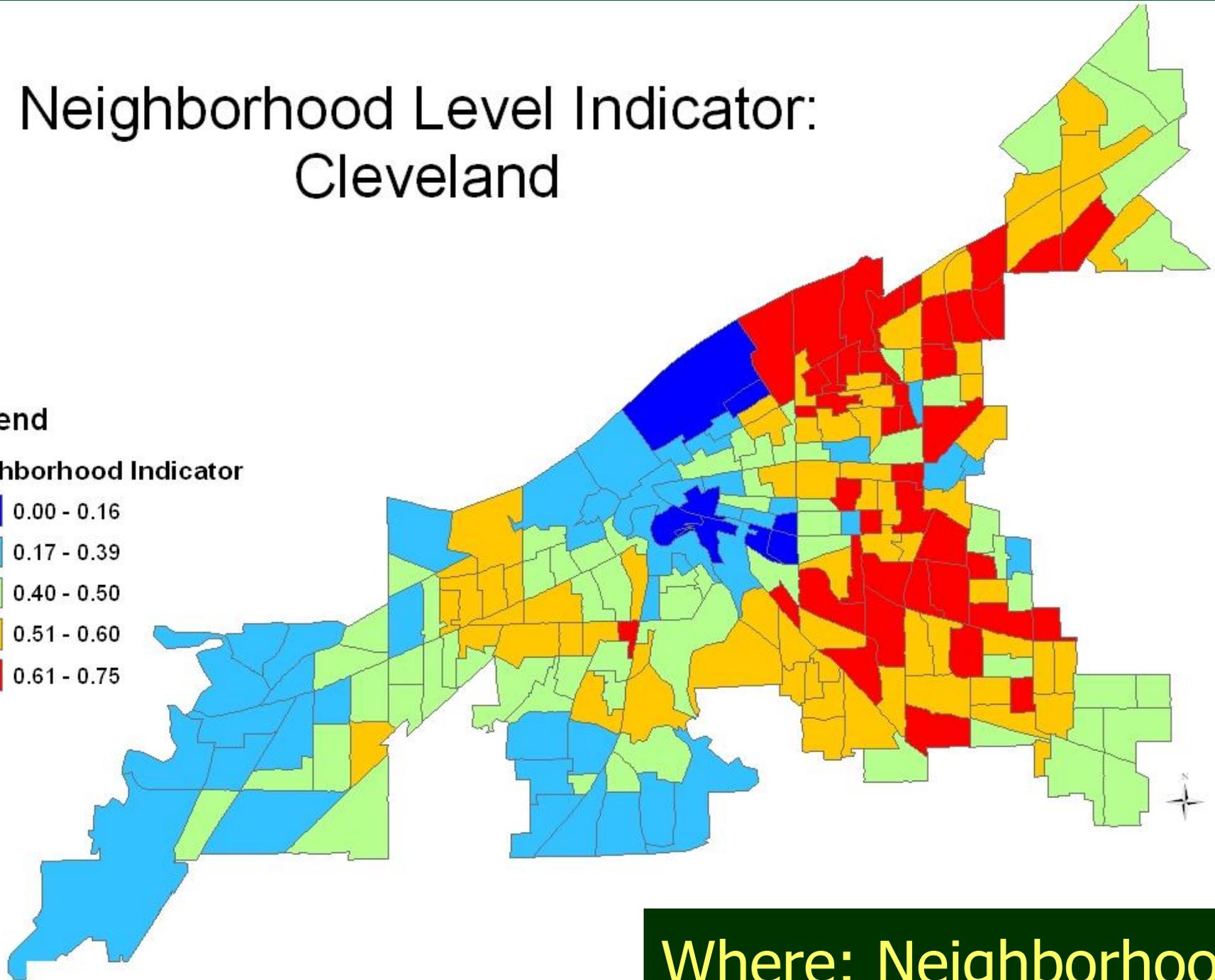
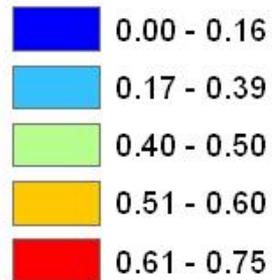
- 0.00 - 0.08
- 0.09 - 0.21
- 0.22 - 0.33
- 0.34 - 0.46
- 0.47 - 0.75
- Cleveland



# Neighborhood Level Indicator: Cleveland

## Legend

### Neighborhood Indicator



Where: Neighborhood

# What are we measuring at the neighborhood level?

- Lending activity (HMDA)
- Foreclosures
- Median household income
- Owner and renter housing burden
- Single-person households with children
- Elderly population
- Market dynamics
- Tenure and tenure transition
- Residential turn-over
- Utility service

Legend

Neighborhood Indicator

0.01-0.10

0.11-0.20

0.21-0.30

0.31-0.40

0.41-0.50

0.51-0.60

0.61-0.70

0.71-0.80

0.81-0.90

0.91-1.00

# V & A Indicator: Columbus



## Legend

### V&A Indicator

- 0.13 - 0.28
- 0.29 - 0.36
- 0.37 - 0.44
- 0.45 - 0.54
- 0.55 - 0.75

— Major Roads

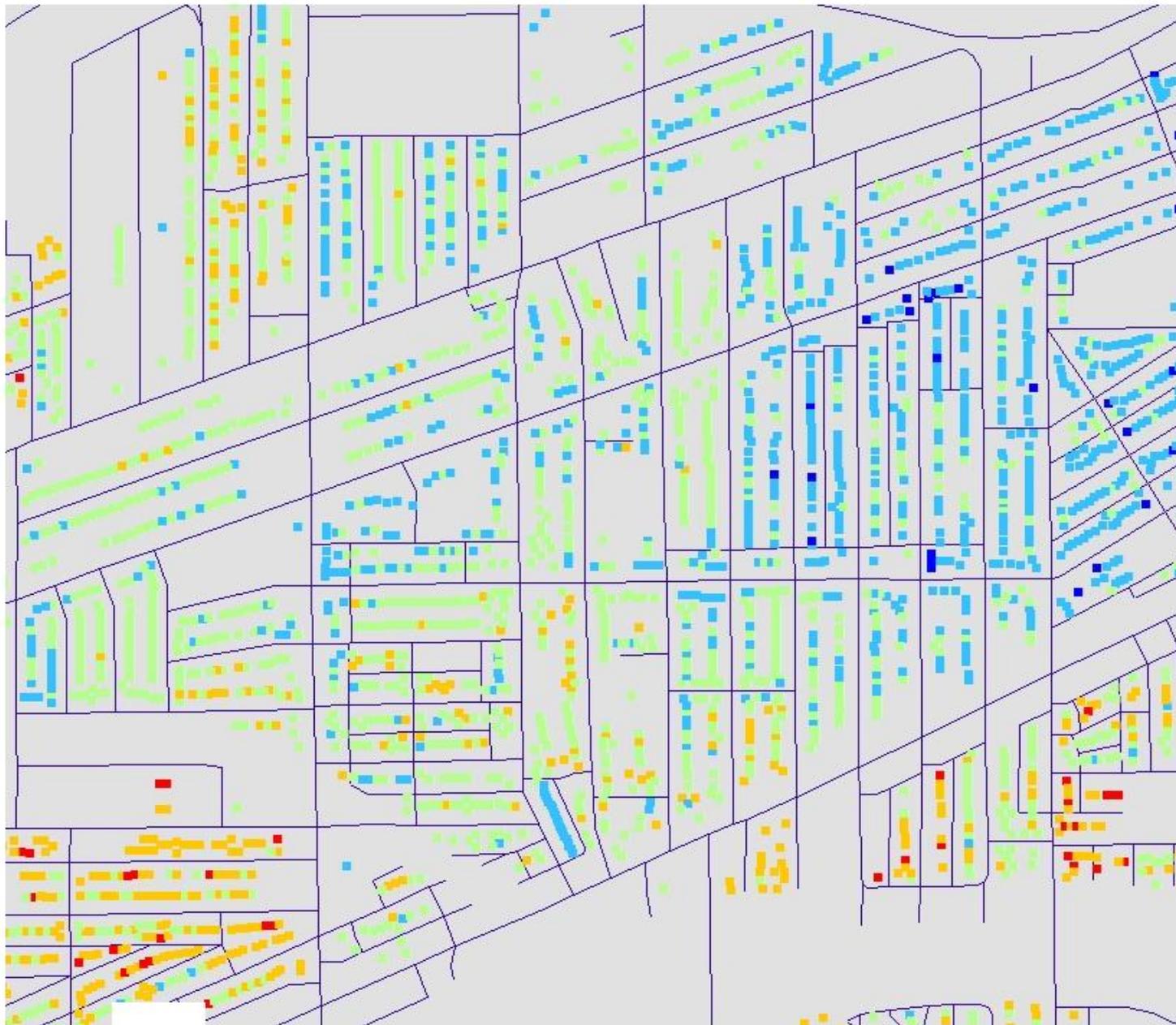
■ Columbus

■ Franklin County



0 0.1 0.2 0.4 Miles

# V & A Indicator: Cleveland



## Legend

### V&A Indicator

- 0.15 - 0.30
- 0.31 - 0.38
- 0.39 - 0.45
- 0.46 - 0.52
- 0.53 - 0.74

— Streets

■ Cleveland



0 0.05 0.1 0.2 Miles

# V&A Indicator: Risk and Reward

- Decisions, Decisions...(the risk)
  - The purpose
  - The geography
  - The data
  - The method
  - The presentation

# V&A Indicator: Risk and Reward

- Decisions, Decisions...(the reward)
  - Easy to compute
  - Easy to interpret
  - Starting point for discussion
  - Information-supported decisions
  - Targeted outreach