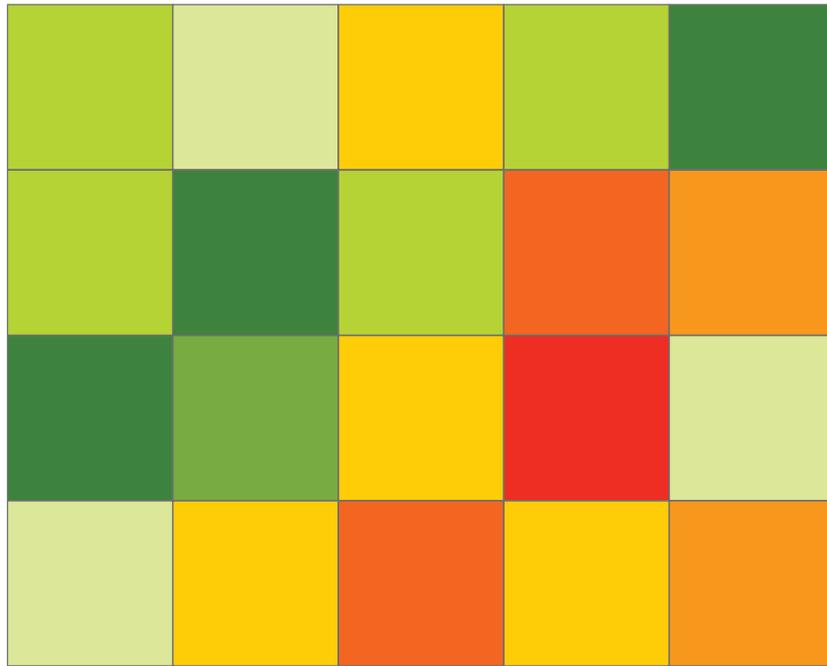


# North Minneapolis Housing Market Index



**A Report by the Folwell Center  
for Urban Initiatives**

**October 2011**



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*Building Social Justice & Economic Opportunities*

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The Folwell Center for Urban Initiatives is dedicated to the social, economic, and environmental improvement of north Minneapolis and its residents. The views expressed in this document represent those of the Folwell Center for Urban Initiatives and do not necessarily reflect the opinions of any of the organizations or people who provided input or data, including the Pohlad Family Foundation, the Center for Urban and Regional Affairs, the Federal Reserve Bank of Minneapolis, the City of Minneapolis, the Minneapolis Police Department, or Hennepin County.

Jacob Wascalus and Jeff Matson of the Center for Urban and Regional Affairs (CURA) provided technical support in developing the Housing Market Index and creating this report.

This report was made possible with financial support from the Pohlad Family Foundation and CURA.

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# Executive Summary

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**R**ebuilding the social and economic health of neighborhoods severely impacted by the housing crisis of recent years has been, and will continue to be, difficult. This report introduces the Folwell Center for Urban Initiatives (FCUI) Housing Market Index (HMI), a new tool that measures the strength of an area's housing market. The FCUI HMI will help local leaders better plan and target sustainable housing interventions as part of their broader reinvestment effort.

The FCUI HMI borrows from an HMI created by the Local Initiatives Support Corporation. The most significant difference is the FCUI HMI's geographic specificity—neighborhoods are measured by block, not census tract or zip code. The FCUI HMI offers a block-by-block view that provides a more precise understanding of neighborhoods. When applied to a neighborhood, it clearly shows investment and disinvestment, as rates of owner-occupancy, housing condition, vacancy, and value retention are combined and compared.

In north Minneapolis, the area examined in this report, the block-by-block view finds a much more diverse housing market, with the blocks in some neighborhoods falling almost entirely on one side of the housing strength spectrum and the blocks in other neighborhoods running the entire gamut of housing strength. Understanding this diversity should lead to improved intervention strategies and a better targeting of limited resources for long-term and, in some cases, scalable improvements.

To reap the benefits of the FCUI HMI, many audiences will need to adopt its usage. Local leaders, city agencies, and neighborhoods should use it when planning. This is especially true in neighborhoods like those in north Minneapolis that have experienced disinvestment and destabilization. New public and private investment should also be sensitive to FCUI HMI data: property owners (banks or local governments), when considering whether to sell or hold REO property; new commercial investors, when considering where to locate needed amenities; and homebuyers, when considering where to purchase a home.

To further improve the housing environment in areas with distressed housing markets, the city should adopt new policies and ordinances that incentivize responsible rental ownership. Doing so would result in improved HMI scores and, likely, improve results of efforts to increase homeownership. Finally, allowing flexible zoning in large areas with significant housing deterioration should also encourage redevelopment investment. These and other policy changes detailed in this report should improve efforts to rebuild the social and economic health of areas like north Minneapolis. ■





# 1.0 Introduction

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For the past several years, cities across the country have been dealing with the repercussions of a housing bust that has brought with it a slew of social and economic ills: foreclosures are occurring in numbers not experienced since the Great Depression; vacant and bank-owned homes are accruing at alarming rates; and unemployment figures remain stubbornly high. North Minneapolis confronts a similar scenario. While its housing problems stretch back decades rather than years, it still faces an aging housing stock, rapidly falling market values, and heightening levels of vacancy that are causing negative spillover effects in some of its neighborhoods.

## GOAL

This report shares a new and different block-level analysis of the housing market strength in north Minneapolis neighborhoods. The results of this index should guide future planning and investment decisions.

Nationally, city agencies, non-profits, and philanthropic organizations are attempting to intervene by creating and supporting programs intended to address these problems, such as foreclosure counseling to help prevent homeowners from losing their houses to skills training to assist people in gaining employment. Even the federal government, through its Neighborhood Stabilization Program, is attempting to stanch the flow of neighborhood depreciation. But while some of these programs have succeeded in producing their intended benefits, many are still awaiting positive outcomes. The same can be said of some of the programs in Minneapolis.

Compounding the steep challenges faced by intervening groups is the increased pressure to do more with less—that is to say, city agencies and their non-profit and philanthropic counterparts are expected to help more people and provide more services in a budgetary environment that is more apt to contract than expand. Recognizing this challenge, the Local Initiatives Support Corporation (LISC) developed a data-oriented tool to help guide housing-based intervention and stabilization strategies: the Housing Market Index (HMI). The HMI measures the strength of a particular area's housing market, which can help policy makers and other interested parties better target their efforts—a critical ability given the stretched budgets that many organizations and agencies face.

Using the methodology of the LISC HMI as a framework, the Folwell Center for Urban Initiatives (FCUI) has developed its own HMI to analyze the housing market strength in north Minneapolis. While LISC's HMI analyzes an area's housing market at the tract level, FCUI's HMI produces a block-level analysis that city planners, neighborhood organizations, and developers can use in guiding specific housing stabilization strategies in north Minneapolis.

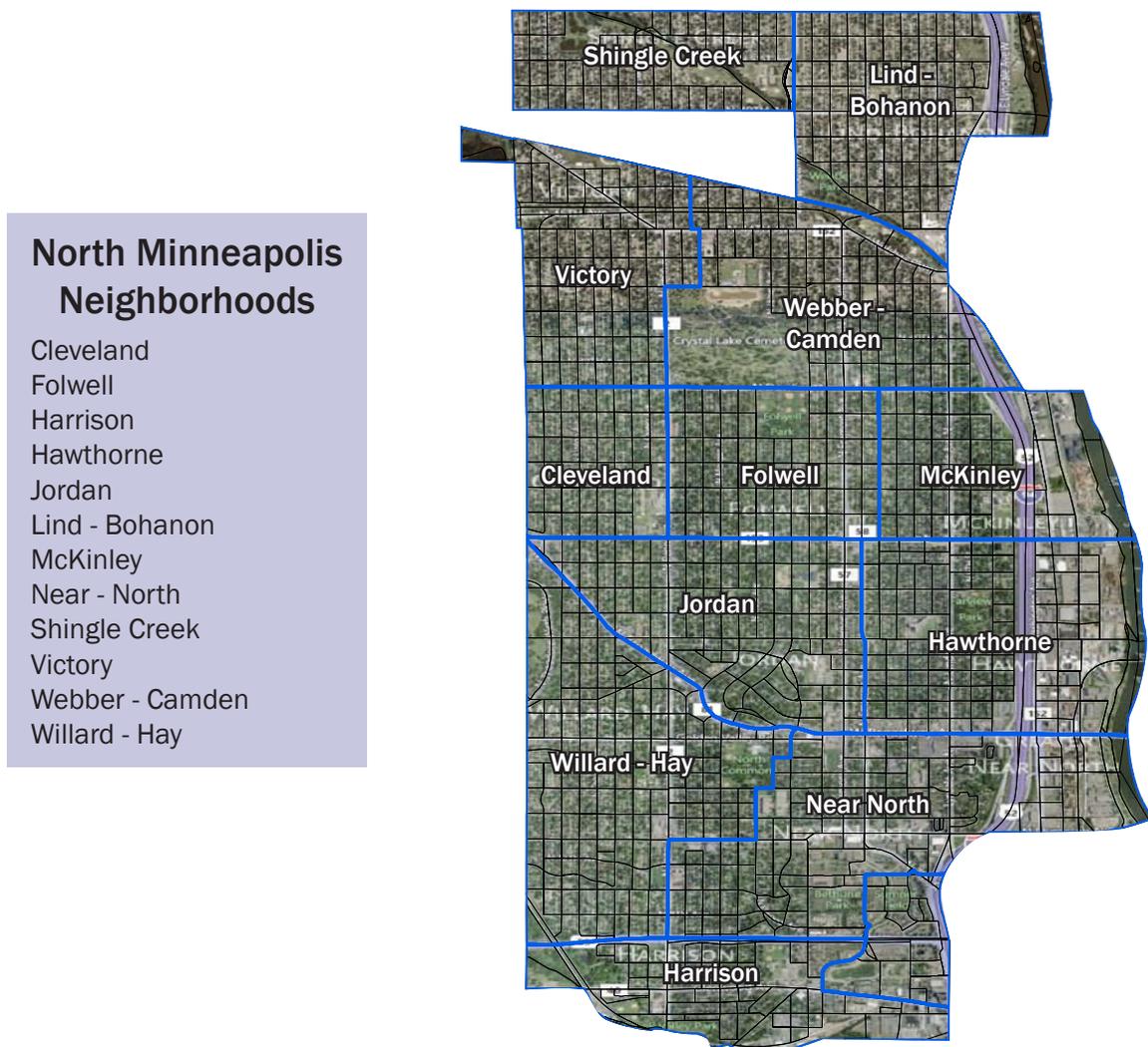
FCUI's HMI is based on a weighted combination of four variables related to housing. The variables include:

1. Value Retention, as measured by the change in estimated market value between January 2008 and June 2011;
2. Owner-Occupancy, as recorded in the 2010 U.S. Census;
3. Housing Condition, as reported by the Minneapolis Assessors Office; and
4. Vacancy, as determined by U.S. Postal Service data.

The HMI measures the housing market in 12 north Minneapolis neighborhoods by using parcel- and block-level data to determine block averages for each variable. (See 6.0 METHODOLOGY for more detail.) The results of this analysis reveal that this vital part of Minneapolis spans the spectrum of housing conditions, from strong, vibrant sections to weak, unstable areas. Fortunately, a large part of north Minneapolis lands in the former category, but the areas that fall in the middle and on the weaker end of the range still hold considerable promise for improving their housing environment.

Based on the results of the HMI, this report offers realistic, achievable policy recommendations (long- and short-term) that city agencies, non-profits, developers, and other interested parties can adopt in their efforts to stabilize and improve north Minneapolis's housing environment. And while the recommended strategies won't solve all of the housing challenges in north Minneapolis, they are based on a data-oriented analysis that reflects the reality of the housing market—an approach all future housing plans should adopt. ■

#### Study Area: North Minneapolis





## 2.0 Context

---

This section describes the historical context of housing in north Minneapolis and explains the factors that led to its current state. It also frames an appropriate course forward for future development that will benefit both individual neighborhoods and greater Minneapolis.

The Context section is broken into three subsections:

- Housing history of north Minneapolis
- The impact of foreclosure and the economic reality
- Planning for sustainable living environments, cities and neighborhoods

### 2.1 HOUSING HISTORY OF NORTH MINNEAPOLIS

Single family homes dominate north Minneapolis neighborhoods, houses built a hundred years ago on a grid of 40-foot lots and designed to be owner-occupied by working class families. When these neighborhoods were built there was little discussion about social or economic change, there was little concern about aging structures or deferred

maintenance, and few people thought about what would happen when the family next door was a tenant, not an owner.

Coincidentally, these neighborhoods were in proximity to the Sumner – Olson Housing Project, where, in the early 1950s, the City of Minneapolis located hundreds of low-income families rather than in scattered site locations throughout the city, as proposed by the Minneapolis Housing and Redevelopment Authority.

During the summer of 1967 Minneapolis was not exempt from the racially based chaos that erupted in many cities, and the northside riots triggered an urban migration that affected many of the neighborhoods.

In 1998, the Sumner – Olson Project was demolished in response to a lawsuit against the Minneapolis Public Housing Authority, U.S. Department of Housing and Urban Development, and the City of Minneapolis, alleging historical patterns of segregation in the location and administration of the Section 8 and public housing programs, specifically addressing the geographic

#### Folwell Center for Urban Initiatives

Our work at Folwell Center for Urban Initiatives is about the preservation of neighborhoods and healthy human interaction within the local and greater city community. Today, it is a quest to reestablish an urban existence that is civil, tolerant and beneficial for everyone who chooses to live in these neighborhoods.

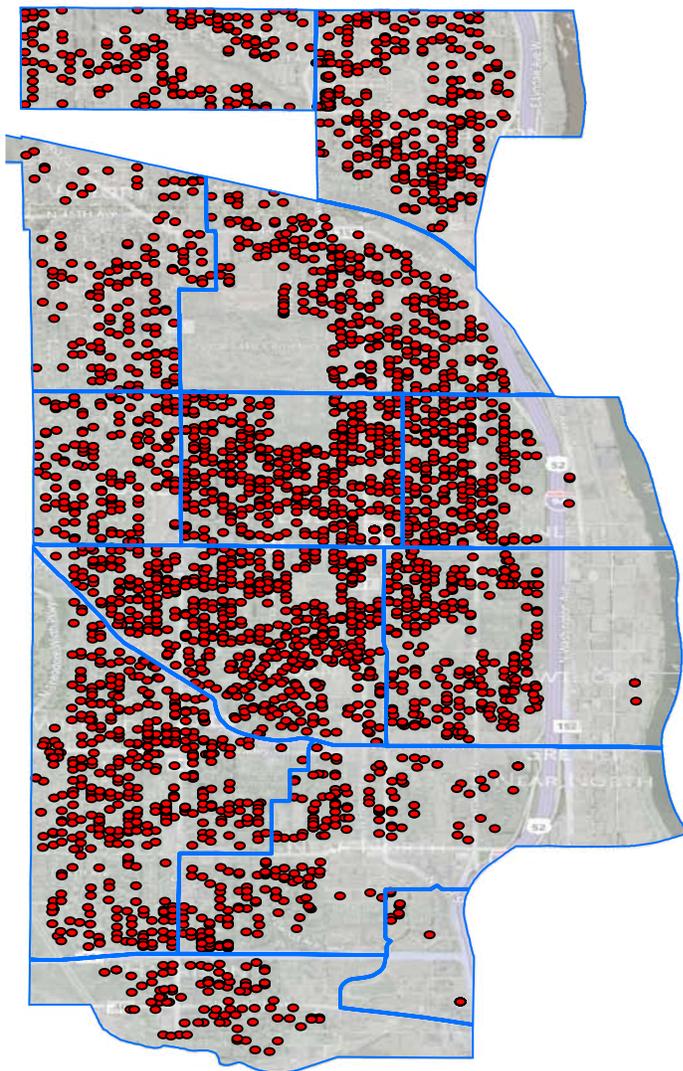
#### Investor-Owned Rental Property

The northside is unique in Minneapolis in that its rental market is primarily single family homes, increasing the risk to blocks and resident stability if a property becomes a problem because of tenant behavior or property maintenance.

concentration of poverty. When those projects were demolished, the residents, who were predominately African American, relocated into northside neighborhoods close to friends and family; they moved into available rental property in the neighborhoods they knew best.

These events opened the door of opportunity even wider for investor-owned rental property. As the older, white population fled north Minneapolis, they sold their homes below market value to investors who turned them into rental properties to meet demand, and that demand was increasing. This iteration of “white flight” occurred in the late 1990s specifically in response to increased violent crime and resulted in a second round of below-market sales, subsequently depressing market values in most of the neighborhoods.

### Foreclosures in North Minneapolis 2008 through 2010



With more than 3,000 residential foreclosures in three years, many parts of north Minneapolis experienced considerable stress on their already weak housing market.

From 2001 until early 2005, north Minneapolis property market values rose to historic highs. During that period, new and existing owners showed confidence in the neighborhoods by investing in their homes. However, the availability of easy equity financing would become costly for many and the available money for acquisitions opened the door to real estate fraud and financial exploitation, a series of lucrative real estate schemes, and even more investor acquisitions.

It should not have come as a surprise when, in early 2006, northside neighborhoods in Minneapolis began to empty out as a result of foreclosure and that property values plummeted after attaining abnormal gains. Of the thirteen neighborhoods in north Minneapolis, none was untouched; five were more devastated than others with multiples of vacant and boarded houses on almost every block

As foreclosure overtook investors, tenants were evicted. Homeowners who had fallen behind on mortgage payments denied the reality of their situation and stayed as long as they could, and then simply left the community with another empty house subject to vandalism. When help was offered in the form of intervention programs to preserve ownership, many people did not even try to take advantage of the process. Some were so upside down in their properties that they believed there was no reason to pursue resolution, and property values continued to decline.

One result of foreclosure in these neighborhoods was the second onslaught of investors who bought homes as they emerged from the redemption period at the bottom of the market, both in cost and condition. Many houses were licensed for rental with no improvements and were immediately occupied by any tenant who could pay the rent. This is an investor practice that has the most negative impact on neighborhood stability; these owners do not live in the neighborhood, rarely screen their tenants, or maintain their property. Also present are investors who are committed to making a profit from the resale of renovated homes or from long-term rental income resulting from well-managed property, but they are not in the majority.

**Revitalization and development designed for neighborhoods will only be successful if it is based on sustainable interrelated goals for the entire dependent community that includes other neighborhoods and the city.**

## **THE IMPACT OF FORECLOSURE AND THE ECONOMIC REALITY**

In early 2009 it appeared that foreclosures in north Minneapolis were waning. There was a slight increase in new owner-occupants as a result of homeownership incentive programs. However, by early 2010, decisions made by financial institutions and lenders at the core of the foreclosure process, coupled with the stalling national economy, unleashed another round of foreclosure, resulting in a significant increase in the number of vacant houses. The housing market was saturated. Those interested in home ownership were increasingly cautious, and credit was tightening. This was the general housing and market condition in north Minneapolis neighborhoods when the tornado struck on May 22, 2011.

## **PLANNING FOR SUSTAINABLE LIVING ENVIRONMENTS, CITIES AND NEIGHBORHOODS**

The neighborhoods in north Minneapolis have a limited future if they are rebuilt in their own image. In their current configuration they isolate poverty, depress commercial development, and limit both social and economic growth. The neighborhoods are in distress for a number of reasons: there was no intervention when it became apparent that they were containment zones for poverty; public safety initiatives were reactive until the juvenile crime and gang activity reached national attention; and

**A broad planning effort that includes individual neighborhood identities can benefit the city and region as a whole while enhancing neighborhood power to limit racial and income exclusionism and support the development of wider social and economic benefits.**

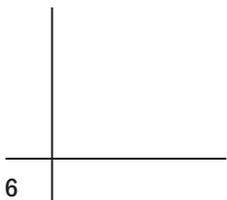
regulatory ordinance and enforcement was rewritten only after some of the housing stock deteriorated to beyond habitation and discussions about problem properties became commonplace.

In order to create neighborhoods that function both economically and socially, it is critical to absorb the lessons learned from the cause of the housing distress. It is easy to identify, in hindsight, what went wrong and the barriers to revitalization, but these neighborhoods are only part of the

construct. It is more important that what happens next is based on defining the future reality for all of Minneapolis neighborhoods and the city.

Revitalization and development designed for neighborhoods will only be successful if it is based on sustainable interrelated goals for the entire dependent community that includes other neighborhoods and the city. A broad planning effort that includes individual neighborhood identities can benefit the city and region as a whole while enhancing neighborhood power to limit racial and income exclusionism and support the development of wider social and economic benefits.

This sort of thinking opens the door for a much larger discussion and requires neighborhoods, cities and other partners to look beyond the remediation of planning deficits and current events to define a development philosophy for the city. ■





# 3.0 Housing Market Index

This section describes the Housing Market Index (HMI) developed and used by the Folwell Center for Urban Initiatives (FCUI) to analyze the housing market strength of 12 north Minneapolis neighborhoods and form policy recommendations for long-term housing stabilization.

The Housing Market Index section is broken into four subsections:

- Overview of the HMI
- Overview of variables
- Standardizing, combining, and weighting variables
- Mapping results

## 3.1 OVERVIEW OF THE HMI

The HMI used in this report is a useful analytical tool not only for understanding the housing market in a given area but also for developing policy recommendations for long-term housing stabilization. Based on an HMI originally developed by the Local Initiatives Support Corporation (LISC), FCUI’s HMI combines four housing-related variables to produce a block-level analysis of housing market strength in 12 north Minneapolis neighborhoods, using the average index score for all of north Minneapolis as a benchmark. Each variable is based on a parcel- or block-level data set that reflects an aspect of housing. (For a

more detailed discussion of LISC’s HMI, see page 8.)

## 3.2 OVERVIEW OF VARIABLES

FCUI’s HMI is based on a weighted combination of four variables. The variables include:

1. *Value Retention*, as measured by the change in estimated market value between January 2008 and June 2011;
2. *Owner-Occupancy*, as recorded in the 2010 U.S. Census;
3. *Housing Condition*, as reported by the Minneapolis Assessors Office; and
4. *Vacancy*, as determined by U.S. Postal Service data.

The formulas for each of the variables follow:

**EMV = Estimated Market Value**

*Value Retention:* 
$$\frac{(\text{April 2011 EMV} - \text{Jan 2008 EMV})}{\text{Jan 2008 EMV}}$$

*Owner-Occupancy:* 
$$\frac{\text{Total owner-occupants (Owned with a mortgage + Owned free and clear)}}{\text{Total Units}}$$

*Housing Condition:* 
$$\frac{\text{Sum of residences' 1-7 ratings of housing condition}}{\text{Number of residences}}$$

### Housing Condition

- 1 - Excellent
- 2 - Good
- 3 - Average Plus
- 4 - Average
- 5 - Average Minus
- 6 - Fair
- 7 - Poor

## LISC's Housing Market Index

LISC's HMI synthesizes a series of data sets drawn from the Home Mortgage Disclosure Act (HMDA) to produce a tract-level analysis of the housing market of more than 350 metropolitan areas in the United States. The variables in this HMI include:

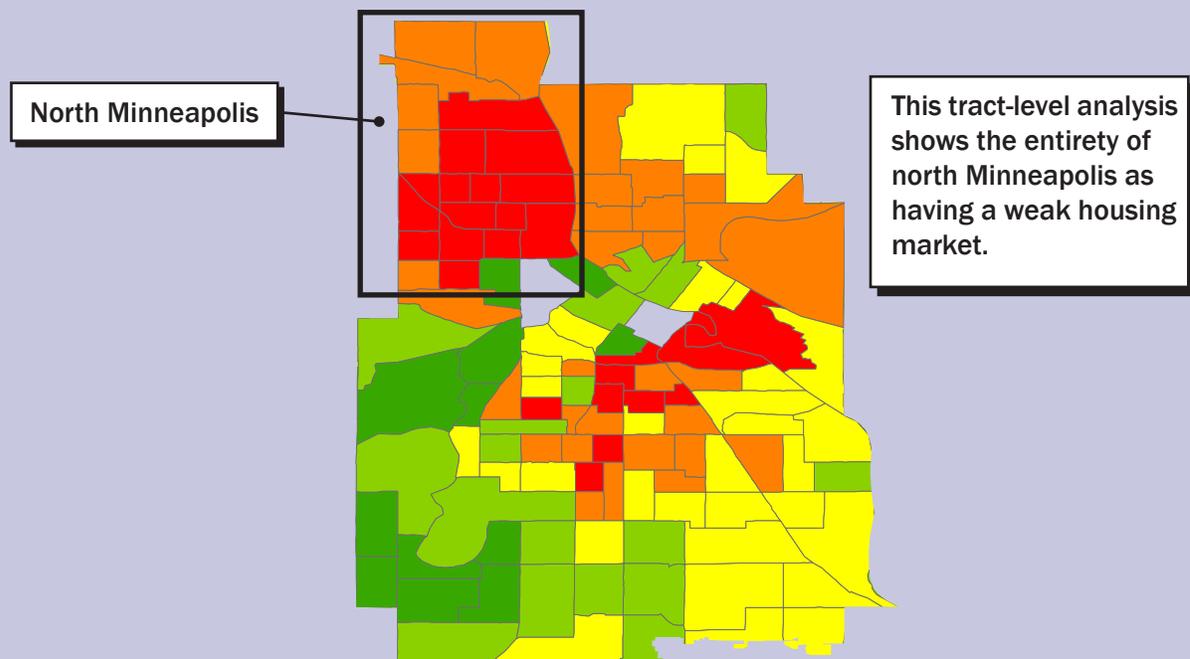
- 1) Median value of first lien home purchase mortgages
- 2) Percentage of all first lien mortgages that are high-cost
- 3) Velocity of home purchase mortgage transactions to owner-occupants, measured as the number of first lien owner-occupant mortgages/the number of owner-occupied units in 2000
- 4) Velocity of home purchase mortgage transactions to investors, measured as the number of first lien investor mortgages/the number of single-family rental units in 2000
- 5) The percentage of first lien mortgages to owner-occupants, measured as the number of owner-occupant mortgages/(owner-occupied mortgages + investor mortgages)

At a citywide scale, the LISC HMI shows Minneapolis's housing market as being average to strong in south Minneapolis while being weak in north Minneapolis (see map inset). While these results are helpful in identifying which regions of the city may require additional resources, the geographical scope of the analysis (i.e., tract) produces generalized scores that, when mapped, do not reflect the nuances within each area.

For north Minneapolis — an area of varied housing conditions — this means the relatively high HMI scores of areas that are known to have healthy housing markets get “averaged out” by areas that do not have vigorous housing markets. Essentially, the resulting housing market analysis does not provide sufficient information on which to base specific housing stabilization strategies.

### LISC's Housing Market Index of Minneapolis

#### By Tract



Vacancy:

$$\frac{\text{Vacant residences}}{\text{Total residences}}$$

**Vacancy Definition**

Not receiving mail for 90 days or longer.

**Residences**

Condominium, Double Bungalow, Residential, Triplex, Townhouse

With the exception of Owner-Occupancy, which is available at the block level, all of the data sets are available at the parcel level. (For more information on each variable, see 6.0 METHODOLOGY.)

**3.3 STANDARDIZING, COMBINING, AND WEIGHTING VARIABLES**

After calculating each variable’s block-level average with the above-defined formulas, each variable goes through a z-score transformation, in which each block-level variable is given a new score based on the mean and standard deviation of the same variable for all of north Minneapolis. (Doing this enables the HMI to combine multiple variables into a broader index). The result of this z-score transformation is a new figure for each variable that reflects the level of disparity between each block and the north Minneapolis average—specifically, the number of standard deviations each block is away from zero.

The z-scores are then weighted (using weights determined by a factor analysis) and combined for each block into a final product, or HMI. The formula follows:

$$\text{HMI} = (\text{Value Retention} \times 0.31174) + (\text{Owner-Occupancy} \times 0.28837) + (\text{Housing Condition} \times 0.38521) + (\text{Vacancy} \times -0.05223)$$

HMI Computation for Example Block				
	Value Retention	Owner-Occupancy	Housing Condition	Vacancy
Raw Scores	-32%	75%	4.44	7%
converted to	↓	↓	↓	↓
Z-Scores	0.6937	0.7755	-0.5453	-0.2525
combined and weighted to	$(0.6937 \times 0.31174) + (0.7755 \times 0.28837) + (-0.5453 \times 0.38521) + (-0.2525 \times -0.05223)$			
HMI Score	0.2167			

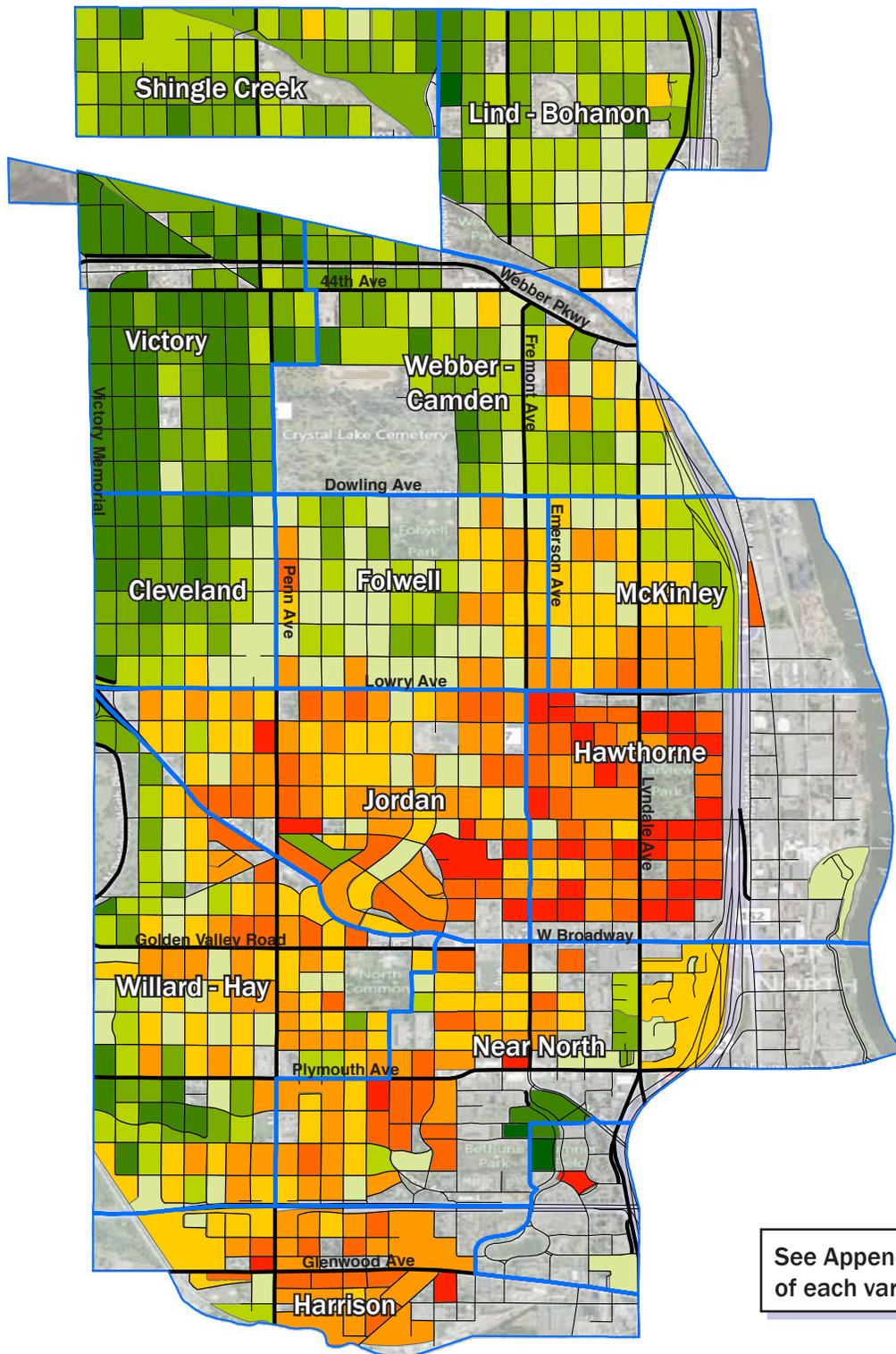
(For more information on how the weights were determined and other approaches taken, see 6.5 WEIGHTING AND COMBINING VARIABLES.)

**3.4 MAPPING RESULTS**

The resulting HMI scores for each block are then mapped in ArcGIS, using 2010 Census blocks. Each block receives a color that corresponds to its HMI score. In the map on the next page, the HMI scores are divided into nine ranges, each assigned a color. Red blocks indicate weak housing markets while green blocks indicate strong housing markets. The yellow and orange blocks represent blocks closer to the average for all of north Minneapolis. ■

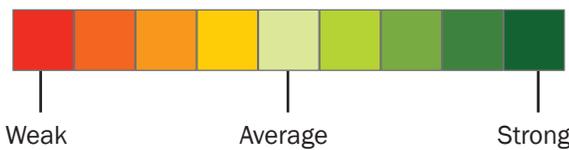
FCUI's Housing Market Index

North Minneapolis



See Appendix for maps of each variable score.

Housing Market Strength





# 4.0 Findings

This section describes the findings of the Housing Market Index (HMI) used to examine the housing market strength of 12 north Minneapolis neighborhoods.

The Findings section is broken into two subsections:

- Overall results
- Neighborhood results

## 4.1 OVERALL RESULTS

As summarized in the table below, the 12 north Minneapolis neighborhoods span the spectrum of housing market strength. Overall, north Minneapolis residences lost 37% of their estimated market value, with Hawthorne losing the greatest percentage (-48%) and Victory losing the least (-28%). Owner-occupancy averaged approximately 56% for the area, with Victory and Shingle

Creek topping the lists (84% and 83%, respectively) and Harrison, Near-North, and Hawthorne ranking at the bottom (29%, 32%, and 33%, respectively). Overall condition rating for north Minneapolis came in at 4.24 (Average), but Victory topped the list (3.989) and Hawthorne and Harrison ranked at the bottom (4.780 and 4.667, respectively). Finally, north Minneapolis’s vacancy rate is approximately 10%, with Victory having the lowest vacancy rate (4%) and Jordan having the highest (15%).

Overall Variable Statistics, by Neighborhood

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Cleveland	-31%	73%	4.049	7%
Folwell	-38%	60%	4.184	12%
Harrison	-41%	29%	4.667	5%
Hawthorne	-48%	33%	4.780	10%
Jordan	-43%	50%	4.519	15%
Lind - Bohanon	-36%	70%	4.018	12%
McKinley	-38%	49%	4.424	10%
Near - North	-43%	32%	4.300	8%
Shingle Creek	-34%	83%	4.029	6%
Victory	-28%	84%	3.989	4%
Webber - Camden	-31%	57%	4.188	9%
Willard - Hay	-39%	57%	4.309	9%
<i>North Minneapolis</i>	<i>-37%</i>	<i>56%</i>	<i>4.24</i>	<i>10%</i>

### Housing Condition

- 1 - Excellent
- 2 - Good
- 3 - Average Plus
- 4 - Average
- 5 - Average Minus
- 6 - Fair
- 7 - Poor

## 4.2 NEIGHBORHOOD RESULTS

HMI scores for each of the 12 north Minneapolis neighborhoods are illustrated on the following pages.

# Cleveland

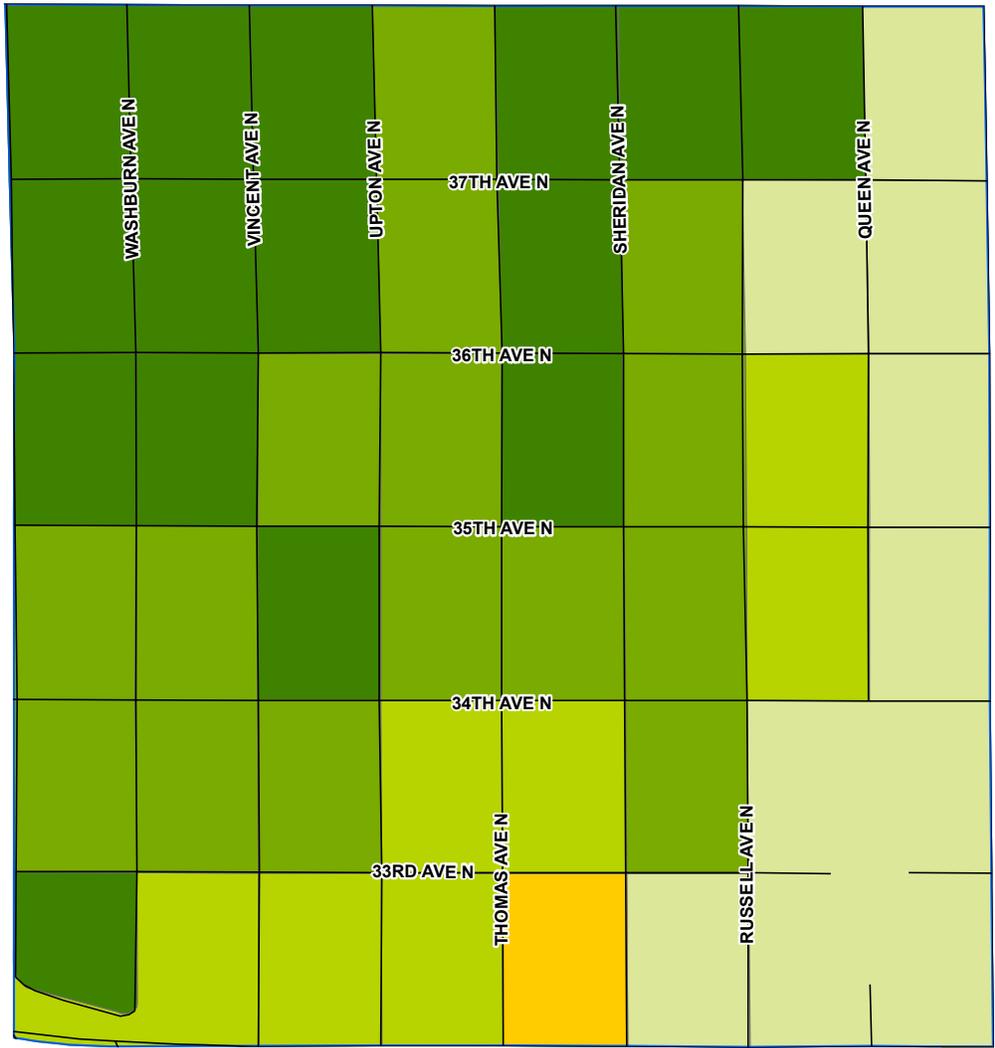
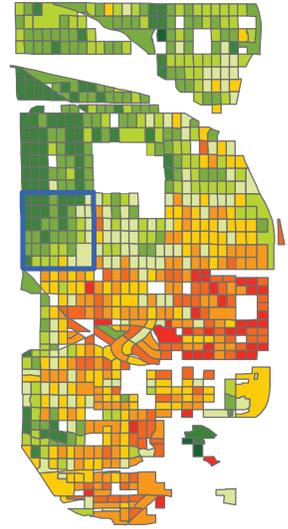
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
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North Minneapolis	-37%	56%	4.24	10%

Housing Market Strength



North Minneapolis

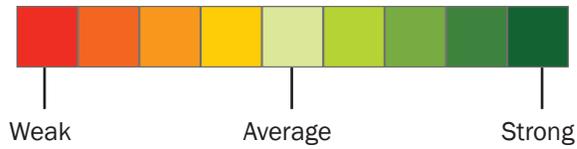


# Folwell

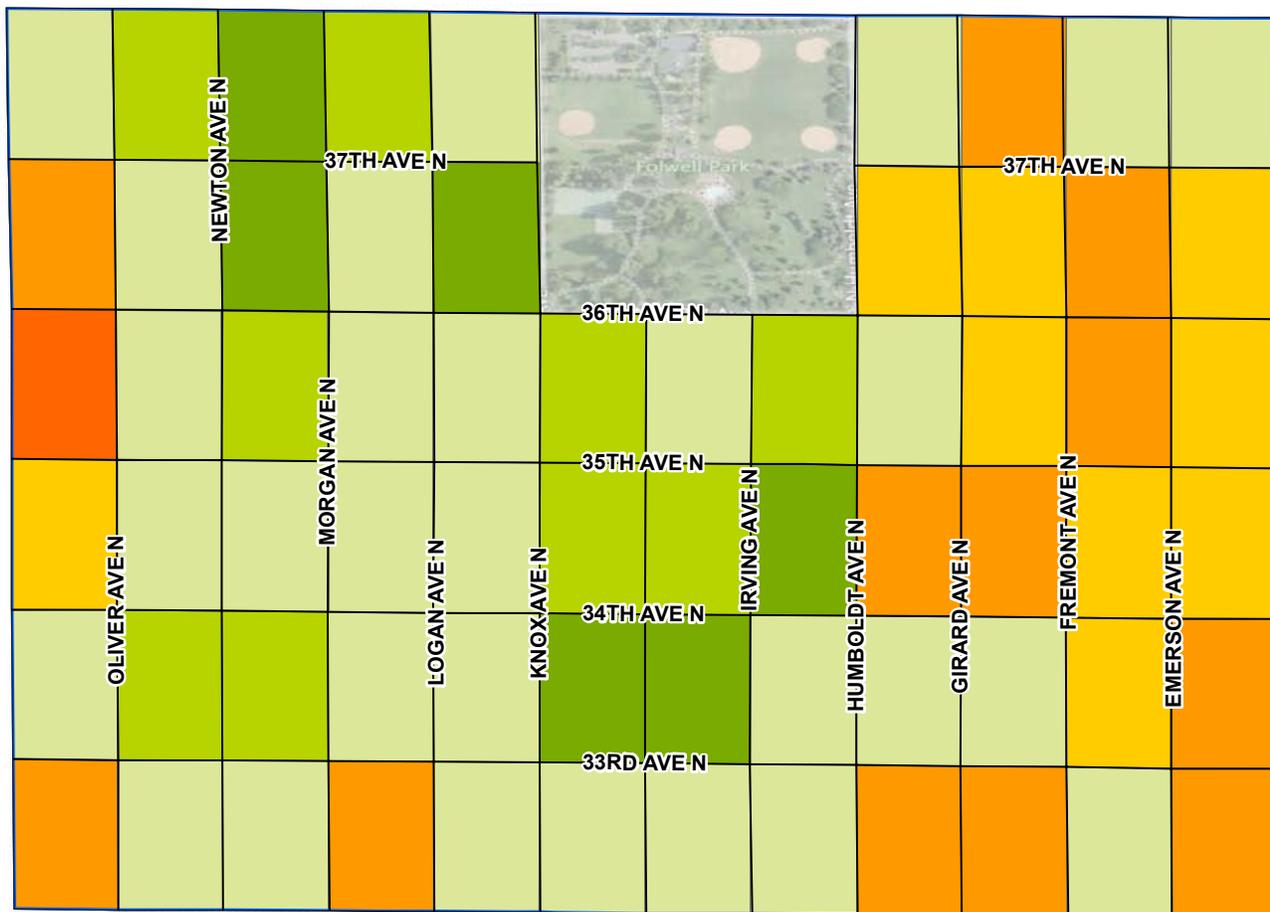
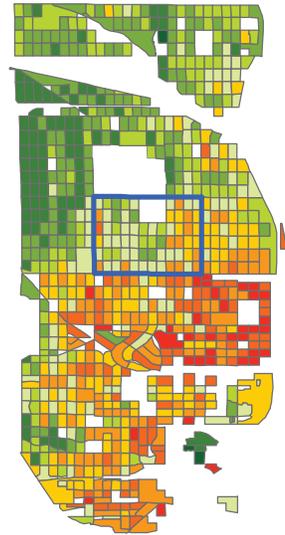
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## Housing Market Strength



## North Minneapolis

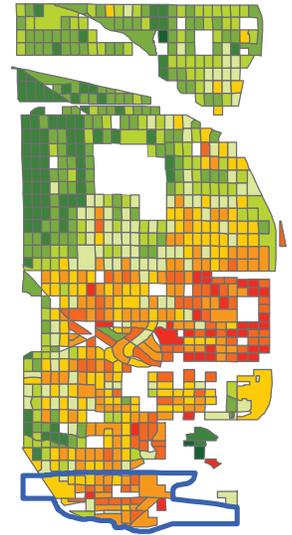


# Harrison

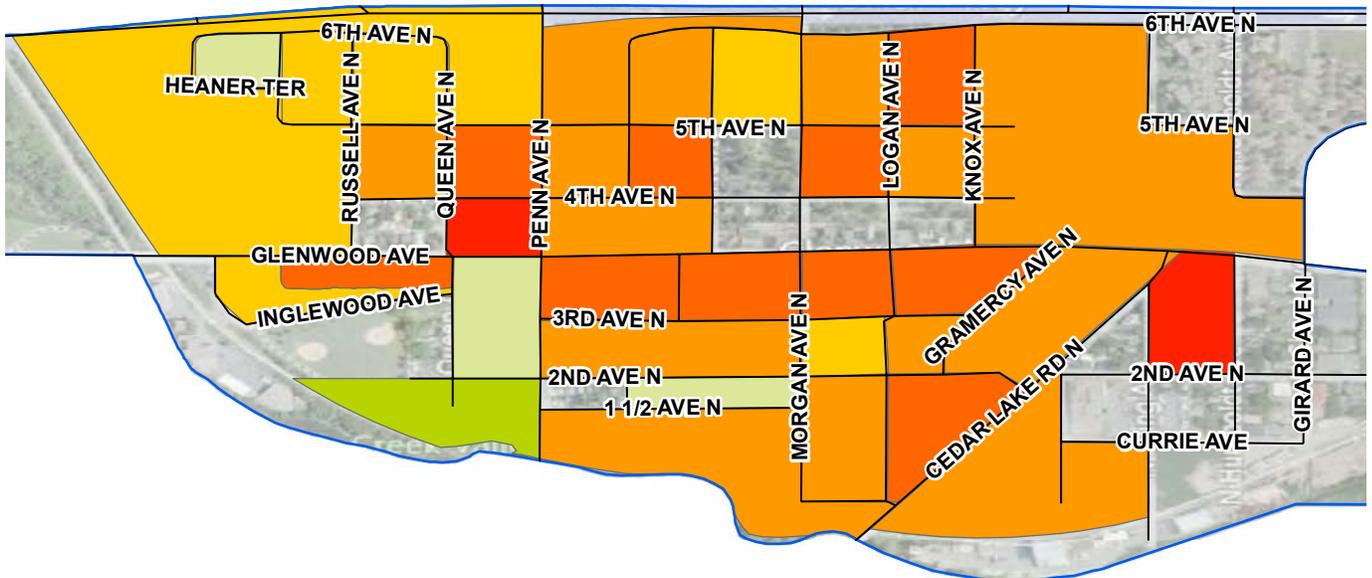
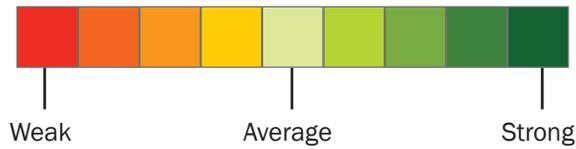
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North Minneapolis



Housing Market Strength

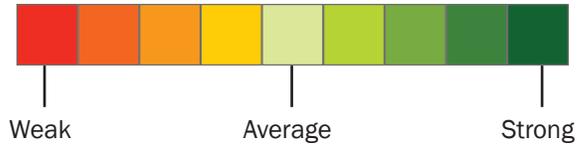


# Hawthorne

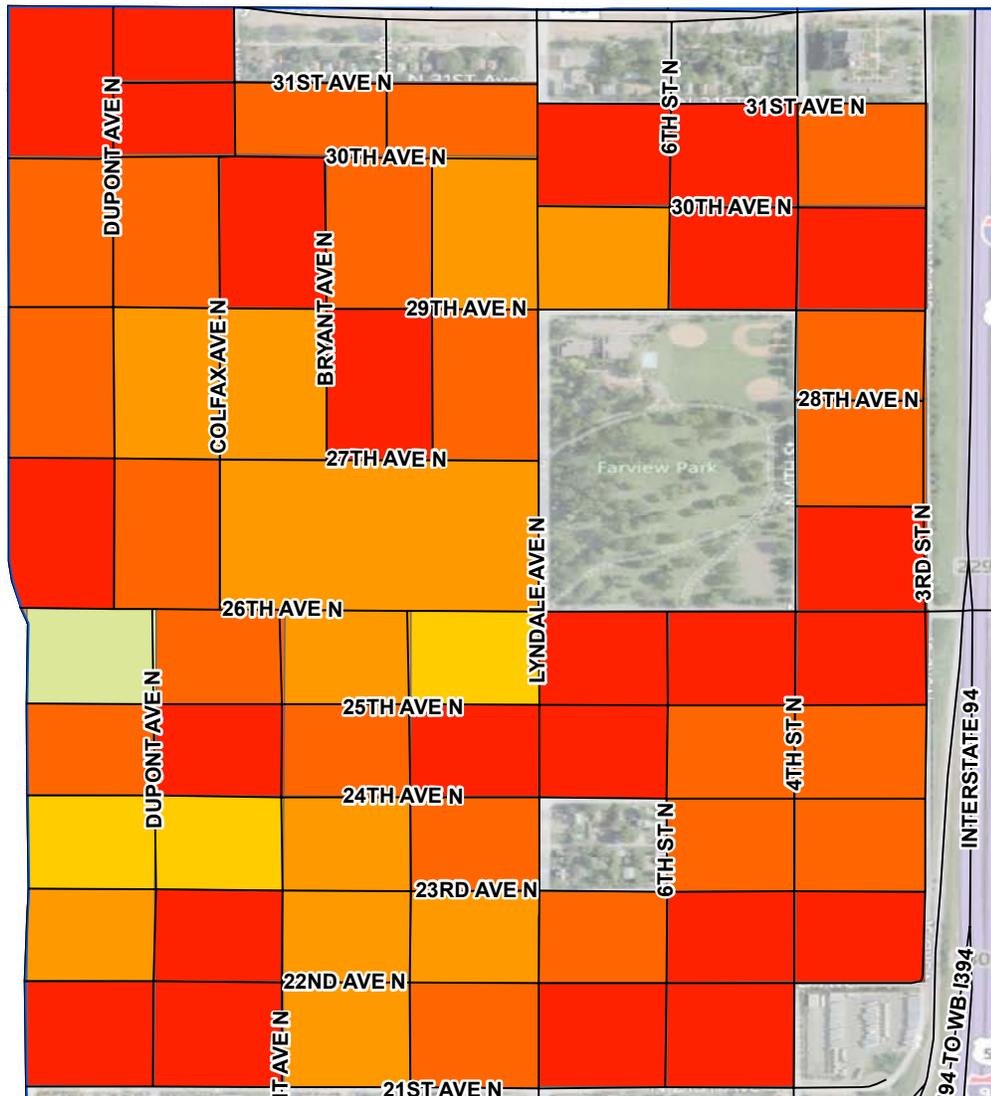
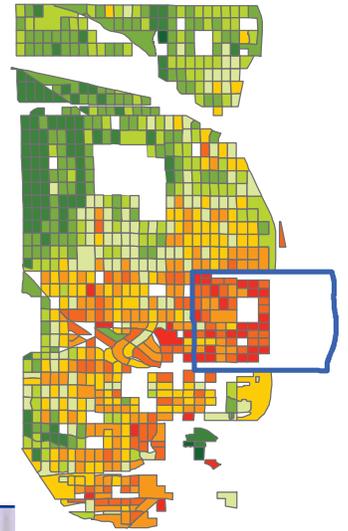
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Hawthorne	-48%	33%	4.780	10%
North Minneapolis	-37%	56%	4.24	10%

Housing Market Strength



North Minneapolis

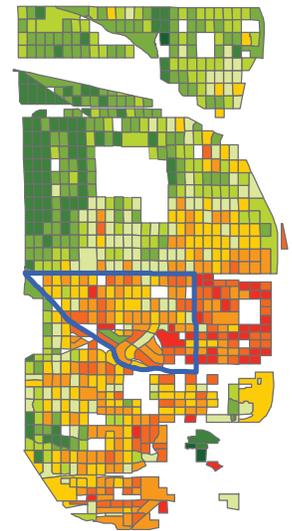


# Jordan

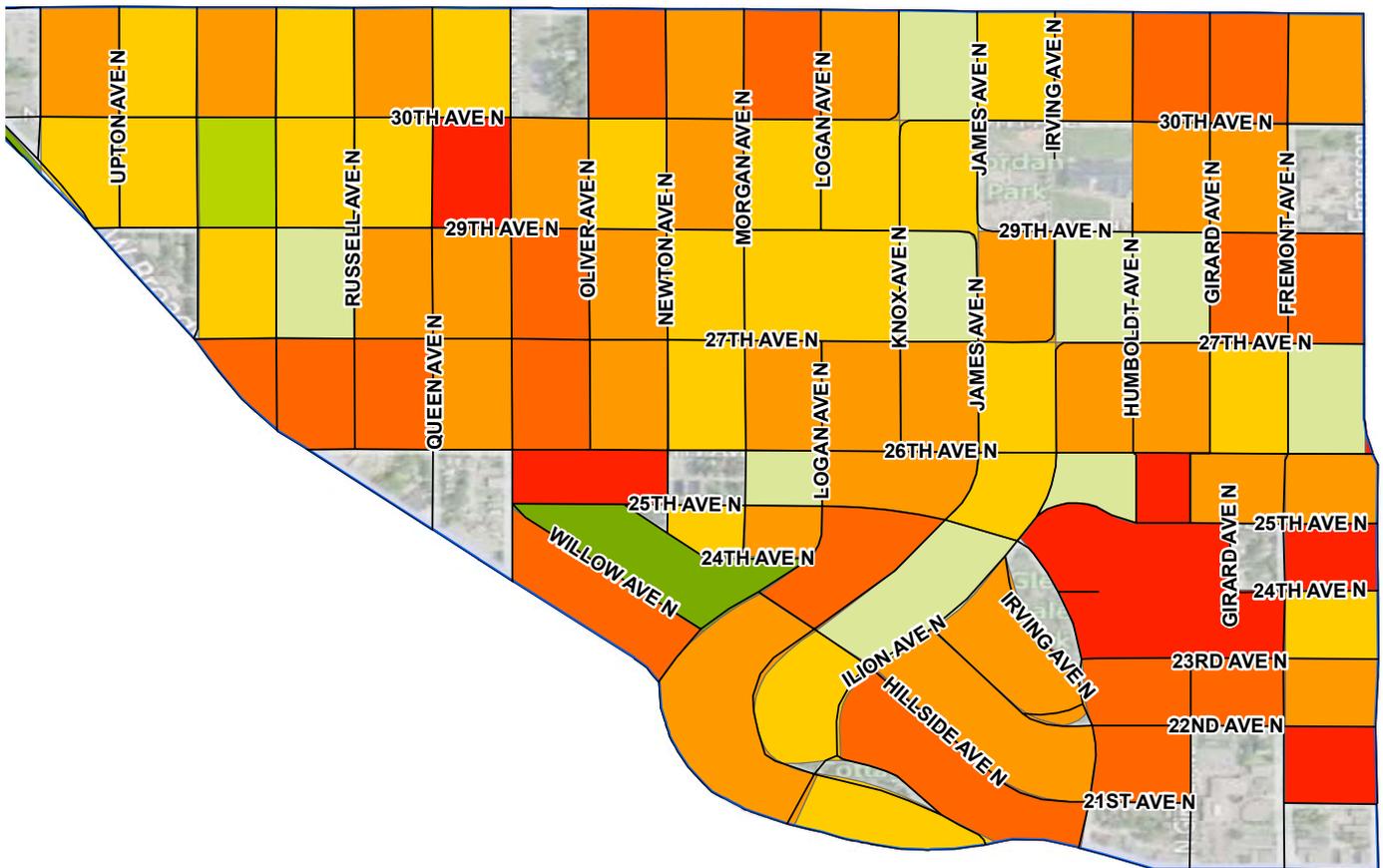
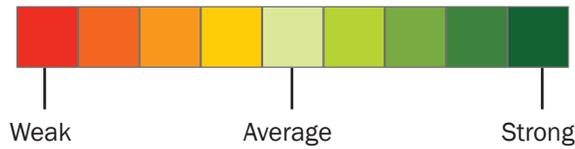
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Jordan	-43%	50%	4.519	15%
North Minneapolis	-37%	56%	4.24	10%

North Minneapolis



Housing Market Strength

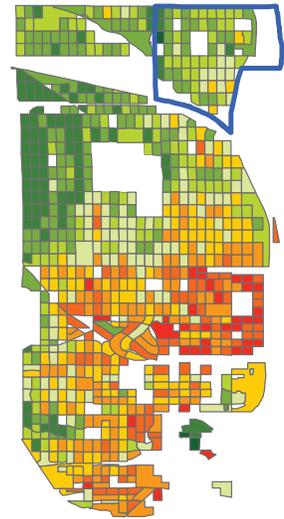


# Lind-Bohanon

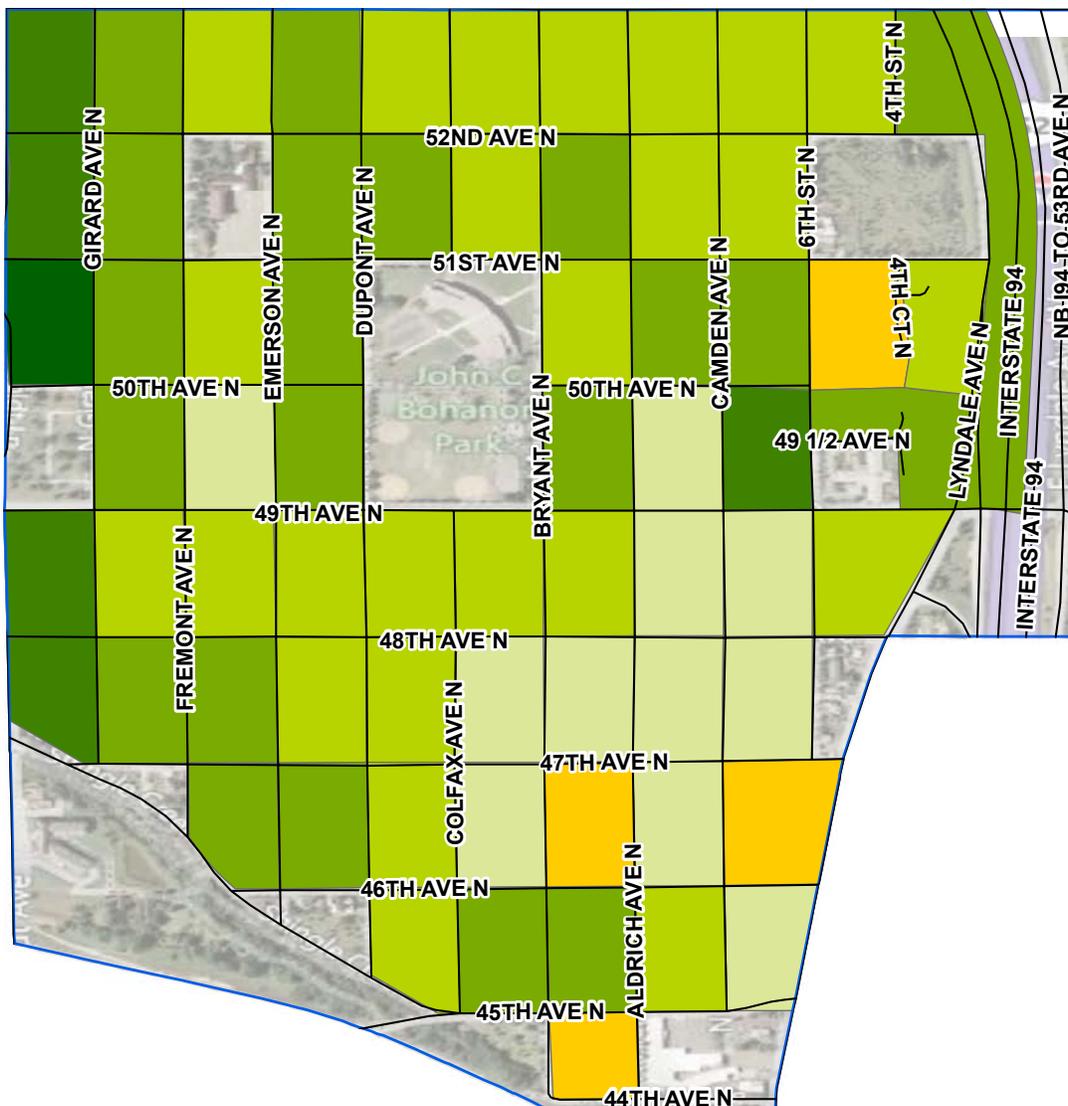
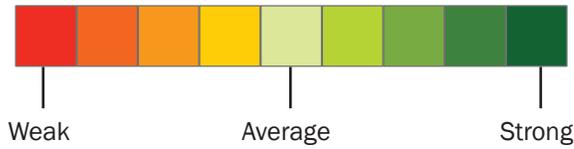
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Lind - Bohanon	-36%	70%	4.018	12%
North Minneapolis	-37%	56%	4.24	10%

North Minneapolis



Housing Market Strength



# McKinley

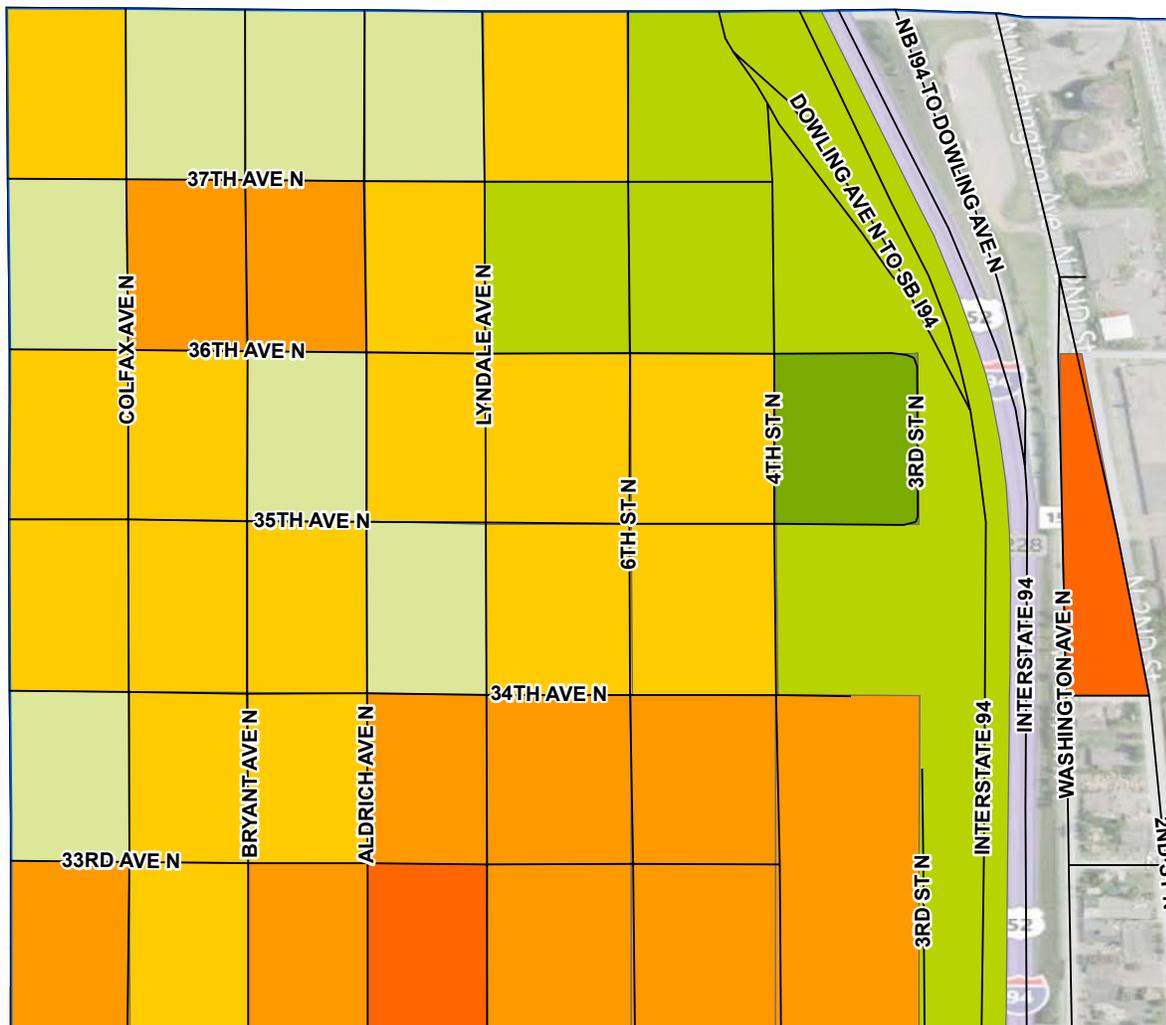
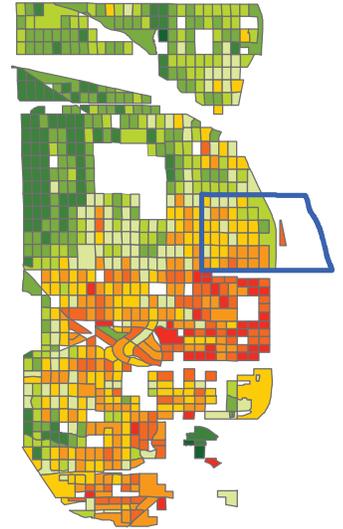
## Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
McKinley	-38%	49%	4.424	10%
North Minneapolis	-37%	56%	4.24	10%

## Housing Market Strength



## North Minneapolis

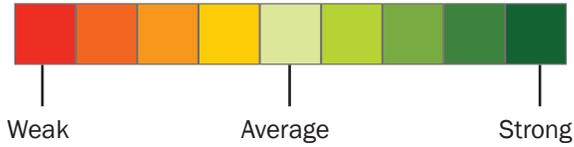


# Near-North

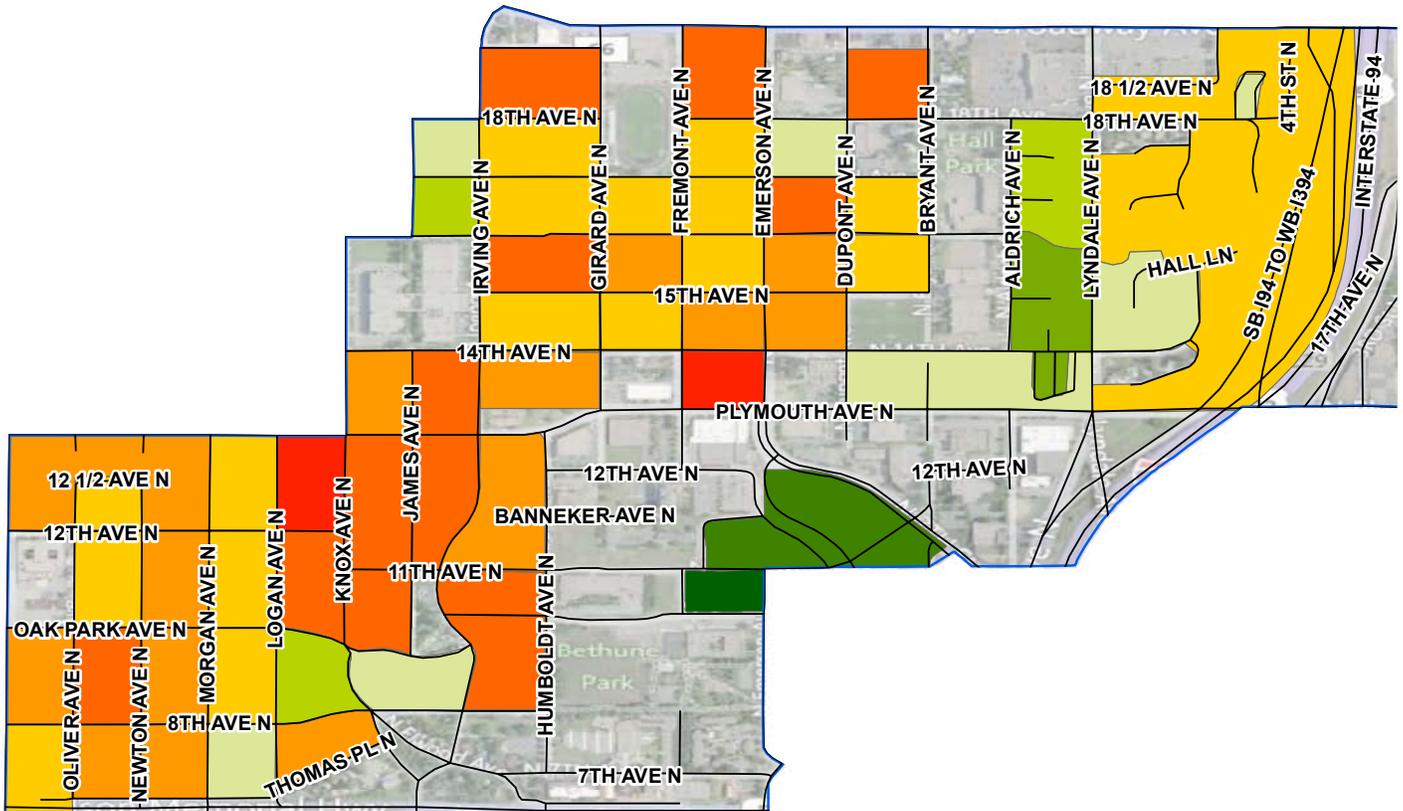
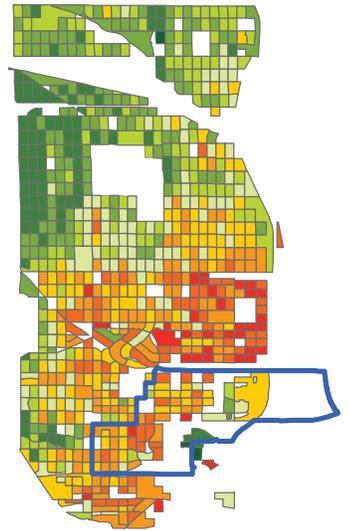
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Near - North	-43%	32%	4.300	8%
North Minneapolis	-37%	56%	4.24	10%

Housing Market Strength



North Minneapolis



# Shingle Creek

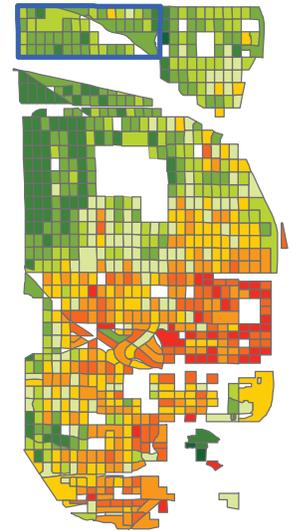
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Shingle Creek	-34%	83%	4.029	6%
North Minneapolis	-37%	56%	4.24	10%

Housing Market Strength



North Minneapolis

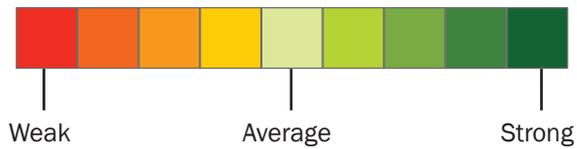


# Victory

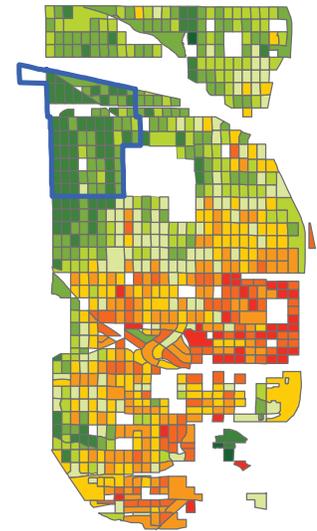
## Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Victory	-28%	84%	3.989	4%
North Minneapolis	-37%	56%	4.24	10%

## Housing Market Strength



## North Minneapolis

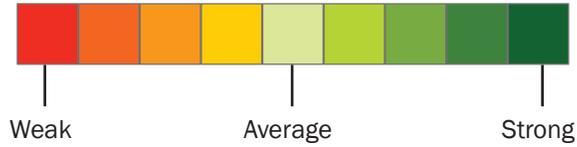


# Webber-Camden

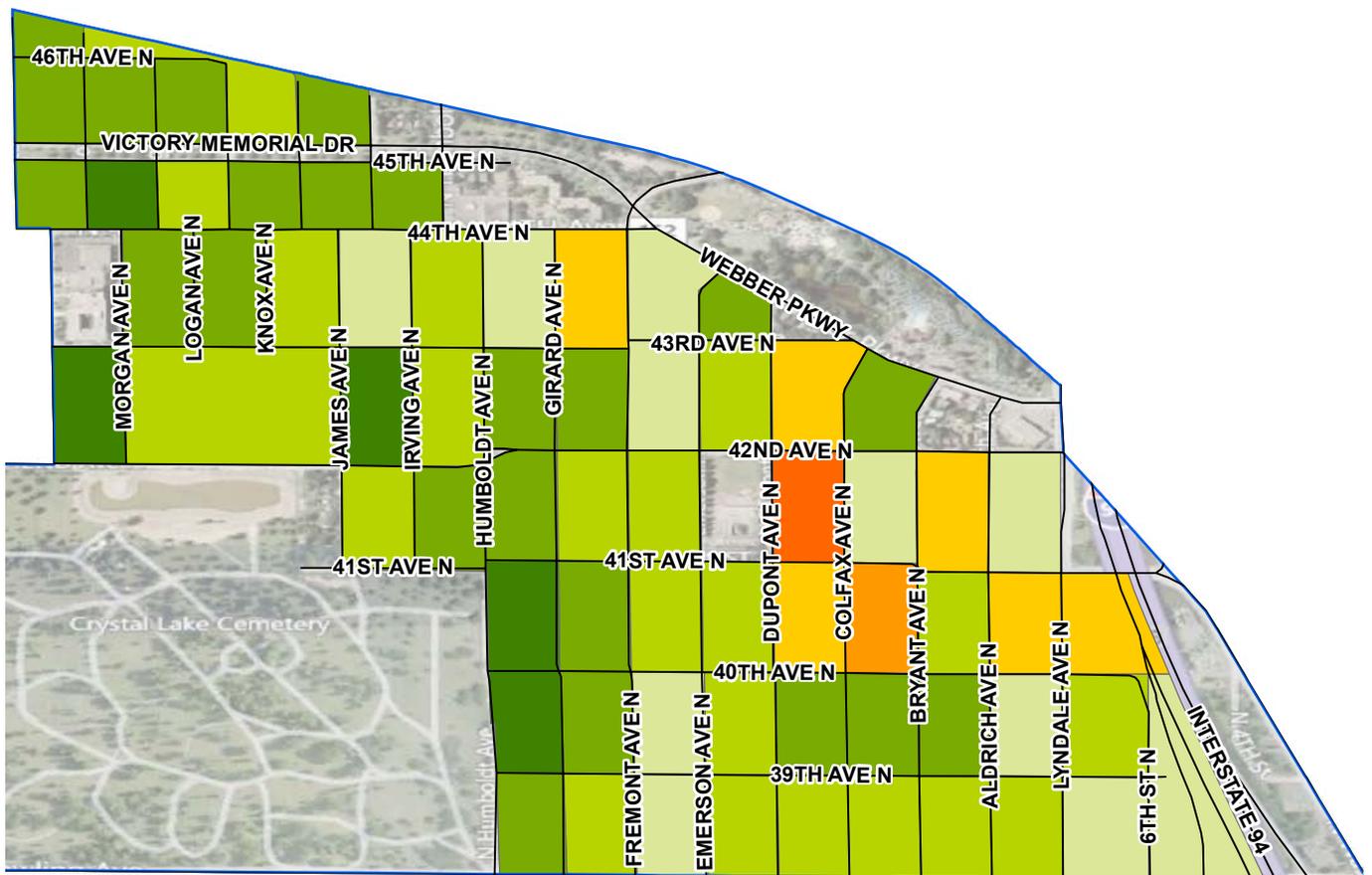
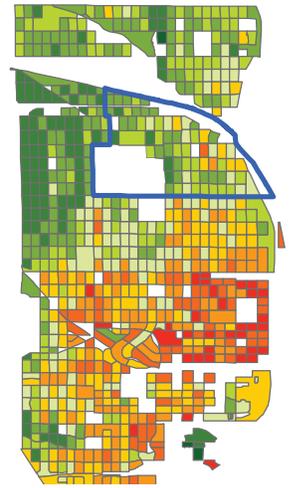
Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Webber - Camden	-31%	57%	4.188	9%
North Minneapolis	-37%	56%	4.24	10%

Housing Market Strength



North Minneapolis

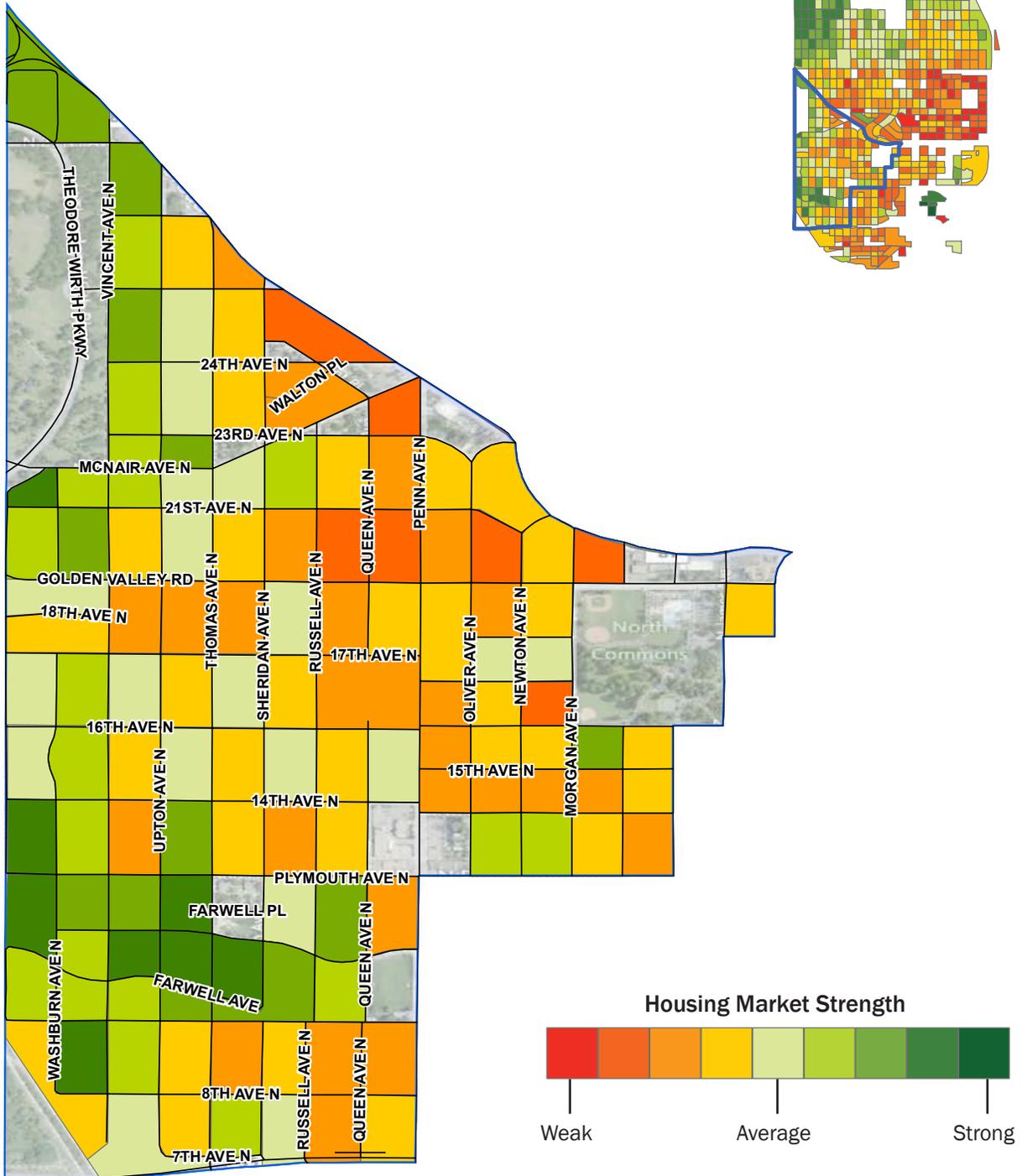


# Willard-Hay

Neighborhood Averages

Neighborhood	Value Retention	Owner-Occupancy	Condition	Vacancy
Willard - Hay	-39%	57%	4.309	9%
North Minneapolis	-37%	56%	4.24	10%

North Minneapolis







# 5.0 Conclusions and Recommendations

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This section provides conclusions regarding housing in north Minneapolis as well as recommendations to improve housing stabilization efforts.

The Conclusions and Recommendations section is broken into two subsections:

- Conclusions
- Recommendations

## 5.1 CONCLUSIONS

### 1. Housing issues in north Minneapolis have many causes.

Conversion of many single-family homes from owner-occupied to rental resulted in significant deterioration of the housing stock and de-stabilized neighborhoods. Too many non-resident investors focus only on profit taking and

are unwilling to improve or maintain their properties. This disinvestment is supported by a large market of people with few housing choices willing or enabled to pay high rental rates for shelter.<sup>1</sup> Regulatory intervention has proven to be the only effective tool to encourage the investor to maintain their property. Moreover, during the latter half of the past decade, mortgage fraud, excessive growth in property values, and easy availability of capital for homeowners exacerbated housing instability.

### 2. The use of more general data sets in recent stabilization efforts has been effective, but significant need remains.

The City of Minneapolis and many nonprofit organizations have worked hard to stabilize housing in north Minneapolis. Together these entities have secured and invested millions of dollars of public and private capital for neighborhood stabilization since 2009.

Despite these investments, a recent housing analysis<sup>2</sup> by the City's Department of Community Planning and Economic Development (CPED) identified housing concerns in north Minneapolis at the close of 2009. Among the issues:

- all but one neighborhood (Victory) had residential properties with above average housing violations;
- only two northside neighborhoods (Victory and Lind - Bohanon) met the city average for buildings on the city's Vacant Building Registry (VBR); the remaining neighborhoods exceeded the average, with two neighborhoods (Jordan and Hawthorne) having the largest number of vacant buildings (many of these buildings were also on the list for the longest period of time); and
- all but one neighborhood (Victory) had foreclosure rates above the city average.

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1 Examples include: recent arrivals without knowledge or connection to responsible owners, operators of illegal drug businesses; or those with criminal histories.

2 Healthy Housing Indicators Analysis; May 2010 presentation to Community Development Committee; Jeff Schneider, Brad Utecht, and Katie White, authors.

Improvement efforts were not sufficiently concentrated or effective to bring about significant change or encourage private investment. Future CPED analysis of housing health during 2010 and 2011 will likely find more damage to northside neighborhoods after the second onslaught of foreclosures, which began in 2010.

### **3. The HMI provides more detailed information for planners and investors.**

Earlier in this report (p. 8), census tract maps show a very weak housing market *throughout* north Minneapolis. Applying the HMI block by block provides a much more detailed view of the area and an entirely different conclusion. Using the HMI's detailed information should increase planning precision and assist all types of investors interested in improving this large and important area of the city.

### **4. North Minneapolis HMI maps clearly indicate opportunities for those interested in improving investment outcomes.**

HMI maps show a large portion of north Minneapolis with housing stock that is stable and/or on the cusp of stability. Nine of north Minneapolis's 12 neighborhoods have homeownership rates of 49% or higher, with four neighborhoods having homeownership rates at, above, or just below the state's 73% rate.<sup>3</sup> Five of these neighborhoods have ownership rates between 49-60%, lower than the state average but within reach of the national average of 66.4%, which is predicted to decline 1-2% in the next few years.<sup>4</sup>

Condition ratings<sup>5</sup> (1 best–7 worst) in the five neighborhoods with homeownership rates at or below 50% range from 4.30 to 4.78, the lowest in north Minneapolis. In some neighborhoods, the opportunity to improve the condition rating is evident: In McKinley, which has an average condition rating of 4.42, 11 blocks rated at or above average in the HMI, and more than half of the remaining blocks are rated only one level below average. Targeted investment in this neighborhood should improve condition ratings as well as other variable scores. In the Near North neighborhood, a low homeownership rate (32%) has not affected the neighborhood's condition rating (4.300) significantly, and like McKinley, a large number of Near North's blocks are only one step away from an average HMI score. In neighborhoods where groups of blocks have average (or just below average) HMI scores, targeted investment to improve property conditions will reward the entire neighborhood with an improved HMI rating.

Two north Minneapolis neighborhoods with low homeownership rates (Harrison at 29% and Hawthorne at 33%) have the worst condition ratings (Harrison at 4.667 and Hawthorne at 4.780). In these neighborhoods, other questions should be asked and opportunities considered, including different land uses and whether a north Minneapolis renaissance could be centered in these areas.

## **5.2 RECOMMENDATIONS**

### **1. City agencies, resident-based organizations, and developers should use HMI data when planning for the future of north Minneapolis.**

The creation of the HMI provides quantitative, block-level data that can provide a framework on which to base development decisions. The HMI's precise and easily understood scores help bridge the information

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3 2010 Census data.

4 Gabriel, Stuart and Stuart Rosenthal, "Where will the homeownership rate go from here?" *Homeownership Boom and Bust 2000-2009*, Research Institute for Housing America Special Report, July 2011.

5 Condition ratings are based on City of Minneapolis Assessor's evaluation of all properties in the city. As indicated in the table on page 11, vacancy rates tend to be lower and owner-occupant ratings tend to be higher in neighborhoods with better condition ratings.

gap and allow residents, city planners, and developers to work together to craft a future in an environment with limited public resources and a need for increased private investment.

The importance of qualitative data remains. However, by its nature, qualitative data is often based on hope, emotion, fear, and/or a sense of loss or disenfranchisement. Coupling the HMI's quantitative data with resident qualitative data should lead to better and more sustainable decisions.

**2. North Minneapolis residents and neighborhood organizations, along with other community partners, need to work together to craft the area's renaissance.**

A future that includes diminished financial resources requires more cooperation among neighborhood organizations, residents, other community partners and the City of Minneapolis. Using HMI data and developing a long-range plan together, along with advocacy efforts to ensure the plan is adopted, should be a high priority. When adopted, plans should be broadly communicated to potential investors.

**3. Private property owners/investors and philanthropic entities should also use the HMI data.**

Nonprofit organizations and banks are large property owners in north Minneapolis. These organizations should use HMI data to develop long-range investment and disposition strategies that will help the area tip to stability as soon as possible. Private and public bankers, especially those with large REO portfolios, should use HMI data to help determine where further REO investment may be equal to or greater than holding costs and where quick disposition may be more affordable and realistic given the property location and/or long-range plans for the area. Philanthropic foundations should also use HMI data to guide their investment decisions. In all cases, selection of areas for investment based on data should result in better returns, at a faster pace, and with sustainable and positive results.

**4. The City of Minneapolis should:**

- *Enact policies and city ordinances that incentivize responsible rental ownership.*

The damage from irresponsible and/or non-resident single-family homeowners is clear. The CPED housing indicator analysis mentioned earlier shows an increasing number of non-homesteaded single-family residences in north Minneapolis and the city's highest concentration of residential properties in poor condition in three north Minneapolis neighborhoods.

Increasing responsible rental ownership in north Minneapolis is difficult, but the City's role in this effort is critical. It should implement most of the following new requirements: disclosure of owner identity (e.g., all LLC partners); annual maintenance and safety inspections; proof of insurance at application and application renewal; visible posting of renters rights inside all rental properties; and the inclusion of Crime Free Lease Addendums to all rental property leases.

The City should also reward responsible rental property owners with ordinance-changes that allow three-year (instead of one-year) license renewal at a fixed rate; the city should also publicly identify well-managed and maintained rental properties and the owners.

- *Continue its efforts to increase homeownership by using the HMI to target downpayment assistance in blocks with higher return possibilities.*
- *Encourage redevelopment by creating flexible zoning areas in areas with significant housing deterioration that is also located in close proximity to desired changes in approved long-range plans. ■*





# 6.0 Methodology

This section describes in greater detail the methodology of the Housing Market Index (HMI) developed and used by the Folwell Center for Urban Initiatives (FCUI) to analyze the housing market strength of 12 north Minneapolis neighborhoods and form policy recommendations for long-term housing stabilization.

The Methodology section is broken into four subsections:

- Identifying variables
- Defining “residential” properties
- Determining and standardizing variable scores
- Weighting and combining variables—three approaches

## 6.1 IDENTIFYING VARIABLES

The FCUI project team\* that formed to develop the HMI identified three criteria for potential HMI variables to meet:

- the data must reflect an aspect of the housing market
- the data must be at the parcel or block level
- the data must be obtainable

Four variables emerged as a product of these requirements. They include:

### 1. Value Retention

(April 2011 EMV - Jan 2008 EMV)

Jan 2008 EMV

*EMV average for each block is determined by summing the individual residential EMVs and dividing by the number of residences.*

*Assumption:* Housing values reached their apex in 2007. This variable reflects the ability of residences to retain their market value since the start of the housing market collapse. Furthermore, this variable captures intangible and often undefined drivers of housing market strength, such as access to greenspace and public transportation, perception of safety and crime, etc.

*Data Source: Hennepin County Parcel Data*

\* The project team consisted of representatives from the Folwell Center for Urban Initiatives, the Center for Urban and Regional Affairs, the Federal Reserve Bank of Minneapolis, and the Pohlada Family Foundation.

## 2. Owner-Occupancy

$$\frac{\text{Total owner-occupants units (Owned with a mortgage + Owned free and clear)}}{\text{Total Units}}$$

*Assumption:* While all residents seek to live in stable areas, owner-occupants are more likely to invest in the stability and long-term health of their neighborhood because they have the most to gain (and lose), as houses are frequently their largest investments.

*Data Source:* 2010 U.S. Census SF1 File (Table H4)

## 3. Housing Condition

$$\frac{\text{Sum of residences' 1-7 ratings of housing condition}}{\text{Number of residences}}$$

*Assumption:* A block full of houses that are structurally sound and well-maintained indicates investment in the block. If the housing stock on the block maintains a relatively high rating, then the structures—and entire block—will be more attractive to potential buyers.

*Data Source:* City of Minneapolis Assessor's Office

### Condition

- 1 - Excellent
- 2 - Good
- 3 - Average Plus
- 4 - Average
- 5 - Average Minus
- 6 - Fair
- 7 - Poor

## 4. Vacancy

$$\frac{\text{Vacant residences}}{\text{Total residences}}$$

*Assumption:* Although the presence of a couple of vacant residences on a block is not necessarily detrimental to a block's livability, too many vacant houses may attract crime (fewer eyes on the street) and structural and landscaping neglect. This may diminish the appeal of houses on the block that are actively for sale.

*Data Source:* USPS parcel data

## 6.2 DEFINING "RESIDENTIAL" PROPERTIES

The HMI analyzes only those properties that are private residences, excluding apartment buildings. Commercial, governmental, industrial and other building types not residential in nature were excluded. The HMI uses parcel data made available by Hennepin County, which has several property classifications that meet the HMI's private residential description. The property use classifications include:

- Condominium (375)
- Double Bungalow (1678)
- Residential (15,294)
- Townhouse (103)
- Triplex (86)

North Minneapolis contains approximately 17,500 residential properties, with the total of each classification indicated in parentheses above.

### 6.3 DETERMINING AND STANDARDIZING VARIABLE SCORES

Using the formulas stated in 6.1 IDENTIFYING VARIABLES and the data associated with the residential properties identified in 6.2 DEFINING “RESIDENTIAL” PROPERTIES, the HMI calculates the block-level score for each of the four variables. To avoid outliers and overly skewed results, the HMI calculates scores only for blocks with eight or more residential units; the average block in north Minneapolis contains 22 residential units.

After calculating each variable’s block-level average, each variable goes through a z-score transformation, in which each block-level variable is given a new score based on the mean and standard deviation of the same variable for all of north Minneapolis. (Doing this enables the HMI to combine multiple variables into a broader index.) The result of this z-score transformation is a new figure for each variable that reflects the level of disparity between each block and the north Minneapolis average—specifically, the number of standard deviations each block is away from zero.

This is what the variable scores look like on a sample block before and after the z-score transformation:

Block ID	Value Retention	Owner-Occupancy	Condition	Vacancy	
270531008004005	-32%	78%	4.44	7%	
270531008004005	0.694	0.776	-0.544	-0.255	← z-scores
North Minneapolis Avg	-37%	54%	4.24	10%	

This block’s -32% Value Retention is 0.694 standard deviations better than the average for north Minneapolis (-37%), which is represented as 0 in a z-score transformation.

The higher the Condition score, the worse the condition. This block has a 4.44 condition score, which is -0.5453 standard deviations below the average for north Minneapolis.

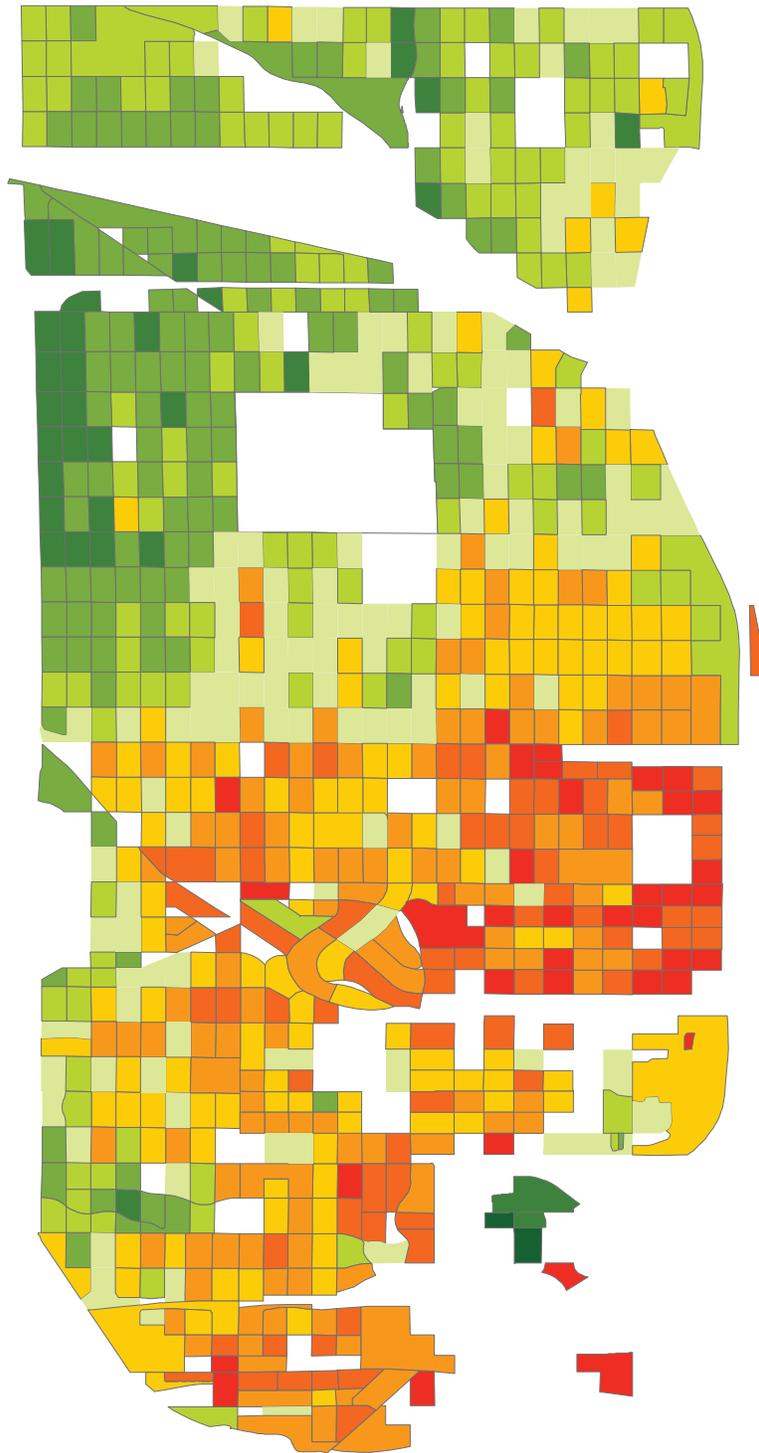
### 6.4 WEIGHTING AND COMBINING VARIABLES

Three weighting models were tested and considered for the HMI — Factor Analysis, Intuitive, and Unweighted — with the Factor Analysis weights ultimately being used. Factor analyses examine the influence variables have on each other and provide a figure that helps quantify their relationships. The Factor Analysis weights used in the HMI are presented below and in section 3.3 STANDARDIZING, COMBINING, AND WEIGHTING VARIABLES. In the Intuitive model, the Value Retention and Owner-Occupancy variables are each multiplied by two, and the Vacancy variable, perceived as a negative, is multiplied by -1. And in the Unweighted model, none of the variables are weighted, though vacancy, still perceived as a negative, is subtracted.

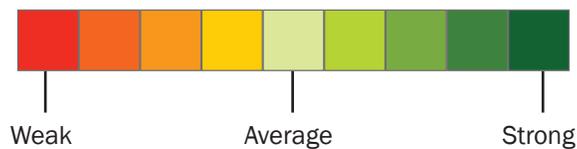
Each block’s four variable z-scores are then weighted and summed to create the final HMI score. A graphic illustrating this process appears in section 3.3 STANDARDIZING, COMBINING, AND WEIGHTING VARIABLES. Although the HMI employs the weights derived through the Factor Analysis model, each of the weights produce similar results, as seen on the following pages. ■

### Factor Analysis Weighted Map of North Minneapolis\*

$$\text{HMI} = (\text{Value Retention} \times 0.31174) + (\text{Owner-Occupancy} \times 0.28837) + (\text{Housing Condition} \times 0.38521) + (\text{Vacancy} \times -0.05223)$$



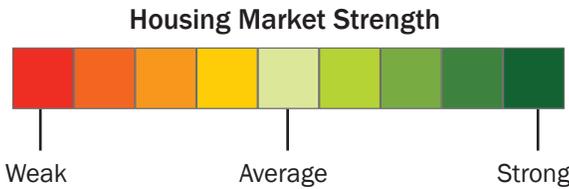
Housing Market Strength



\* Each of the following maps was recalibrated to proportionally fit within the same scale, which enables easy comparison; because of this, the Factor Analysis map deviates to some degree from the map presented in the body of this report.

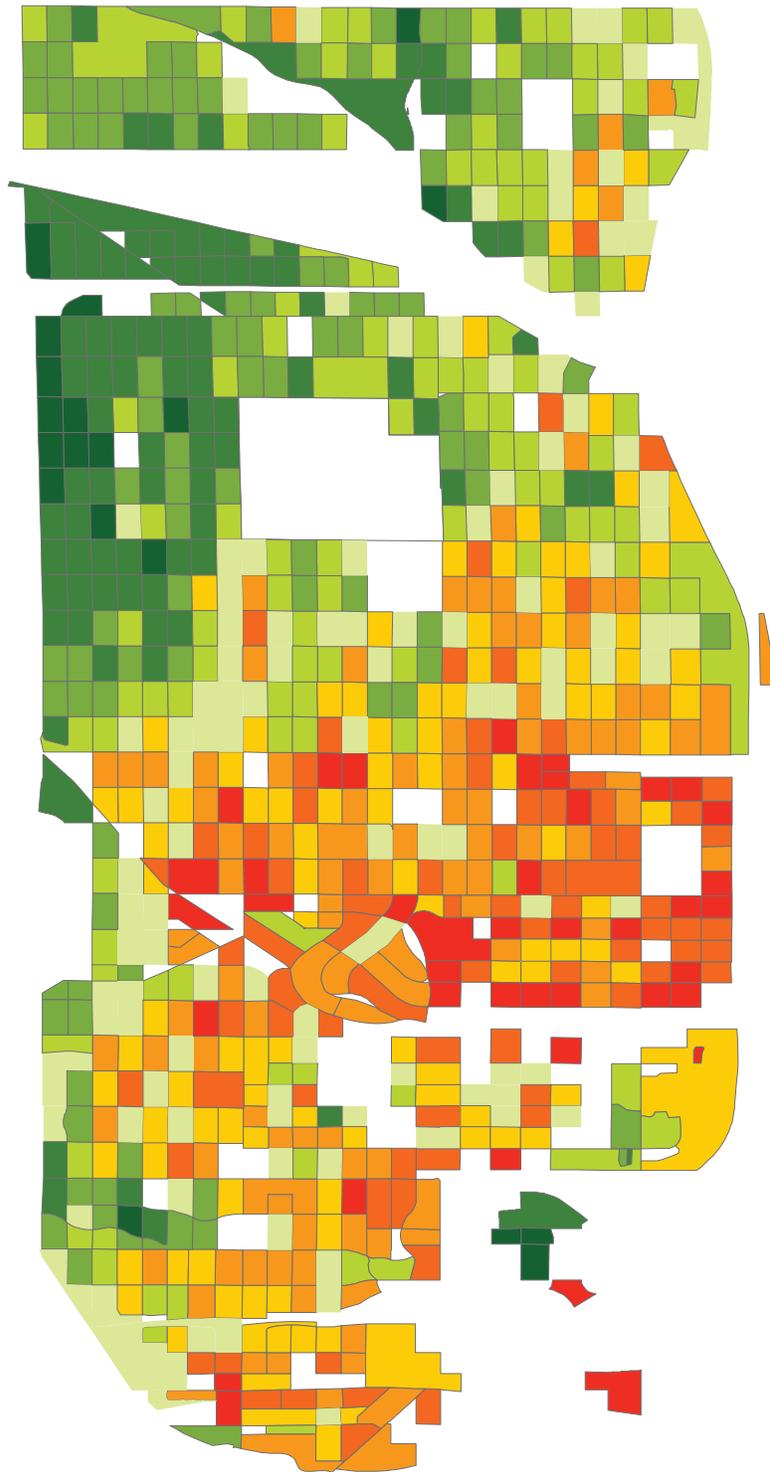
# Intuitively Weighted Map of North Minneapolis

$$\text{HMI} = (\text{Value Retention} \times 2) + (\text{Owner-Occupancy} \times 2) + \text{Housing Condition} - \text{Vacancy}$$

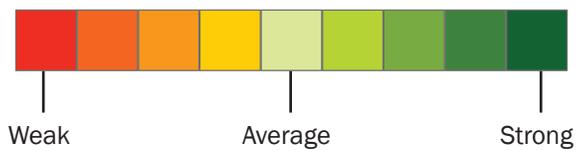


# Unweighted Map of North Minneapolis

$$\text{HMI} = \text{Value Retention} + \text{Owner-Occupancy} + \text{Housing Condition} - \text{Vacancy}$$



Housing Market Strength





# 7.0 Appendix

This section provides additional information and data related to the Housing Market Index.

The Appendix section is broken into two subsections:

- Block-Level Z-Scores
- Variable Maps

## Block-Level Z-Scores

### North Minneapolis

Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531007003011	Cleveland	19	0.885	1.572	0.650	-1.149	1.039
270531007004006	Cleveland	20	0.711	-0.888	0.367	-0.546	0.136
270531007001007	Cleveland	21	1.038	-0.589	-0.373	0.000	0.010
270531007001009	Cleveland	22	0.814	1.153	0.040	-0.052	0.604
270531007001008	Cleveland	22	0.743	-0.310	0.162	0.498	0.178
270531007001011	Cleveland	24	1.008	1.287	0.762	-0.646	1.013
270531007004000	Cleveland	24	0.413	-0.102	-0.021	0.360	0.072
270531007002007	Cleveland	25	1.660	0.489	0.650	-0.666	0.944
270531007004002	Cleveland	25	1.450	0.980	0.328	-0.183	0.870
270531007001003	Cleveland	25	1.374	1.443	1.187	-1.149	1.362
270531007002011	Cleveland	25	0.963	1.443	1.187	-0.666	1.209
270531007003009	Cleveland	25	0.875	1.265	-0.317	0.300	0.500
270531007002009	Cleveland	25	0.730	1.055	0.757	0.300	0.808
270531007002010	Cleveland	25	0.649	1.472	0.972	-1.149	1.061
270531007004003	Cleveland	25	0.610	1.117	0.757	-1.149	0.864
270531007003008	Cleveland	25	0.309	0.824	0.005	0.783	0.295
270531007001000	Cleveland	25	0.111	1.214	-0.639	0.300	0.123
270531007001005	Cleveland	26	1.491	0.731	0.753	-0.221	0.977
270531007002006	Cleveland	26	1.350	1.458	0.865	0.244	1.162

Continued . . .

Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531007003001	Cleveland	26	0.625	1.635	1.167	-0.221	1.127
270531007003003	Cleveland	26	0.310	1.472	0.857	-0.684	0.887
270531007002000	Cleveland	27	1.407	1.496	0.252	-0.255	0.980
270531007002001	Cleveland	27	1.190	1.635	1.147	-0.255	1.298
270531007002004	Cleveland	27	1.168	1.376	0.948	-0.255	1.139
270531007002003	Cleveland	27	1.070	1.799	1.147	-0.703	1.331
270531007003000	Cleveland	27	0.686	0.889	0.551	-1.149	0.742
270531007001010	Cleveland	27	0.629	1.193	0.451	-1.149	0.774
270531007001006	Cleveland	27	0.570	0.197	-0.146	1.087	0.122
270531007004001	Cleveland	27	0.381	1.287	0.252	0.192	0.577
270531007004004	Cleveland	27	0.263	0.738	0.451	-0.255	0.482
270531007004005	Cleveland	27	0.260	1.287	0.650	0.192	0.693
270531007001004	Cleveland	28	1.302	1.344	0.554	-0.287	1.022
270531007002005	Cleveland	28	1.045	1.648	0.458	-1.149	1.037
270531007003010	Cleveland	28	0.650	0.392	0.074	-0.718	0.382
270531007003005	Cleveland	28	0.462	1.214	0.650	-0.287	0.760
270531007003002	Cleveland	28	0.434	1.635	0.842	0.144	0.924
270531007003004	Cleveland	28	0.211	1.344	0.746	-0.718	0.778
270531007002002	Cleveland	29	1.608	1.472	1.113	-0.733	1.393
270531007001001	Cleveland	29	1.141	1.093	0.928	-1.149	1.088
270531007002008	Cleveland	29	0.813	0.629	0.557	0.099	0.644
270531007003006	Cleveland	29	0.729	1.360	0.743	0.099	0.900
270531007003007	Cleveland	29	0.552	0.844	0.280	-0.316	0.539
270531007004008	Cleveland	29	-0.000	0.325	-0.554	0.933	-0.168
270531007004007	Cleveland	30	-0.248	1.472	-0.156	0.460	0.263
270531007001002	Cleveland	31	1.332	0.707	0.910	-0.759	1.009
270531008004011	Folwell	17	0.253	-1.710	-1.562	0.271	-1.030
270531008003011	Folwell	17	-0.607	-0.330	-0.614	-0.439	-0.498
270531008002012	Folwell	20	-0.417	0.298	0.381	-1.149	0.163
270531009005004	Folwell	20	-0.461	-1.144	-0.559	-0.546	-0.660
270531008003004	Folwell	21	-0.244	-0.825	0.906	-0.575	0.065
270531009005013	Folwell	21	-0.614	-0.077	0.010	-0.575	-0.180
270531009005017	Folwell	22	-0.239	-0.102	-0.815	0.498	-0.444
270531009005015	Folwell	22	-0.472	-0.062	-0.571	2.144	-0.497
270531008002010	Folwell	22	-0.955	-0.248	-0.327	-0.052	-0.492
270531008002001	Folwell	23	0.328	1.317	0.650	-0.624	0.765
270531009005001	Folwell	23	0.312	0.683	-0.518	1.476	0.017
270531008002014	Folwell	23	-0.653	0.310	0.416	-0.624	0.079
270531008003009	Folwell	23	-0.751	1.055	0.183	-0.624	0.173
270531008001000	Folwell	24	0.516	-0.992	0.986	0.864	0.209
270531009005014	Folwell	24	0.347	-0.021	0.314	0.360	0.204
270531008002006	Folwell	24	-0.041	1.214	0.762	-1.149	0.691
270531008003008	Folwell	24	-0.206	-1.035	-0.357	2.373	-0.624
270531009005002	Folwell	25	-0.336	-0.888	-0.747	1.266	-0.715
270531008003010	Folwell	25	-0.492	0.496	0.435	-0.666	0.192
270531008002013	Folwell	25	-0.500	0.776	0.543	1.266	0.211
270531009005012	Folwell	25	-0.552	-0.760	-0.962	-0.183	-0.752

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531008002009	Folwell	26	0.037	0.161	-0.073	1.173	-0.031
270531009005007	Folwell	26	-0.232	-0.888	-0.486	0.244	-0.528
270531008004005	Folwell	27	0.694	0.776	-0.544	-0.255	0.244
270531009005000	Folwell	27	0.484	0.325	-0.444	-1.149	0.133
270531008002007	Folwell	27	0.320	1.055	1.346	-0.255	0.936
270531008004007	Folwell	27	0.031	-0.159	0.443	-0.703	0.171
270531009005008	Folwell	27	0.001	-0.319	-0.643	0.192	-0.349
270531008001003	Folwell	27	-0.107	1.517	0.551	-0.703	0.653
270531009005010	Folwell	27	-0.233	-0.090	-0.444	2.429	-0.397
270531008003007	Folwell	27	-0.297	0.629	-0.146	0.639	-0.001
270531008003003	Folwell	27	-0.402	0.197	0.053	1.534	-0.128
270531009005009	Folwell	27	-0.497	-0.248	-0.842	-0.255	-0.538
270531008002004	Folwell	27	-0.545	0.605	0.053	1.534	-0.055
270531008002005	Folwell	27	-0.633	0.161	0.352	0.639	-0.049
270531008004006	Folwell	28	0.434	0.697	0.746	-0.718	0.661
270531008004003	Folwell	28	0.424	0.670	-0.309	0.144	0.199
270531008004002	Folwell	28	0.328	1.327	0.362	0.144	0.617
270531008004010	Folwell	28	0.259	0.124	-0.021	0.144	0.101
270531008001007	Folwell	28	0.244	0.310	0.842	-1.149	0.550
270531009005006	Folwell	28	0.041	-0.248	-0.501	1.007	-0.304
270531008001008	Folwell	28	0.014	1.087	-0.021	1.007	0.257
270531008002008	Folwell	28	-0.024	0.496	0.170	1.439	0.126
270531008001002	Folwell	28	-0.056	1.012	-0.021	0.144	0.259
270531009005011	Folwell	28	-0.084	-0.002	-0.789	0.144	-0.338
270531009005005	Folwell	28	-0.142	0.105	-0.405	-0.287	-0.155
270531008002011	Folwell	28	-0.233	0.434	0.266	1.007	0.103
270531009005003	Folwell	28	-0.257	-0.578	-0.021	1.870	-0.353
270531008003006	Folwell	28	-0.386	0.738	0.938	-0.287	0.469
270531008003005	Folwell	28	-0.461	0.571	0.746	-0.287	0.323
270531008002000	Folwell	28	-0.473	-0.345	-0.405	1.870	-0.501
270531008001009	Folwell	28	-0.877	0.653	-0.213	1.007	-0.220
270531008004009	Folwell	29	0.316	0.586	0.650	0.099	0.513
270531008004008	Folwell	29	-0.026	0.382	-0.184	0.099	0.026
270531008003002	Folwell	29	-0.122	0.191	0.187	0.516	0.062
270531008003001	Folwell	29	-0.222	0.434	0.187	-0.733	0.166
270531008004001	Folwell	30	0.444	1.068	0.650	-0.747	0.736
270531008004000	Folwell	30	0.245	1.068	0.650	0.460	0.611
270531008002002	Folwell	30	0.149	0.909	0.650	0.058	0.556
270531008002003	Folwell	30	0.131	0.854	0.381	1.266	0.368
270531008001006	Folwell	30	-0.182	0.283	0.094	0.460	0.037
270531008001005	Folwell	30	-0.257	1.308	0.471	2.071	0.370
270531008001004	Folwell	30	-0.262	0.697	0.023	0.460	0.104
270531008003000	Folwell	30	-0.417	0.817	0.202	-0.344	0.201
270531008004004	Folwell	52	-3.102	0.033	0.702	-0.221	-0.676
270531041001026	Harrison	8	-0.423	0.264	-1.029	0.360	-0.471
270531041001011	Harrison	9	-0.328	-1.905	-0.842	0.192	-0.986
270531041002009	Harrison	9	-0.432	0.571	-1.141	0.192	-0.420

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531041002026	Harrison	9	-0.603	-0.540	-1.141	-1.149	-0.723
270531041002010	Harrison	9	-0.766	0.683	0.352	-1.149	0.154
270531041002027	Harrison	9	-1.153	0.434	-2.633	0.192	-1.258
270531041001022	Harrison	10	0.188	-0.090	-1.230	0.058	-0.444
270531041002020	Harrison	10	-0.571	-1.476	-2.842	0.058	-1.701
270531041001014	Harrison	10	-1.168	1.287	-0.962	-1.149	-0.303
270531041002033	Harrison	11	0.301	-0.504	-1.792	-0.052	-0.739
270531041001013	Harrison	11	-1.325	-0.735	-1.059	-1.149	-0.973
270531041001017	Harrison	12	0.415	1.390	-0.469	-1.149	0.409
270531041002032	Harrison	12	0.167	-0.657	-1.141	-0.143	-0.570
270531041001009	Harrison	12	-0.154	-0.248	-2.036	-0.143	-0.896
270531041001021	Harrison	12	-0.436	-0.540	-0.021	-1.149	-0.240
270531041002015	Harrison	13	-0.145	-1.234	-0.383	-1.149	-0.488
270531041001025	Harrison	13	-0.201	1.169	-0.796	-1.149	0.028
270531041002011	Harrison	13	-0.718	-0.419	-1.416	0.708	-0.927
270531041002022	Harrison	13	-1.007	-0.930	-1.623	-1.149	-1.147
270531041001032	Harrison	14	-0.186	-1.503	-0.693	-0.287	-0.743
270531041002008	Harrison	14	-0.298	0.161	-0.693	-1.149	-0.253
270531041001005	Harrison	14	-0.650	-1.640	-2.612	-0.287	-1.667
270531041002024	Harrison	14	-1.043	0.008	-1.460	-1.149	-0.826
270531041001008	Harrison	15	-1.354	-1.710	-0.603	-0.344	-1.130
270531041001010	Harrison	16	-0.568	-0.460	-1.868	0.360	-1.048
270531041002017	Harrison	16	-0.831	-0.504	-1.700	-1.149	-0.999
270531041002025	Harrison	16	-1.046	0.044	-0.189	-0.395	-0.366
270531041002007	Harrison	18	-1.022	0.662	-1.290	1.534	-0.705
270531041002023	Harrison	19	-0.271	0.571	-1.471	0.122	-0.493
270531041002021	Harrison	20	-0.595	-0.475	-1.096	-1.149	-0.685
270531041001023	Harrison	21	-0.472	-0.589	-1.396	0.576	-0.885
270531041001024	Harrison	25	-0.333	-0.615	-0.639	-1.149	-0.468
270531041001006	Harrison	26	-0.309	-0.515	-1.313	-0.684	-0.715
270531041002006	Harrison	36	-0.202	0.329	-0.618	-1.149	-0.146
270531041001020	Harrison	43	-0.461	-0.394	-1.224	-1.149	-0.669
270530022001001	Hawthorne	8	-0.907	0.889	-0.693	-1.149	-0.233
270531023001010	Hawthorne	8	-1.072	-2.047	-1.029	0.360	-1.340
270530022001003	Hawthorne	8	-1.401	-0.248	-2.036	0.360	-1.311
270530022001014	Hawthorne	10	-1.295	0.264	-0.156	0.058	-0.391
270530022002004	Hawthorne	11	-1.141	0.571	-1.059	-1.149	-0.539
270531016001012	Hawthorne	11	-1.344	-0.930	-1.792	-0.052	-1.375
270531016001014	Hawthorne	12	-0.656	-0.930	-2.036	0.864	-1.302
270530022002007	Hawthorne	12	-0.668	-1.359	-0.245	-0.143	-0.687
270530022001007	Hawthorne	12	-0.981	-0.833	-1.364	-1.149	-1.012
270531023001009	Hawthorne	12	-1.153	-0.930	-1.141	-0.143	-1.060
270530022002008	Hawthorne	12	-1.249	-1.158	-1.364	-0.143	-1.241
270530022001002	Hawthorne	12	-1.522	0.224	-0.469	-1.149	-0.530
270531016002004	Hawthorne	12	-1.565	-0.760	-2.484	1.870	-1.761
270530022002005	Hawthorne	12	-2.103	-0.434	-1.364	1.870	-1.404
270531016002014	Hawthorne	13	-0.430	-0.368	-0.590	-0.221	-0.456

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530022001004	Hawthorne	13	-0.893	-0.248	0.857	-1.149	0.040
270531016002010	Hawthorne	13	-1.031	-0.540	-2.036	-1.149	-1.202
270531016002012	Hawthorne	13	-1.858	-0.248	-3.482	-0.221	-1.981
270531016002011	Hawthorne	13	-1.919	-0.504	-2.243	0.708	-1.644
270530022002001	Hawthorne	14	-0.747	0.434	-0.885	-0.287	-0.433
270530022001013	Hawthorne	14	-0.798	0.520	-0.309	0.576	-0.248
270530022001012	Hawthorne	14	-1.022	0.854	-1.269	-1.149	-0.501
270530022001008	Hawthorne	14	-1.787	-2.068	-1.844	1.439	-1.939
270531023001015	Hawthorne	14	-1.790	-0.090	-0.796	0.576	-0.921
270531023001016	Hawthorne	14	-2.359	-1.385	-1.652	0.576	-1.802
270531023001011	Hawthorne	15	-1.049	-1.551	-2.752	-0.344	-1.816
270530022002003	Hawthorne	15	-1.226	-0.850	-2.215	-0.344	-1.463
270530022001005	Hawthorne	15	-1.348	-0.504	-1.857	-0.344	-1.263
270530022001009	Hawthorne	15	-1.435	-0.368	-2.394	0.460	-1.500
270530022001011	Hawthorne	15	-1.600	-1.203	-1.320	-0.344	-1.336
270531016002008	Hawthorne	15	-1.667	0.434	-3.110	0.460	-1.617
270530022002002	Hawthorne	15	-1.748	0.629	-1.141	0.460	-0.827
270530022002006	Hawthorne	15	-1.752	-0.930	-2.573	-0.344	-1.788
270530022001006	Hawthorne	15	-1.844	-0.405	-2.036	1.266	-1.542
270530022001000	Hawthorne	15	-1.912	-0.504	-2.036	-1.149	-1.466
270531016001016	Hawthorne	15	-1.981	-1.350	-2.394	0.460	-1.953
270531023001014	Hawthorne	16	-1.630	-0.930	-0.525	0.360	-0.998
270531023001012	Hawthorne	16	-1.724	-0.111	-2.707	1.115	-1.671
270530022002000	Hawthorne	16	-1.808	0.161	-1.700	0.360	-1.191
270531016001015	Hawthorne	17	-1.094	0.264	-1.562	0.271	-0.881
270531016002013	Hawthorne	17	-1.160	-0.930	-2.194	-1.149	-1.415
270531016002005	Hawthorne	17	-2.272	-1.730	-2.352	0.982	-2.165
270531023001013	Hawthorne	17	-2.809	-0.760	-2.752	0.271	-2.169
270531016002009	Hawthorne	18	-1.398	-0.248	-2.185	0.192	-1.359
270531016001013	Hawthorne	19	-1.291	-1.178	-2.177	0.757	-1.621
270530022002009	Hawthorne	19	-2.140	-0.248	-2.334	0.122	-1.644
270531016003006	Hawthorne	20	-1.125	-1.272	-2.573	0.058	-1.712
270531016003002	Hawthorne	20	-1.405	-0.760	-1.902	0.058	-1.393
270531023001008	Hawthorne	21	-2.075	-0.992	-2.036	-1.149	-1.657
270531016003008	Hawthorne	22	-0.594	-0.446	-1.181	1.046	-0.823
270531016003001	Hawthorne	23	-0.977	-0.248	-1.452	0.951	-0.985
270531016003005	Hawthorne	23	-1.436	-0.657	-1.219	-1.149	-1.047
270531016002015	Hawthorne	24	-1.073	-0.735	-0.693	-0.646	-0.780
270531016003007	Hawthorne	24	-1.213	-0.657	-1.476	-0.143	-1.129
270531016002006	Hawthorne	24	-1.732	-0.515	-1.802	-0.646	-1.349
270531016002016	Hawthorne	26	-1.015	-0.384	-1.313	0.708	-0.970
270531016002007	Hawthorne	26	-1.335	-0.883	-1.416	-0.684	-1.181
270531016003004	Hawthorne	27	-1.003	-0.248	-0.643	-0.703	-0.595
270531016003003	Hawthorne	28	-0.824	-0.540	-0.117	0.144	-0.465
270531016002017	Hawthorne	28	-2.109	-0.821	-1.748	0.576	-1.598
270531021001002	Jordan	8	-1.018	-0.930	-2.036	0.360	-1.389
270531021001010	Jordan	8	-1.782	-0.248	-1.029	3.379	-1.200

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531021003005	Jordan	9	-0.221	0.161	-0.245	0.192	-0.127
270531013002010	Jordan	9	-1.520	0.434	-1.738	0.192	-1.028
270531021001011	Jordan	10	0.354	-0.657	-2.036	2.474	-0.993
270531021002009	Jordan	11	-0.056	0.264	-0.815	1.046	-0.310
270531021001008	Jordan	11	-0.198	0.571	-2.524	-1.149	-0.809
270531021001009	Jordan	11	-0.348	-0.589	-2.280	-0.052	-1.154
270531021003002	Jordan	11	-0.463	0.264	0.894	2.144	0.164
270531021001003	Jordan	12	0.149	-0.434	0.202	0.864	-0.046
270531021003010	Jordan	12	-0.649	-0.062	-0.693	0.864	-0.532
270531021001007	Jordan	13	-0.249	-0.021	-0.796	0.708	-0.427
270531257003007	Jordan	13	-0.839	-1.272	-0.383	-0.221	-0.764
270531021001000	Jordan	13	-1.245	0.044	-0.383	1.638	-0.608
270531021001001	Jordan	14	0.637	-1.203	-1.269	-0.287	-0.622
270531257003000	Jordan	14	-0.878	0.434	-1.077	-1.149	-0.503
270531021001006	Jordan	16	-1.855	-1.067	-2.204	1.115	-1.793
270531257003001	Jordan	16	-2.048	0.776	-1.029	1.115	-0.869
270531013001000	Jordan	18	0.407	-1.203	-0.298	-0.478	-0.310
270531021003000	Jordan	18	-1.061	-0.021	0.501	4.889	-0.399
270531021001013	Jordan	18	-2.732	-1.158	-2.185	2.876	-2.177
270531013001008	Jordan	20	-0.656	-0.021	-0.559	-0.546	-0.397
270531021001004	Jordan	20	-1.889	-1.573	-1.230	1.266	-1.582
270531021003001	Jordan	21	-0.539	-1.024	-0.245	1.726	-0.648
270531257002004	Jordan	21	-1.743	-0.434	-0.757	1.151	-1.020
270531013001002	Jordan	23	-0.656	0.197	-0.284	-1.149	-0.197
270531257001004	Jordan	23	-0.664	-1.272	-0.985	-1.149	-0.893
270531257002005	Jordan	23	-1.598	0.075	-2.036	1.476	-1.338
270531257001007	Jordan	24	-0.150	-0.563	-0.245	0.360	-0.323
270531013001003	Jordan	24	-0.197	-0.540	-1.141	0.864	-0.702
270531257001006	Jordan	24	-0.225	-0.760	-1.029	-0.646	-0.652
270531257003019	Jordan	24	-0.565	0.375	0.538	-0.646	0.173
270531021003008	Jordan	24	-0.669	-0.419	-1.476	0.360	-0.917
270531257003002	Jordan	24	-0.764	-0.760	-1.364	-0.143	-0.975
270531257002003	Jordan	24	-0.919	0.124	-0.805	0.864	-0.606
270531257002002	Jordan	24	-1.034	0.239	-0.357	-0.646	-0.357
270531257003003	Jordan	24	-1.123	0.496	-0.805	-0.143	-0.510
270531013001013	Jordan	24	-1.508	-0.735	-1.812	1.870	-1.478
270531013001001	Jordan	25	-0.169	-1.476	-0.424	-0.183	-0.632
270531257001000	Jordan	25	-0.484	0.434	0.005	0.783	-0.064
270531257003012	Jordan	25	-0.630	0.869	-0.102	-0.666	0.050
270531257003008	Jordan	25	-0.686	0.161	-1.284	0.783	-0.703
270531013001005	Jordan	25	-0.797	0.310	-1.284	0.300	-0.669
270531257001002	Jordan	25	-0.808	-0.248	-1.284	3.198	-0.985
270531257003013	Jordan	26	-0.234	0.067	-0.073	-0.221	-0.070
270531013002000	Jordan	26	-0.271	-0.248	-1.416	0.244	-0.714
270531021002006	Jordan	26	-0.468	-0.356	0.237	1.638	-0.243
270531257003017	Jordan	26	-0.618	-0.248	-1.003	0.708	-0.687
270531257003004	Jordan	26	-0.772	0.489	-0.486	1.638	-0.373

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531257003010	Jordan	26	-1.076	-0.394	-1.416	0.708	-1.032
270531013002006	Jordan	26	-1.632	-0.248	-1.106	2.102	-1.116
270531257002000	Jordan	27	0.084	0.731	-0.444	-0.255	0.079
270531257001003	Jordan	27	-0.046	-0.540	-0.743	1.534	-0.536
270531257001011	Jordan	27	-0.152	-0.345	-0.444	0.192	-0.328
270531013001009	Jordan	27	-0.221	0.375	-0.544	0.192	-0.180
270531257001009	Jordan	27	-0.301	-0.077	-0.544	0.192	-0.336
270531257002009	Jordan	27	-0.637	-0.150	-0.942	1.087	-0.661
270531013002007	Jordan	27	-0.901	0.653	-1.240	0.192	-0.580
270531257002010	Jordan	27	-0.905	-0.356	-0.486	0.639	-0.606
270531257003016	Jordan	27	-0.935	-0.062	-0.643	1.534	-0.637
270531257001008	Jordan	27	-0.949	0.124	-0.590	1.534	-0.567
270531257002006	Jordan	27	-1.024	-0.248	-0.942	1.087	-0.810
270531257003018	Jordan	27	-1.085	0.539	-0.345	1.087	-0.372
270531021003004	Jordan	27	-1.656	-0.601	-2.334	1.982	-1.692
270531013002002	Jordan	28	-0.050	0.697	0.170	0.576	0.221
270531257003014	Jordan	28	-0.262	-0.330	-0.789	1.007	-0.533
270531013001004	Jordan	28	-0.286	0.325	-0.789	1.439	-0.374
270531013001011	Jordan	28	-0.312	-0.002	-0.789	-0.287	-0.387
270531013001012	Jordan	28	-0.320	0.889	-0.981	1.870	-0.319
270531257003015	Jordan	28	-0.384	0.483	-0.693	-0.287	-0.232
270531013002003	Jordan	28	-0.430	0.434	-0.309	1.007	-0.180
270531257002007	Jordan	28	-0.492	0.264	-0.501	-0.287	-0.255
270531257002008	Jordan	28	-0.649	0.161	-0.789	0.576	-0.490
270531257003011	Jordan	28	-1.052	-0.627	-1.460	-1.149	-1.011
270531013001010	Jordan	29	0.462	0.697	0.002	0.516	0.319
270531257002001	Jordan	29	-0.152	0.946	-0.739	1.766	-0.151
270531257001001	Jordan	29	-0.259	-0.248	-0.647	4.264	-0.624
270531257001010	Jordan	29	-0.671	0.375	-0.184	1.766	-0.264
270531013002001	Jordan	29	-0.999	-0.248	-0.276	1.349	-0.560
270531021003009	Jordan	30	-1.079	-0.515	-1.499	0.058	-1.065
270531021002002	Jordan	33	-0.713	-0.306	-0.815	-0.052	-0.622
270531021002001	Jordan	35	-0.558	0.478	0.036	-0.114	-0.016
270531021002007	Jordan	36	-1.575	0.113	-0.320	0.528	-0.609
270531021003006	Jordan	38	0.018	0.329	1.569	0.757	0.665
270531021002005	Jordan	38	-1.285	-0.062	-1.258	1.393	-0.976
270531021002004	Jordan	44	-0.690	-0.288	-0.937	-0.052	-0.656
270530001021004	Lind - Bohanon	12	-0.377	1.344	0.874	-0.143	0.614
270530001022016	Lind - Bohanon	13	0.969	-1.448	-0.383	-1.149	-0.203
270530001024006	Lind - Bohanon	14	2.301	1.799	3.336	3.163	2.356
270530001021024	Lind - Bohanon	14	0.462	-0.248	0.202	1.439	0.075
270530001021023	Lind - Bohanon	18	0.171	-1.794	0.352	-1.149	-0.269
270530001025004	Lind - Bohanon	19	0.339	1.031	1.074	-1.149	0.877
270530001021012	Lind - Bohanon	20	0.308	1.572	1.993	0.662	1.282
270530001021014	Lind - Bohanon	20	0.035	1.019	-0.021	0.058	0.294
270530001024010	Lind - Bohanon	20	-0.133	1.390	0.784	-1.149	0.722
270530001024009	Lind - Bohanon	20	-0.225	-0.248	0.247	-1.149	0.014

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530001022005	Lind - Bohanon	21	0.953	1.214	0.522	-1.149	0.908
270530001022011	Lind - Bohanon	21	0.688	0.496	0.266	0.576	0.430
270530001024004	Lind - Bohanon	21	0.157	1.019	0.522	-0.575	0.574
270530001023005	Lind - Bohanon	21	-0.209	0.824	0.394	-0.575	0.355
270530001024003	Lind - Bohanon	22	0.379	1.584	0.528	-0.600	0.810
270530001025013	Lind - Bohanon	22	0.060	0.553	0.406	-1.149	0.394
270530001024012	Lind - Bohanon	22	-0.033	0.264	0.528	2.693	0.129
270530001022002	Lind - Bohanon	23	0.675	0.434	-0.635	0.951	0.042
270530001025011	Lind - Bohanon	23	0.533	1.621	0.183	0.425	0.682
270530001023009	Lind - Bohanon	23	0.488	1.427	0.884	-0.624	0.937
270530001023006	Lind - Bohanon	23	0.425	0.629	0.416	-0.099	0.480
270530001025001	Lind - Bohanon	23	0.160	0.571	0.650	1.476	0.388
270530001024001	Lind - Bohanon	23	0.012	1.409	0.533	0.425	0.593
270530001025012	Lind - Bohanon	24	0.385	1.087	0.650	-0.143	0.691
270530001021011	Lind - Bohanon	24	0.358	1.427	0.762	0.864	0.771
270530001023010	Lind - Bohanon	24	0.340	1.117	0.762	1.366	0.650
270530001024011	Lind - Bohanon	24	0.042	1.287	0.762	-0.646	0.712
270530001024000	Lind - Bohanon	24	-0.065	1.799	0.762	1.870	0.694
270530001021003	Lind - Bohanon	24	-0.430	1.613	1.322	1.870	0.743
270530001025014	Lind - Bohanon	25	0.542	1.087	1.080	1.266	0.832
270530001021007	Lind - Bohanon	25	0.350	0.496	0.220	-0.666	0.372
270530001025015	Lind - Bohanon	25	0.320	0.605	0.757	0.300	0.550
270530001021008	Lind - Bohanon	25	0.256	0.946	0.328	1.266	0.413
270530001025005	Lind - Bohanon	25	0.159	0.776	0.543	0.300	0.466
270530001025000	Lind - Bohanon	25	-0.012	0.980	0.220	0.300	0.348
270530001021013	Lind - Bohanon	25	-0.306	1.012	-0.102	1.749	0.066
270530001022000	Lind - Bohanon	26	0.247	0.653	0.030	0.244	0.264
270530001025002	Lind - Bohanon	26	0.079	1.443	0.237	0.708	0.495
270530001024008	Lind - Bohanon	26	0.045	0.776	1.167	-0.684	0.723
270530001022001	Lind - Bohanon	26	0.035	-0.620	-0.176	2.102	-0.346
270530001025003	Lind - Bohanon	26	0.012	0.697	0.443	-0.221	0.387
270530001021010	Lind - Bohanon	26	-0.126	-0.930	0.650	1.638	-0.143
270530001024005	Lind - Bohanon	27	1.539	0.382	0.749	-0.703	0.915
270530001022014	Lind - Bohanon	27	1.015	-0.248	0.252	-0.255	0.355
270530001025009	Lind - Bohanon	27	0.318	1.055	0.650	-0.255	0.667
270530001023008	Lind - Bohanon	27	0.196	1.496	2.341	-1.149	1.454
270530001025006	Lind - Bohanon	27	-0.012	1.041	0.948	-0.255	0.675
270530001025008	Lind - Bohanon	27	-0.440	1.484	2.043	-1.149	1.138
270530001022013	Lind - Bohanon	28	1.103	0.731	0.554	0.144	0.761
270530001022003	Lind - Bohanon	28	0.881	0.298	0.266	-0.718	0.501
270530001023014	Lind - Bohanon	28	-0.215	0.854	-0.117	1.007	0.081
270530001022012	Lind - Bohanon	29	1.371	0.434	0.280	0.099	0.655
270530001023001	Lind - Bohanon	29	0.183	0.697	0.465	3.015	0.280
270530001021022	Lind - Bohanon	29	0.165	0.629	0.187	0.933	0.256
270530001021006	Lind - Bohanon	29	0.046	1.068	0.557	0.516	0.510
270530001023013	Lind - Bohanon	29	-0.076	0.387	0.465	0.516	0.240
270530001025007	Lind - Bohanon	29	-0.148	1.484	1.669	0.099	1.020

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530001023000	Lind - Bohanon	29	-0.248	0.889	0.002	0.516	0.153
270530001022004	Lind - Bohanon	30	1.163	0.952	0.829	-0.747	0.995
270530001023011	Lind - Bohanon	30	0.140	0.922	0.650	-0.344	0.578
270530001023002	Lind - Bohanon	30	-0.008	1.214	0.292	0.864	0.415
270530001023003	Lind - Bohanon	30	-0.213	1.344	0.292	0.058	0.431
270530001023004	Lind - Bohanon	30	-0.316	1.376	0.560	-0.344	0.532
270530001023015	Lind - Bohanon	30	-0.344	0.922	-0.335	1.668	-0.058
270530001023012	Lind - Bohanon	31	0.394	0.586	0.563	0.408	0.488
270530001023007	Lind - Bohanon	32	0.079	0.875	1.909	-0.017	1.013
270531009001010	McKinley	9	0.283	-1.067	-1.141	0.192	-0.669
270531009001012	McKinley	12	1.075	-0.806	-2.931	-0.143	-1.019
270531009001016	McKinley	12	-0.562	-0.405	-1.141	-1.149	-0.672
270531009002009	McKinley	20	0.001	-0.405	-0.827	0.058	-0.438
270531009003006	McKinley	21	-0.060	-0.419	-0.117	0.000	-0.185
270531009001017	McKinley	22	0.688	-0.806	-1.059	0.498	-0.452
270531009004008	McKinley	22	-0.165	-0.128	-0.693	0.498	-0.381
270531009002008	McKinley	22	-0.270	-1.410	-1.426	-0.600	-1.008
270531009002000	McKinley	22	-0.577	-0.090	-0.815	-0.052	-0.517
270531009002007	McKinley	22	-0.837	-0.021	-0.693	0.498	-0.560
270531009002006	McKinley	23	-0.683	0.325	-0.284	0.951	-0.278
270531009004009	McKinley	24	0.449	0.869	0.202	-0.143	0.476
270531009004003	McKinley	24	-0.407	-0.021	0.426	0.360	0.013
270531009002003	McKinley	24	-0.409	-0.077	-0.245	-0.143	-0.237
270531009003003	McKinley	24	-0.760	0.571	-0.133	1.870	-0.221
270531009001009	McKinley	25	0.440	1.287	0.328	-0.666	0.670
270531009004002	McKinley	26	0.346	0.869	-0.280	0.244	0.238
270531009002002	McKinley	26	0.064	-0.248	-0.796	-0.684	-0.323
270531009003007	McKinley	26	-0.091	-0.657	-0.486	-1.149	-0.345
270531009002004	McKinley	26	-0.125	0.067	0.133	-0.684	0.068
270531009003002	McKinley	26	-0.165	0.093	-0.176	-0.684	-0.057
270531009003005	McKinley	26	-0.244	0.224	-0.693	-0.684	-0.243
270531009001008	McKinley	26	-0.252	-0.521	-0.383	-0.684	-0.341
270531009002001	McKinley	26	-1.235	-0.248	-0.486	0.244	-0.656
270531009003004	McKinley	27	-0.154	-0.090	-0.743	0.192	-0.370
270531009003001	McKinley	27	-0.163	0.264	-0.444	0.639	-0.179
270531009003008	McKinley	27	-0.202	0.325	-0.146	0.639	-0.059
270531009004007	McKinley	27	-0.375	-0.419	-0.544	0.192	-0.457
270531009004001	McKinley	28	0.140	0.653	-0.213	-0.718	0.187
270531009004006	McKinley	28	-0.424	-0.657	-0.597	1.870	-0.649
270531009002005	McKinley	28	-0.702	-0.540	-0.501	1.870	-0.665
270531009001007	McKinley	29	0.566	0.776	0.094	0.516	0.410
270531009004000	McKinley	29	0.199	-0.248	-1.017	-0.316	-0.385
270531009004004	McKinley	29	-0.010	0.325	-0.647	0.099	-0.163
270531009004005	McKinley	29	-0.024	0.044	0.002	0.933	-0.043
270531009003000	McKinley	29	-0.388	0.434	-0.461	-0.316	-0.157
270531009001018	McKinley	30	-0.022	0.067	-0.514	-0.747	-0.146
270531009003009	McKinley	30	-0.390	0.529	-0.693	-0.344	-0.218

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531009001006	McKinley	38	0.962	0.601	-0.057	0.122	0.445
270531029001015	Near - North	8	0.383	1.287	0.986	-1.149	0.931
270530033002004	Near - North	8	0.133	-1.371	0.314	0.360	-0.252
270530033002006	Near - North	8	-1.199	1.287	-0.693	1.870	-0.367
270531029001029	Near - North	8	-2.579	-1.613	-0.357	0.360	-1.425
270531034001006	Near - North	9	2.922	-1.864	3.933	0.192	1.878
270531029001010	Near - North	9	-0.542	-0.062	-0.245	0.192	-0.291
270531029001003	Near - North	9	-0.781	-1.944	-0.842	0.192	-1.138
270530033002003	Near - North	9	-0.870	-2.295	-1.738	0.192	-1.612
270530033002015	Near - North	9	-1.863	-0.062	-0.842	1.534	-1.003
270530033002016	Near - North	10	-0.496	1.799	-0.424	-1.149	0.261
270531034001010	Near - North	11	7.706	1.507	3.824	-0.052	4.313
270531029001021	Near - North	11	-0.447	-0.620	-0.327	-1.149	-0.384
270531029001020	Near - North	11	-0.503	-0.248	0.894	-0.052	0.119
270531028001009	Near - North	11	-1.259	-1.515	-0.571	-0.052	-1.047
270531029001009	Near - North	12	-0.416	-0.787	-0.021	-1.149	-0.305
270531028001010	Near - North	12	-0.461	-1.551	-0.021	0.864	-0.644
270531029001007	Near - North	12	-0.640	1.427	1.322	-1.149	0.781
270531029001023	Near - North	12	-0.905	0.683	-0.469	-1.149	-0.206
270531029001012	Near - North	12	-0.920	-1.272	-1.141	1.870	-1.191
270531029001018	Near - North	12	-1.057	-1.035	-0.021	1.870	-0.734
270531029001025	Near - North	12	-1.140	0.434	-0.245	-1.149	-0.264
270531029001019	Near - North	12	-1.821	-1.067	-0.693	-0.143	-1.135
270530033001008	Near - North	13	-0.482	-0.111	0.237	-1.149	-0.031
270531029001026	Near - North	13	-1.209	0.008	-0.383	-1.149	-0.462
270530033002014	Near - North	13	-1.458	-0.703	-0.590	-0.221	-0.873
270530033002011	Near - North	14	0.198	-1.016	0.266	-0.287	-0.114
270530033002010	Near - North	14	-0.522	-1.234	-0.117	0.576	-0.594
270530033001009	Near - North	14	-0.745	-1.067	-0.309	-0.287	-0.644
270531029001027	Near - North	14	-1.047	0.539	-0.501	-0.287	-0.349
270531029001006	Near - North	15	-0.275	0.922	0.113	-1.149	0.284
270531028001008	Near - North	15	-0.508	-0.540	-0.424	0.460	-0.502
270531029001022	Near - North	15	-0.688	-0.248	0.471	-0.344	-0.087
270531029001024	Near - North	15	-0.903	0.161	-0.783	-0.344	-0.518
270531028001004	Near - North	15	-1.003	0.889	0.829	-0.344	0.281
270531029001017	Near - North	15	-1.350	-0.021	-0.783	-1.149	-0.668
270531028001003	Near - North	16	-0.477	0.595	0.482	0.360	0.190
270530033002007	Near - North	16	-1.206	-0.657	-1.364	-1.149	-1.031
270530033002008	Near - North	16	-1.598	-0.992	-0.357	-1.149	-0.862
270530033001000	Near - North	17	1.255	-0.248	0.650	0.271	0.556
270531029001013	Near - North	17	0.221	1.344	0.650	-0.439	0.730
270530033002009	Near - North	17	-0.827	-0.356	0.018	-0.439	-0.330
270530033001005	Near - North	18	-0.816	-0.248	-0.245	-0.478	-0.395
270530033001007	Near - North	19	-0.248	-0.609	-1.188	-0.514	-0.684
270530033002001	Near - North	19	-1.600	-1.359	-0.481	0.757	-1.116
270531029001014	Near - North	20	0.289	-0.453	0.650	-0.546	0.238
270531023002017	Near - North	21	-0.752	1.031	0.266	-0.575	0.196

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530033001003	Near - North	21	-1.184	-0.833	-0.885	-0.575	-0.920
270530033001001	Near - North	22	-0.333	-0.002	-0.449	-0.600	-0.246
270530033001006	Near - North	22	-0.867	0.520	-1.059	-0.052	-0.526
270530033002000	Near - North	22	-1.108	-1.385	-0.205	-0.600	-0.793
270530033002002	Near - North	22	-1.271	-1.455	-0.815	0.498	-1.156
270531028001006	Near - North	23	-0.648	-1.365	-0.635	0.425	-0.862
270530033001004	Near - North	25	-0.931	-0.682	-0.532	-0.666	-0.657
270530033001002	Near - North	26	-0.729	-0.248	-0.796	0.708	-0.642
270531028001005	Near - North	26	-0.741	-0.036	-0.280	0.244	-0.362
270531028001002	Near - North	26	-1.291	0.346	-0.383	-0.684	-0.415
270531028001001	Near - North	26	-1.611	-0.679	-1.106	1.173	-1.185
270531028001011	Near - North	27	-0.421	0.224	-0.444	-0.703	-0.201
270530033002005	Near - North	30	-1.142	-0.423	-0.603	0.058	-0.714
270531023002013	Near - North	103	-1.182	-1.302	0.833	-0.915	-0.375
270530001011008	Shingle Creek	12	1.037	0.008	0.874	-1.149	0.722
270530001011009	Shingle Creek	15	0.627	1.799	0.650	-0.344	0.983
270530001013003	Shingle Creek	16	1.099	0.264	0.314	-0.395	0.560
270530001013012	Shingle Creek	16	0.809	1.799	0.292	-0.395	0.904
270530001013013	Shingle Creek	17	1.152	0.889	0.492	0.271	0.791
270530001013014	Shingle Creek	17	0.878	0.889	0.818	-0.439	0.868
270530001011007	Shingle Creek	18	0.179	0.937	0.202	0.192	0.394
270530001011010	Shingle Creek	20	0.556	1.368	0.650	-0.546	0.847
270530001012004	Shingle Creek	20	0.137	0.375	0.919	0.662	0.470
270530001011003	Shingle Creek	20	0.058	1.214	-0.424	-0.546	0.233
270530001011004	Shingle Creek	21	0.413	0.239	0.522	1.151	0.339
270530001013004	Shingle Creek	21	0.397	0.937	0.138	-1.149	0.507
270530001012005	Shingle Creek	21	0.390	1.153	0.394	-0.575	0.636
270530001011005	Shingle Creek	21	-0.341	-0.356	0.266	1.151	-0.167
270530001012001	Shingle Creek	22	0.752	1.368	-0.327	-0.052	0.506
270530001013006	Shingle Creek	22	0.558	1.584	0.650	-0.052	0.884
270530001012009	Shingle Creek	22	0.322	1.604	1.260	0.498	1.023
270530001013005	Shingle Creek	22	-0.026	1.390	0.528	-0.600	0.627
270530001013010	Shingle Creek	23	0.412	1.443	0.650	-1.149	0.855
270530001013008	Shingle Creek	23	0.370	1.443	0.300	-0.624	0.680
270530001011013	Shingle Creek	23	0.199	0.496	0.300	-0.624	0.353
270530001013011	Shingle Creek	24	0.625	1.621	1.098	-0.646	1.119
270530001013007	Shingle Creek	24	0.432	1.427	0.650	-0.143	0.804
270530001012011	Shingle Creek	24	0.423	1.594	0.426	-0.646	0.789
270530001012008	Shingle Creek	24	0.379	1.427	0.533	-1.149	0.795
270530001011011	Shingle Creek	25	0.871	1.265	0.757	0.783	0.887
270530001011012	Shingle Creek	25	0.823	0.776	0.757	-0.183	0.781
270530001014002	Shingle Creek	25	0.355	1.799	0.972	-1.149	1.064
270530001013009	Shingle Creek	25	0.268	1.458	0.543	-0.666	0.748
270530001014005	Shingle Creek	26	0.496	1.144	0.237	-1.149	0.636
270530001014008	Shingle Creek	26	0.443	0.946	-0.280	-0.221	0.315
270530001012003	Shingle Creek	26	0.438	1.117	0.340	-1.149	0.650
270530001011006	Shingle Creek	26	0.435	1.308	0.547	-0.221	0.735

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530001012010	Shingle Creek	26	0.365	1.613	0.547	-0.684	0.825
270530001014006	Shingle Creek	26	0.335	0.854	0.443	-1.149	0.582
270530001014004	Shingle Creek	26	0.207	1.012	0.030	-0.684	0.404
270530001014001	Shingle Creek	26	0.191	1.308	0.443	-0.684	0.643
270530001011000	Shingle Creek	27	0.565	1.327	2.242	-1.149	1.482
270530001011016	Shingle Creek	27	0.442	0.738	2.441	-1.149	1.351
270530001011001	Shingle Creek	27	0.375	1.193	0.352	-1.149	0.656
270530001011002	Shingle Creek	27	0.308	0.909	0.551	-0.255	0.583
270530001014003	Shingle Creek	28	0.149	1.068	0.746	-1.149	0.702
270530001012002	Shingle Creek	29	0.455	1.376	0.094	-0.733	0.613
270530001012007	Shingle Creek	29	0.438	0.817	0.187	0.516	0.417
270530001014007	Shingle Creek	29	0.430	0.811	0.465	-1.149	0.607
270530001014000	Shingle Creek	44	0.050	1.276	0.589	-0.052	0.613
270531034002007	Sumner - Glenwood	10	2.997	-0.540	3.336	0.058	2.061
270531034002013	Sumner - Glenwood	24	-6.899	-2.295	3.336	8.914	-1.993
270531034002011	Sumner - Glenwood	25	4.596	1.368	3.443	1.266	3.088
270531002001031	Victory	9	1.198	1.344	1.247	0.192	1.231
270531002001029	Victory	10	1.306	-0.140	1.187	0.058	0.821
270531002001013	Victory	10	0.874	1.799	0.381	-1.149	0.998
270531002001000	Victory	13	0.985	1.484	0.650	0.708	0.949
270531002001030	Victory	14	1.527	-0.062	0.266	-1.149	0.621
270531002001034	Victory	14	0.795	1.253	0.650	-0.287	0.875
270531002001035	Victory	14	0.730	0.922	1.226	-0.287	0.981
270531002001015	Victory	15	0.768	1.507	1.008	-1.149	1.122
270531002001001	Victory	16	0.916	1.526	0.650	-1.149	1.036
270531002001018	Victory	18	1.447	1.031	0.501	-0.478	0.966
270531002001020	Victory	18	1.260	1.572	0.501	-1.149	1.099
270531002001011	Victory	18	0.974	1.543	0.501	-0.478	0.967
270531002001037	Victory	18	0.907	1.799	1.247	-1.149	1.342
270531002001025	Victory	19	1.214	1.344	1.215	-0.514	1.261
270531002001019	Victory	19	1.175	0.889	0.367	-1.149	0.824
270531002001005	Victory	19	1.145	1.317	0.933	-0.514	1.123
270531002001012	Victory	21	1.282	1.214	0.778	-1.149	1.109
270530003004011	Victory	22	2.010	1.427	1.260	-1.149	1.584
270530003001001	Victory	22	0.913	1.409	0.772	-0.600	1.020
270530003003003	Victory	23	1.977	1.799	1.701	-0.624	1.823
270530003004008	Victory	23	1.736	0.136	-0.051	-0.099	0.566
270530003001011	Victory	23	1.192	0.075	1.000	-0.624	0.811
270530003001000	Victory	23	1.080	0.283	0.884	-0.624	0.791
270531002001002	Victory	23	0.924	1.629	0.533	-1.149	1.023
270530003003008	Victory	23	0.500	-0.697	-0.051	-0.099	-0.060
270530003004010	Victory	24	2.121	1.799	1.098	-1.149	1.663
270530003003002	Victory	24	1.966	1.621	1.098	-1.149	1.563
270530003004003	Victory	24	1.317	1.799	1.098	-1.149	1.412
270531002001016	Victory	24	0.481	1.055	1.322	-1.149	1.023
270530003004004	Victory	26	1.606	1.799	1.476	-0.684	1.624
270530003002009	Victory	26	1.488	1.484	0.340	-0.684	1.059

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270530003003011	Victory	26	1.352	1.458	1.167	-0.684	1.327
270530003004001	Victory	26	1.198	1.214	0.340	-0.684	0.890
270530003004007	Victory	27	2.282	0.298	0.252	-0.703	0.931
270530003003001	Victory	27	1.916	1.507	0.948	-1.149	1.457
270530003004000	Victory	27	1.810	0.611	0.650	-1.149	1.051
270530003002004	Victory	27	1.416	0.952	0.153	-1.149	0.835
270530003003009	Victory	27	1.179	1.496	1.247	-1.149	1.339
270530003003007	Victory	27	0.874	0.346	0.849	-0.703	0.736
270530003001007	Victory	27	0.771	1.193	-0.146	0.639	0.495
270530003004006	Victory	28	1.966	1.214	0.170	-0.287	1.044
270530003004005	Victory	28	1.561	1.799	0.938	0.144	1.359
270530003004002	Victory	28	1.358	1.507	0.938	-0.718	1.257
270530003002010	Victory	28	1.347	1.621	0.170	0.144	0.945
270530003002011	Victory	28	1.312	0.346	0.362	0.144	0.641
270531002001042	Victory	28	1.278	0.586	0.458	0.144	0.736
270531002001041	Victory	28	1.188	1.308	0.842	0.576	1.042
270530003003010	Victory	28	0.943	1.344	1.130	-0.718	1.154
270530003002008	Victory	28	0.902	1.308	0.458	0.576	0.805
270530003002000	Victory	28	0.858	1.234	0.746	-0.718	0.948
270530003001008	Victory	28	0.812	1.093	0.458	-1.149	0.805
270530003002006	Victory	29	1.416	1.234	0.835	-0.316	1.136
270530003003006	Victory	29	1.306	1.360	0.650	-0.733	1.088
270530003001009	Victory	29	1.260	1.484	0.557	-0.316	1.052
270530003002001	Victory	29	1.121	1.496	0.557	-0.316	1.012
270531002001003	Victory	29	0.942	1.327	0.557	-1.149	0.951
270530003002005	Victory	29	0.934	1.169	-0.184	-0.733	0.596
270530003002002	Victory	29	0.907	1.214	0.002	-0.733	0.672
270530003003004	Victory	30	2.122	1.663	1.366	-1.149	1.727
270530003004009	Victory	30	1.650	1.526	0.202	-1.149	1.093
270530003003005	Victory	30	1.495	1.390	0.471	-0.747	1.087
270530003001010	Victory	30	1.354	1.653	0.919	-1.149	1.313
270530003002003	Victory	30	0.866	1.390	0.650	-0.747	0.960
270530003002007	Victory	30	0.814	1.068	0.202	-0.747	0.679
270531002001040	Victory	30	0.711	1.234	0.292	-0.747	0.729
270530003001006	Victory	31	1.352	1.526	0.737	-1.149	1.205
270530003001005	Victory	31	1.206	1.648	0.823	-0.370	1.188
270530003001003	Victory	32	1.203	1.799	0.818	-0.771	1.249
270531002001039	Victory	32	1.118	0.361	-0.273	-0.771	0.388
270530003001004	Victory	34	1.468	0.844	0.334	-0.439	0.852
270530003001002	Victory	34	1.117	1.675	0.650	-0.794	1.123
270531002001008	Victory	37	1.607	1.551	1.322	-1.149	1.517
270531002001009	Victory	39	1.224	1.344	1.201	-0.840	1.276
270531002001010	Victory	42	1.039	1.214	1.034	-0.575	1.102
270531002002005	Webber - Camden	8	1.130	1.214	-0.021	-1.149	0.754
270531004001008	Webber - Camden	8	0.831	-1.371	-0.021	3.379	-0.321
270531004001010	Webber - Camden	10	1.446	-0.930	0.113	1.266	0.160
270531002003003	Webber - Camden	11	0.867	-0.356	1.871	-1.149	0.949

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531004001004	Webber - Camden	12	0.833	-0.405	-0.021	-1.149	0.195
270531002002001	Webber - Camden	12	0.695	1.077	0.874	0.864	0.819
270531004003011	Webber - Camden	12	0.626	0.571	-0.693	3.883	-0.110
270531004003014	Webber - Camden	14	0.733	0.161	0.074	-0.287	0.319
270531002002014	Webber - Camden	15	0.751	0.836	1.008	-0.344	0.881
270531002002016	Webber - Camden	15	-0.141	0.629	0.829	0.460	0.433
270531002002018	Webber - Camden	16	0.943	0.354	0.818	0.360	0.692
270531002002015	Webber - Camden	16	0.581	0.980	0.482	-0.395	0.670
270531002002017	Webber - Camden	17	1.010	0.291	1.598	-1.149	1.074
270531002002013	Webber - Camden	17	0.672	1.317	0.808	0.271	0.887
270531004003001	Webber - Camden	17	0.112	-0.703	-1.878	1.692	-0.979
270531002003012	Webber - Camden	18	1.485	-1.158	0.352	0.192	0.254
270531002002003	Webber - Camden	18	1.439	1.117	-0.096	-0.478	0.759
270531002002006	Webber - Camden	18	1.163	1.317	0.501	-1.149	0.995
270531004003003	Webber - Camden	18	0.968	-0.166	-0.096	-1.149	0.277
270531002003004	Webber - Camden	18	0.392	-0.356	0.501	-1.149	0.272
270531004002009	Webber - Camden	19	1.080	0.707	-0.340	2.029	0.304
270531004002008	Webber - Camden	19	0.911	-0.062	-0.622	2.029	-0.080
270531002002004	Webber - Camden	20	1.028	0.937	0.247	-0.546	0.715
270531002003015	Webber - Camden	20	0.837	0.824	0.381	-0.546	0.674
270531004002007	Webber - Camden	21	0.852	0.980	-0.373	0.576	0.375
270531002002002	Webber - Camden	22	1.126	0.707	0.040	-0.052	0.573
270531004001017	Webber - Camden	22	0.760	-0.248	1.016	1.596	0.474
270531004002006	Webber - Camden	23	0.949	0.496	0.650	0.425	0.667
270531004003004	Webber - Camden	23	0.795	-0.021	-0.051	-1.149	0.283
270531004001007	Webber - Camden	23	0.347	-0.806	-0.401	-0.624	-0.246
270531004003012	Webber - Camden	24	0.920	0.553	0.090	0.360	0.462
270531002003008	Webber - Camden	24	0.896	-1.091	-0.245	0.360	-0.149
270531002003013	Webber - Camden	24	0.837	0.131	-0.021	-1.149	0.351
270531002003014	Webber - Camden	24	0.695	-0.362	-0.581	-0.143	-0.104
270531004003015	Webber - Camden	25	1.703	0.382	1.080	0.783	1.016
270531004003005	Webber - Camden	25	1.496	1.117	0.650	0.783	0.998
270531004001016	Webber - Camden	25	0.333	-0.090	0.328	1.266	0.138
270531004002005	Webber - Camden	26	1.602	1.144	0.753	-0.221	1.131
270531004002004	Webber - Camden	26	1.595	0.697	0.443	-0.221	0.880
270531002003011	Webber - Camden	26	1.342	0.325	0.443	0.244	0.670
270531002002026	Webber - Camden	26	1.275	1.308	0.753	-0.221	1.076
270531004003017	Webber - Camden	26	1.085	-0.166	0.237	0.244	0.369
270531004003000	Webber - Camden	26	1.062	-0.324	-0.486	-0.221	0.062
270531004001006	Webber - Camden	26	0.996	0.683	0.030	-0.221	0.530
270531004003016	Webber - Camden	26	0.930	1.409	0.340	0.244	0.814
270531004003009	Webber - Camden	26	0.907	-0.627	-1.416	0.708	-0.481
270531004003008	Webber - Camden	26	0.775	-0.434	-0.796	-0.221	-0.179
270531004001018	Webber - Camden	26	0.588	0.629	-0.693	-0.221	0.109
270531004003007	Webber - Camden	26	0.473	1.287	-0.486	-0.221	0.343
270531004001019	Webber - Camden	26	0.402	0.529	-0.073	-1.149	0.310
270531002003010	Webber - Camden	27	1.347	0.264	0.551	0.639	0.675

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Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531004003010	Webber - Camden	27	1.220	0.489	0.551	-1.149	0.793
270531004003013	Webber - Camden	28	1.442	1.642	1.034	0.144	1.314
270531004001015	Webber - Camden	28	1.367	1.012	0.170	-1.149	0.844
270531004002002	Webber - Camden	28	0.995	0.382	0.074	0.144	0.441
270531002002025	Webber - Camden	28	0.644	0.067	0.170	-0.287	0.301
270531004001020	Webber - Camden	29	1.069	0.553	0.187	0.099	0.560
270531004001005	Webber - Camden	29	1.007	-0.697	-0.647	0.099	-0.142
270531002002022	Webber - Camden	29	0.272	0.889	-0.091	-0.316	0.323
270531004002000	Webber - Camden	30	1.439	0.817	0.560	-0.747	0.939
270531004002001	Webber - Camden	30	1.167	0.922	0.202	0.864	0.662
270531004002010	Webber - Camden	30	1.058	0.264	0.292	-0.747	0.557
270531004002011	Webber - Camden	30	1.038	0.776	-0.603	-0.747	0.354
270531004002003	Webber - Camden	30	0.619	0.325	-0.603	-0.344	0.072
270531002003009	Webber - Camden	31	1.153	0.044	-0.476	0.408	0.167
270531002002020	Webber - Camden	31	1.145	0.707	0.823	-0.370	0.897
270531002002023	Webber - Camden	32	0.238	0.571	-0.525	-0.017	0.038
270531002002024	Webber - Camden	34	0.856	1.031	-0.061	-0.084	0.545
270531002002021	Webber - Camden	34	0.405	0.844	1.361	-0.084	0.898
270530032001020	Willard - Hay	8	1.008	1.287	0.650	0.360	0.917
270531028002001	Willard - Hay	8	0.812	-1.655	0.314	3.379	-0.280
270530032001008	Willard - Hay	8	0.537	1.287	-0.021	-1.149	0.590
270531020002012	Willard - Hay	8	-0.230	-0.248	-1.029	-1.149	-0.480
270530032001007	Willard - Hay	9	0.440	1.799	0.948	-1.149	1.081
270531020003004	Willard - Hay	9	-0.176	1.287	2.142	0.192	1.131
270531020003007	Willard - Hay	10	0.431	0.889	0.381	0.058	0.535
270531020003005	Willard - Hay	10	-0.522	1.055	0.919	-1.149	0.555
270530032001016	Willard - Hay	11	0.642	1.055	-0.083	1.046	0.418
270531020003010	Willard - Hay	11	0.589	0.571	1.138	-0.052	0.790
270530032002007	Willard - Hay	11	0.070	-0.062	-0.815	-1.149	-0.250
270531028002006	Willard - Hay	11	-1.030	-1.272	-1.792	-1.149	-1.318
270530027001006	Willard - Hay	11	-1.123	-0.405	0.162	2.144	-0.517
270531028003002	Willard - Hay	11	-1.367	-0.248	-0.083	-1.149	-0.470
270530032001010	Willard - Hay	12	0.748	1.799	0.874	0.864	1.044
270530032001015	Willard - Hay	12	0.443	1.055	0.202	-0.143	0.528
270531020003011	Willard - Hay	12	0.411	1.117	-0.815	-0.143	0.144
270531020001001	Willard - Hay	12	0.062	-0.720	-0.917	0.864	-0.587
270530032001004	Willard - Hay	13	1.023	0.980	1.063	-1.149	1.071
270530032001011	Willard - Hay	13	0.751	1.799	1.476	-1.149	1.382
270531020003006	Willard - Hay	13	0.528	1.055	0.443	1.638	0.554
270530032001005	Willard - Hay	13	0.450	1.799	0.030	-0.221	0.682
270530032001014	Willard - Hay	13	0.393	0.980	0.443	-0.221	0.588
270531028003009	Willard - Hay	13	-0.659	-0.589	-0.590	0.708	-0.639
270531028003011	Willard - Hay	13	-1.168	-0.405	-0.796	-0.221	-0.776
270531028003010	Willard - Hay	13	-1.171	-0.657	0.030	0.708	-0.580
270530032001006	Willard - Hay	14	0.466	1.214	0.458	-1.149	0.732
270531020001003	Willard - Hay	14	0.140	-1.649	-1.460	1.439	-1.070
270531028003008	Willard - Hay	14	0.087	-1.332	0.074	-0.287	-0.313

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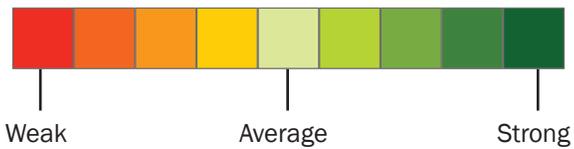
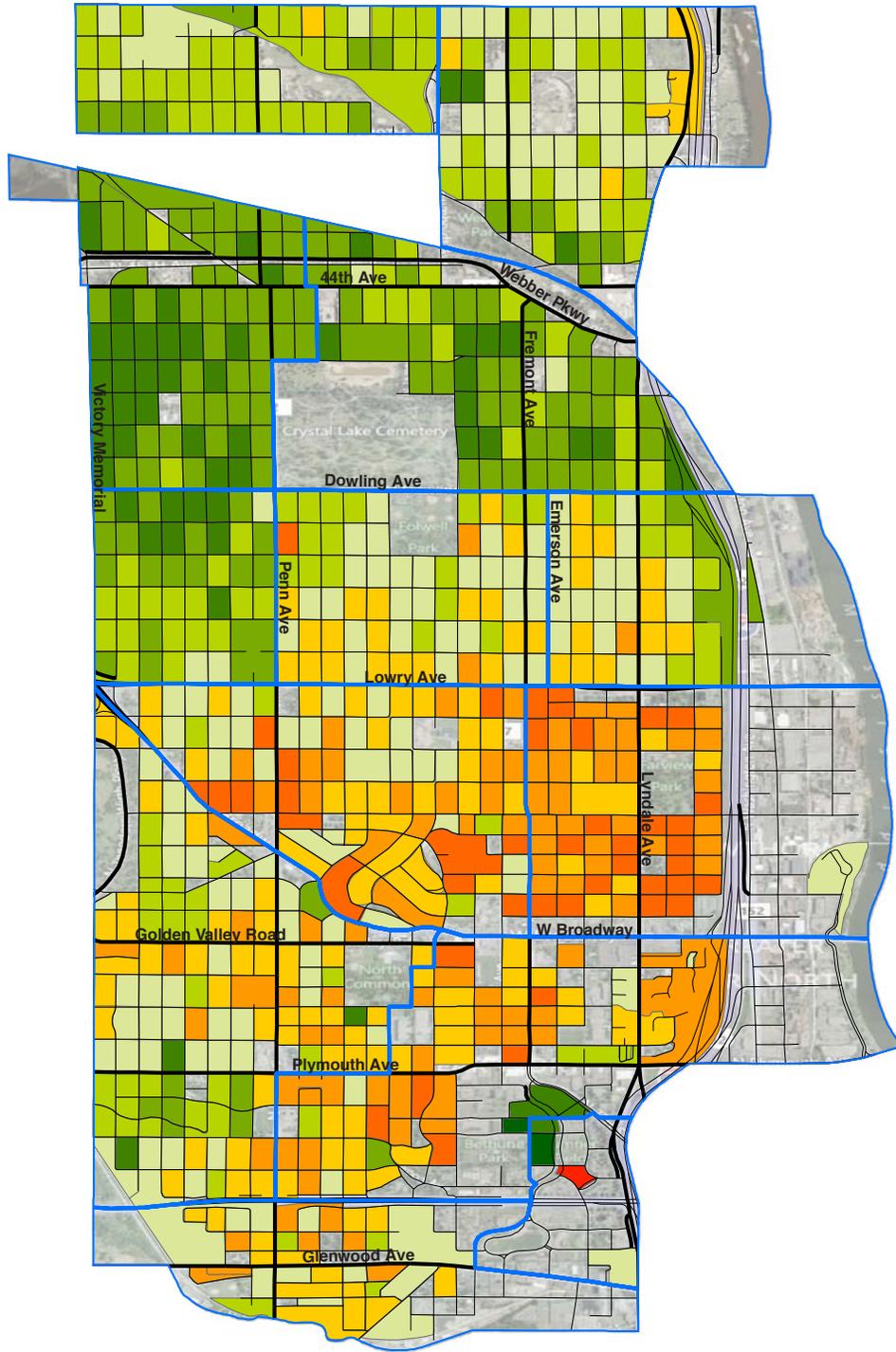
Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531028003015	Willard - Hay	14	-0.400	0.776	0.458	-1.149	0.336
270531028003016	Willard - Hay	14	-0.507	0.044	-0.309	-1.149	-0.204
270531028003012	Willard - Hay	14	-0.514	-0.384	-0.501	-0.287	-0.449
270530032001018	Willard - Hay	15	0.858	0.539	0.471	-0.344	0.622
270531028002016	Willard - Hay	15	0.388	0.264	-0.603	-1.149	0.024
270531028003001	Willard - Hay	15	0.076	-0.111	-0.424	-1.149	-0.112
270531028002015	Willard - Hay	15	-0.240	0.161	0.113	-1.149	0.075
270531028003007	Willard - Hay	15	-0.375	0.161	-0.245	-0.344	-0.147
270531028003003	Willard - Hay	15	-0.491	-0.571	-0.783	-0.344	-0.601
270530032001000	Willard - Hay	15	-0.682	-0.248	-0.783	-1.149	-0.525
270531028003006	Willard - Hay	16	1.562	0.434	0.482	-1.149	0.858
270530032001012	Willard - Hay	16	0.660	1.031	1.489	-0.395	1.098
270531028003014	Willard - Hay	16	0.476	0.922	-0.021	1.115	0.348
270531028002005	Willard - Hay	16	-0.201	-0.384	0.146	-0.395	-0.096
270530027001003	Willard - Hay	16	-0.375	-1.272	-0.189	-0.395	-0.536
270531028003004	Willard - Hay	16	-0.503	-0.657	0.146	-1.149	-0.230
270531028003005	Willard - Hay	16	-0.585	-0.405	0.314	-0.395	-0.158
270531028003017	Willard - Hay	16	-0.656	-1.860	0.113	0.360	-0.716
270531028002010	Willard - Hay	16	-0.767	0.207	-0.189	0.360	-0.271
270531028003000	Willard - Hay	16	-1.203	-0.504	-1.029	0.360	-0.936
270530032002009	Willard - Hay	17	0.331	-0.043	-0.298	-1.149	0.036
270531020001014	Willard - Hay	17	0.266	0.707	-0.298	-0.439	0.195
270530032002012	Willard - Hay	17	-0.249	0.571	0.018	0.271	0.080
270530032001002	Willard - Hay	18	0.538	0.496	-0.096	0.192	0.264
270531028002013	Willard - Hay	18	-0.023	0.264	-1.439	-0.478	-0.461
270531028002002	Willard - Hay	18	-0.064	0.520	-1.141	-0.478	-0.284
270531028002004	Willard - Hay	18	-0.919	-0.930	-0.842	0.864	-0.924
270531020001004	Willard - Hay	19	0.466	-0.248	-1.612	0.122	-0.553
270530027002009	Willard - Hay	19	-0.050	1.185	0.509	-0.514	0.549
270531028002012	Willard - Hay	19	-0.438	0.506	-0.764	-0.514	-0.258
270530032002013	Willard - Hay	19	-0.535	0.483	-0.340	0.122	-0.165
270530027001000	Willard - Hay	19	-0.733	0.044	-0.622	-0.514	-0.429
270530027002001	Willard - Hay	19	-0.752	-0.525	-0.198	0.122	-0.468
270530032001001	Willard - Hay	20	0.856	0.662	0.381	-0.546	0.633
270530032002005	Willard - Hay	20	0.126	0.539	0.381	0.058	0.339
270530032002008	Willard - Hay	20	0.075	0.980	0.650	0.662	0.522
270530027002015	Willard - Hay	20	-0.221	1.572	1.724	-0.546	1.077
270530032002010	Willard - Hay	20	-0.469	-0.657	-0.424	0.058	-0.502
270530027001012	Willard - Hay	21	-0.049	-0.248	-0.373	1.151	-0.291
270531020003015	Willard - Hay	21	-0.709	0.817	1.162	-1.149	0.522
270530032002011	Willard - Hay	21	-0.794	-0.021	-0.245	-0.575	-0.318
270531020003014	Willard - Hay	21	-0.804	1.368	1.162	-1.149	0.652
270530027002000	Willard - Hay	21	-0.924	-0.310	-0.373	-0.575	-0.491
270530032002006	Willard - Hay	22	1.920	1.031	0.650	1.046	1.092
270530027002013	Willard - Hay	22	0.003	-1.035	-0.815	-0.600	-0.580
270530027001014	Willard - Hay	22	-0.035	0.019	-0.083	1.046	-0.092
270530027001013	Willard - Hay	22	-0.214	-0.589	-1.059	1.046	-0.699

Continued . . .

Block	Neighborhood	Number of Residences	Value Retention	Owner-Occupants	Housing Condition	Vacant	Z-Score Total
270531020002014	Willard - Hay	22	-1.084	-0.779	-1.670	1.596	-1.289
270530032001017	Willard - Hay	23	0.641	1.613	0.416	-0.624	0.858
270531020002009	Willard - Hay	23	0.287	1.458	0.416	-0.099	0.676
270531020003013	Willard - Hay	23	0.280	-0.635	-0.284	-0.624	-0.173
270531020002003	Willard - Hay	23	0.065	1.287	1.351	-0.624	0.944
270530027002008	Willard - Hay	23	-0.771	0.909	-0.051	-0.099	0.007
270531020001013	Willard - Hay	24	0.469	-0.423	-1.141	-0.143	-0.408
270531020003012	Willard - Hay	24	0.190	-0.177	-0.021	-0.646	0.033
270530027002005	Willard - Hay	24	0.035	0.434	-0.133	0.864	0.040
270531020002010	Willard - Hay	24	0.022	0.067	0.090	-0.143	0.068
270531028002003	Willard - Hay	24	-0.199	-0.077	-1.141	0.360	-0.543
270530027001002	Willard - Hay	24	-0.297	-0.077	0.202	-0.646	-0.003
270531020001008	Willard - Hay	25	0.023	0.586	0.328	-0.666	0.337
270530032002002	Willard - Hay	25	-0.079	-0.330	-0.639	-0.666	-0.331
270530032002004	Willard - Hay	25	-0.099	-0.337	-0.210	0.300	-0.224
270530032002003	Willard - Hay	25	-0.440	-0.405	-1.499	-0.183	-0.822
270531020001015	Willard - Hay	25	-0.466	-0.515	-1.499	1.266	-0.937
270530027002007	Willard - Hay	25	-0.672	0.980	0.328	-0.183	0.209
270531020001011	Willard - Hay	25	-1.179	-0.021	-1.499	2.715	-1.093
270530027002012	Willard - Hay	26	1.749	0.653	-0.073	-0.221	0.717
270530027001009	Willard - Hay	26	0.062	-0.248	-0.424	-0.221	-0.204
270530027002011	Willard - Hay	26	-0.117	-0.021	-0.102	-0.221	-0.070
270530027002010	Willard - Hay	26	-0.180	0.264	-0.796	1.173	-0.348
270531020002007	Willard - Hay	26	-0.293	0.662	-0.693	-0.221	-0.156
270530027002014	Willard - Hay	26	-0.323	0.738	0.340	-0.684	0.279
270531020001016	Willard - Hay	26	-0.332	-0.330	-1.416	-0.221	-0.733
270530027001005	Willard - Hay	26	-0.340	-0.111	-0.383	-0.221	-0.274
270531020002011	Willard - Hay	26	-0.408	1.169	-1.003	-0.684	-0.141
270531020001012	Willard - Hay	26	-0.409	-0.434	-1.003	-0.221	-0.628
270530027001010	Willard - Hay	26	-0.802	0.325	0.443	1.173	-0.047
270530027002002	Willard - Hay	26	-1.057	1.117	0.237	-1.149	0.144
270530032002000	Willard - Hay	26	-1.077	-0.657	-0.383	0.244	-0.686
270531020003008	Willard - Hay	27	0.195	1.327	-0.146	-0.255	0.401
270530027002006	Willard - Hay	27	0.150	0.922	0.547	-0.703	0.560
270530027001008	Willard - Hay	27	-0.024	0.434	-0.146	0.192	0.051
270531020001002	Willard - Hay	27	-0.024	0.478	-0.643	-0.255	-0.104
270531020001009	Willard - Hay	27	-0.118	0.434	-0.743	-1.149	-0.138
270531028002014	Willard - Hay	28	-0.413	0.019	-0.213	0.144	-0.213
270531020002008	Willard - Hay	28	-0.617	0.707	0.842	-0.287	0.351
270530027001001	Willard - Hay	28	-0.737	0.946	-1.173	1.007	-0.461
270530027001007	Willard - Hay	28	-0.894	0.489	-0.309	-0.287	-0.242
270530027001004	Willard - Hay	29	0.302	0.483	-0.461	0.516	0.029
270531020003009	Willard - Hay	29	0.050	0.854	0.002	0.933	0.214
270530027002004	Willard - Hay	29	-0.072	-0.077	-0.461	3.015	-0.380
270530032002001	Willard - Hay	29	-0.614	-0.248	-0.647	-0.316	-0.495
270530027002003	Willard - Hay	29	-0.831	0.629	-0.276	-0.733	-0.146
270531020002000	Willard - Hay	30	-0.642	1.613	1.366	-1.149	0.851

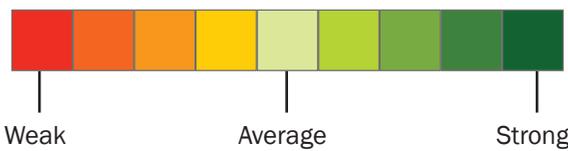
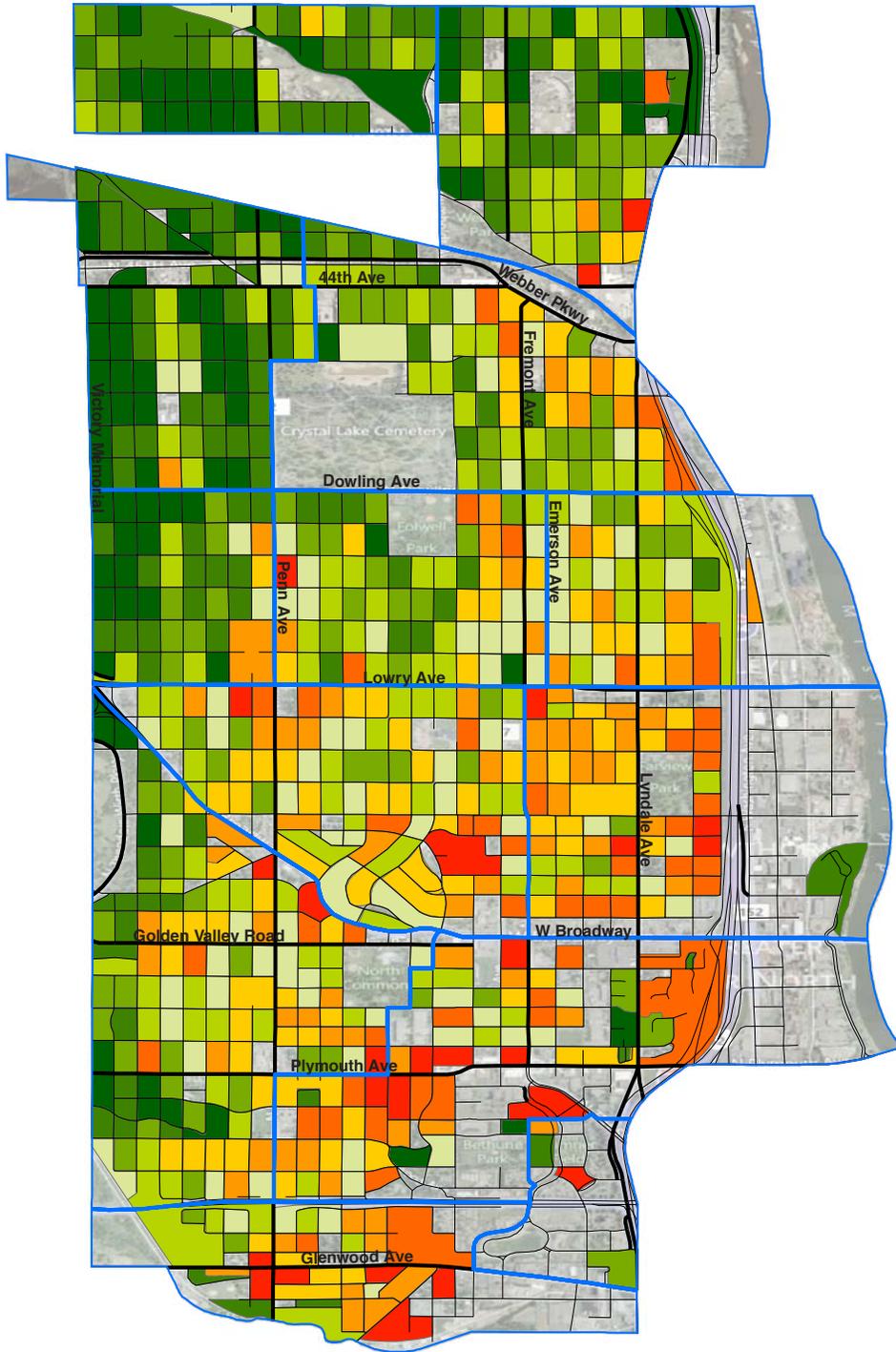
# Value Retention

(April 2011 EMV - Jan 2008 EMV)  
Jan 2008 EMV



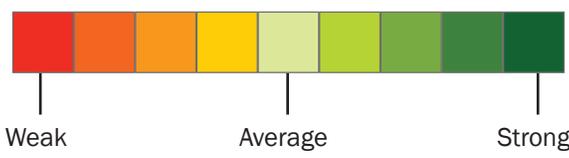
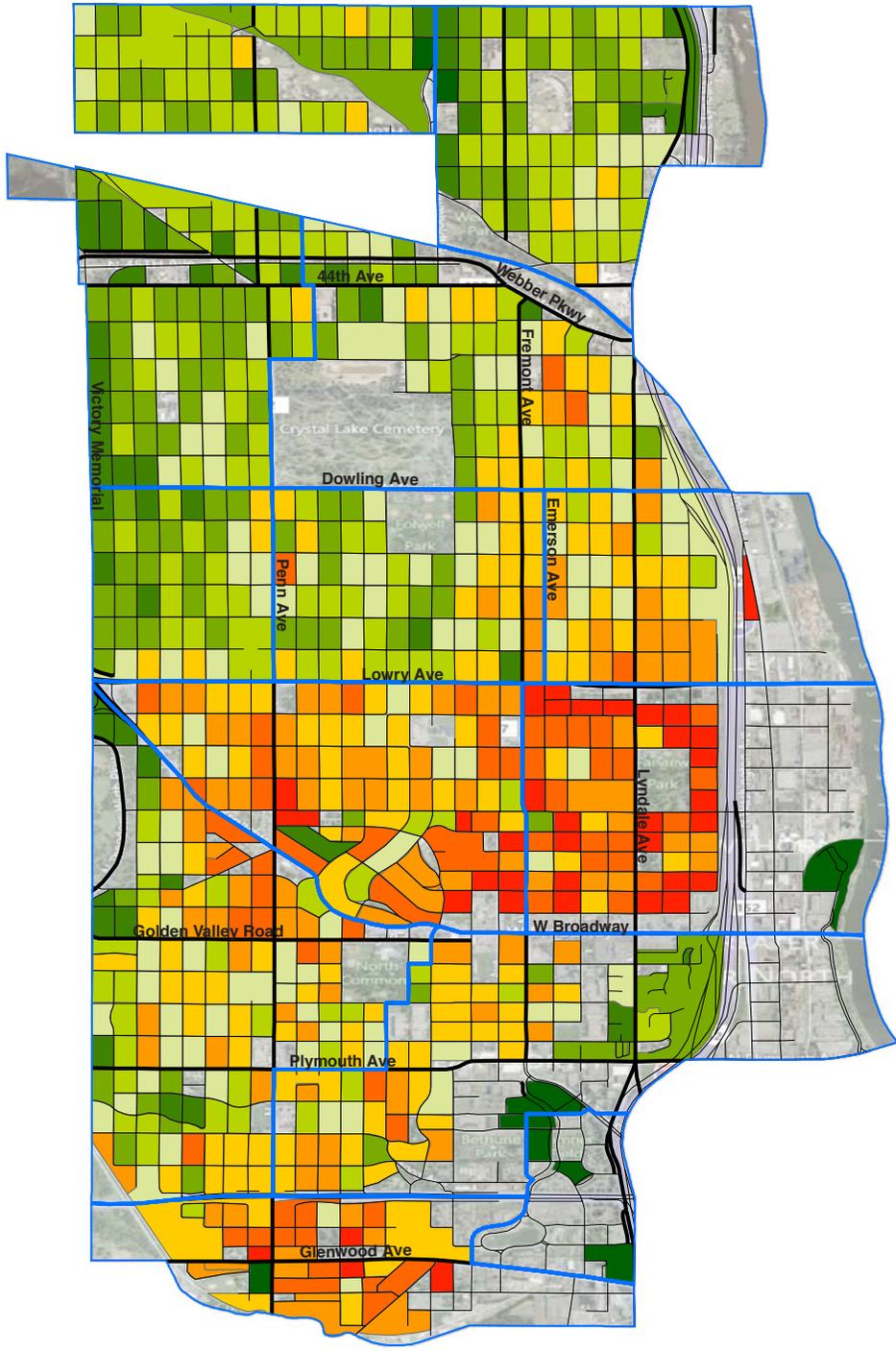
# Owner-Occupancy

$\frac{\text{Total owner-occupants units (Owned with a mortgage + Owned free and clear)}}{\text{Total Units}}$



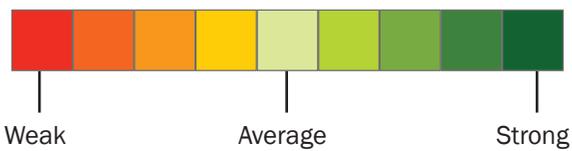
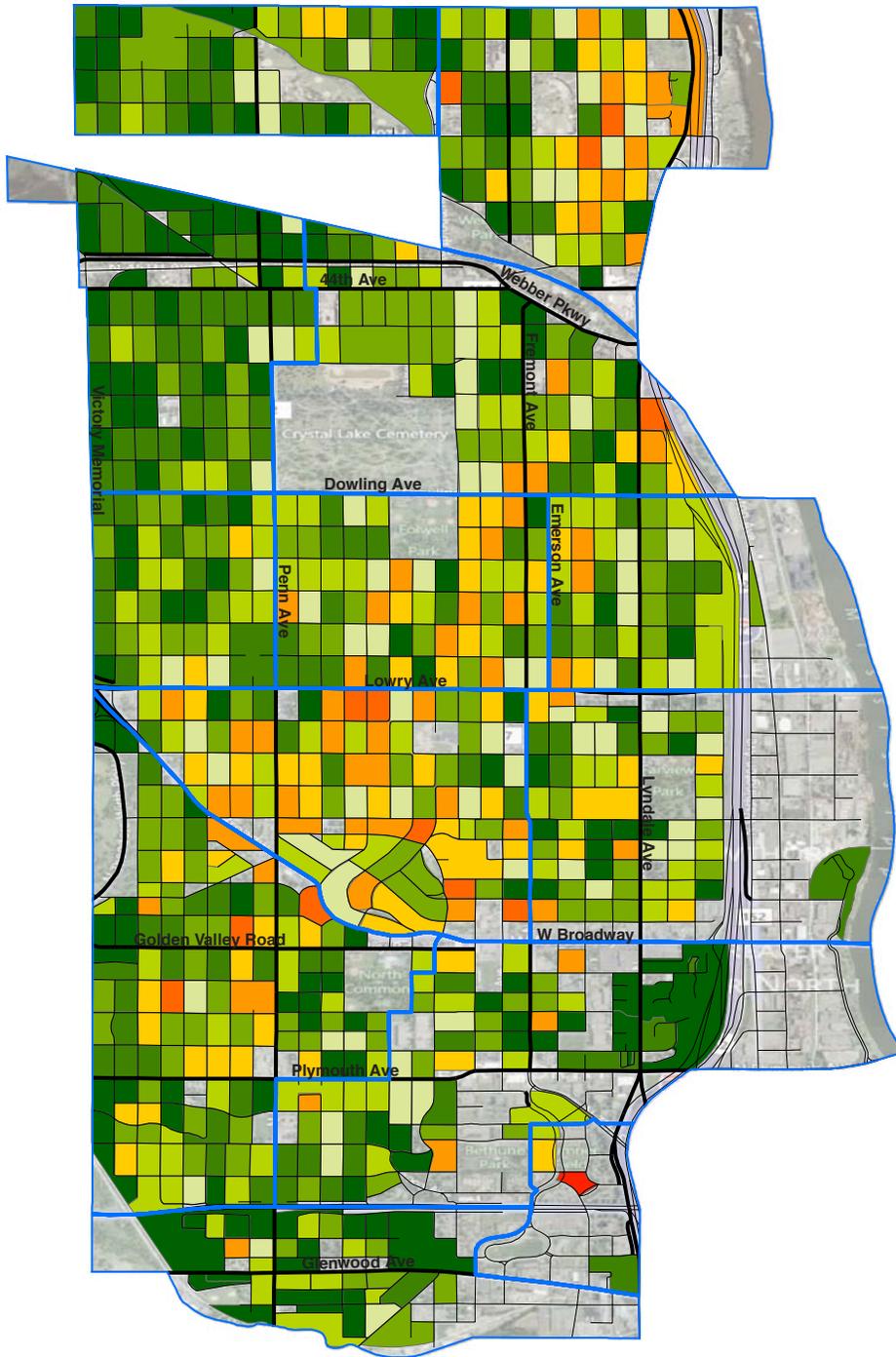
# Housing Condition

Sum of residences' 1-7 ratings of housing condition  
Number of residences



# Vacancy

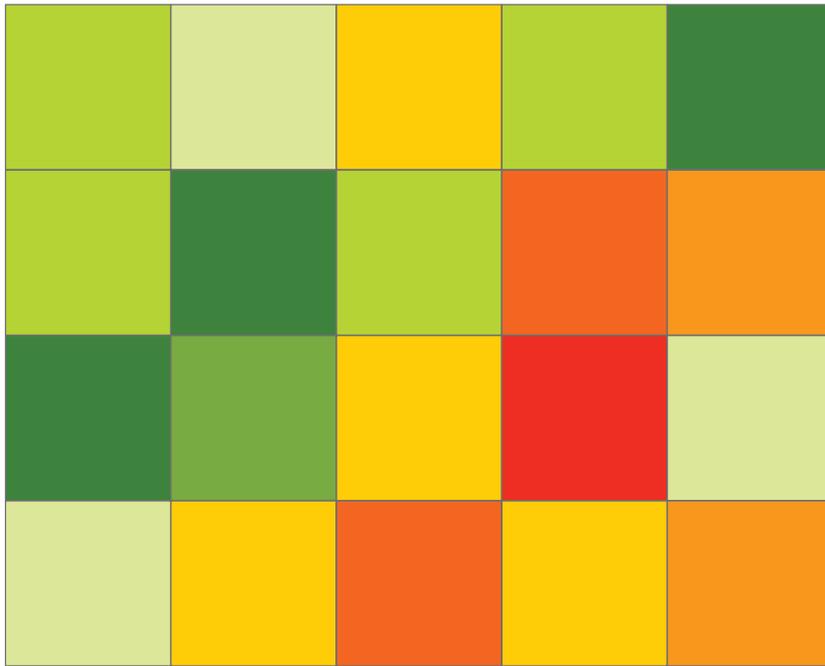
Vacant residences  
Total residences





### **ACKNOWLEDGEMENTS**

The Folwell Center for Urban Initiatives would like to thank the Center for Urban and Regional Affairs for its help in developing the Housing Market Index as well as obtaining and helping analyze the data underpinning this report. We would also like to thank the Federal Reserve Bank of Minneapolis, the Minneapolis Police Department, the City of Minneapolis, and Hennepin County.



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