Affordable Housing Gap Analysis: Minneapolis, MN

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Project Overview and Background

Context for research

Research Partner
The City of Lakes Community Land Trust (CLCLT) was formed through collaboration between multiple neighborhood groups in 2001. Powderhorn Residents Group, Seward Redesign, Powderhorn Park Neighborhood Association, and the Lyndale Neighborhood Development Corporation worked together to form the Minneapolis Community Land Trust Initiative to research how South Minneapolis residents could benefit from a community land trust. The Initiative’s research indicated the City could benefit from the formation of a community land trust. As a result, the Minneapolis Community Land Trust Initiative officially incorporated The CLCLT as a non-profit in Fall 2002. The CLCLT’s mission is to create community ownership that preserves affordability and inclusivity and has assisted over 200 families access homeownership.

Research Questions and Goals of the Research:
The following are the goals of this research project as defined by our community partner CLCLT:

- Expand on existing research to determine the number of permanently affordable housing units currently needed in Minneapolis.
- Compare this number to what is currently permanently affordable.

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- Determine future number of permanently affordable housing units needed to meet demand in Minneapolis.

**Summary of City of Minneapolis’ Study:**
The City of Minneapolis is conducting a similar study which kicked off in June 2019 and is scheduled to deliver the final report in early 2020. The city’s Long Term Affordable Housing Policy Study is aimed at understanding the expansion of long-term affordable housing ownership. The key elements of this study include:

- “Literature review about trends for housing affordability
- Market study to clarify options for ensuring affordability in the Minneapolis housing market
- Community engagement to gain input about options to build LTA capacity in Minneapolis
- Drafting a recommendation for the City Council to consider for expanding LTA capacity in Minneapolis”

**Summary of Methodology**

**Precedents for Methodology**
Through literature review we sought to gain methodological insight into adequately assessing the gap between the supply and demand for affordable housing. One subtopic looks at how other cities and agencies calculate housing demand and supply. Another subtopic looks at how to size the financing gap. Some of the sources provide baseline information on housing trends which informed us of which scenarios to test and the

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logic behind our assumptions that guide our calculations. We gained a better understanding of how to compare Minneapolis to other cities by reviewing how industry experts calculated this gap. This literature review revealed few comparable precedents for this type of research. The following are some are three especially useful precedents that we did find useful.

- **Pittsburgh Housing Needs Assessment:**\(^3\) The Housing Needs Assessment tool is used by the City of Pittsburgh to assess the scale of affordable housing needs today and into the future, especially at the very low (50% MHI) income level and below. The assessment takes into account populations below the Median Household Income (MHI) and is conducted at the neighborhood level. The gap reported differentiates renters from homeowners, which is unique to this type of study. This report uses many useful graphics such as the median gross rent (as compared to net rent) mapped out by neighborhood and the map of the income needed to afford this gross rent mapped by neighborhood. The report measures the gap in the number of housing units needed per 100 households, instead of by the capital needed to fill the gap. This report has one of the most robustly explained methodologies of their gap assessment.

- **The Gap: A Shortage of Affordable Homes, National Low Income Housing Coalition:**\(^4\) This report seems to be the first nationwide study aimed at determining the gap in affordable housing. The report breaks down the housing

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shortage by metropolitan area and income level. From this study we see that the
Minneapolis-St. Paul metropolitan area has fewer affordable units than the
overall national level. There is currently a shortage of 78,997 units at or below the
extremely low-income level and 66,470 units at or below 50% AMI in
Minneapolis. This study was extremely relevant to our project because it verified
many of our assumptions and provided a basis for our different calculation
scenarios.

- Affordable Housing Funding Gap Analysis, City of San Francisco:⁵ This report
identified the amount of newly constructed housing needed to house each new
lower-income household projected between 2010 -2040, assuming no household
will pay more than 30% of their income. The study also focuses on funding
strategies to fill this gap and the impacts of existing policies and strategies on
meeting the housing need. The Affordable Housing Funding Gap Analysis estimates
a needed annual subsidy of $3.2 Billion to close the gap. With this number, they
identified a potential funding strategy to close 70% of the gap funding needed.
For example, the report’s gap estimate is conservative because the analysis does
not take into account the existing gap in affordability, only the projected gap.
The methodology to determine the subsidy gap used a sample of 27 housing
projects to establish a range of total subsidy cost per unit. The description of the
methodology of the report is a very useful precedent.

⁵ Housing the Workforce Working Group. (2014). Affordable Housing Funding Gap Analysis. City of San Francisco: Department of Housing and Urban Development.
Overview of Our Methodology
Based on precedent, we decided to approach our research from a quantitative and qualitative lens. The following is a summary of our research methodology that contributed to the conclusions of the report.

- **Literature Review:** We explored a variety of topics related to the research goals. The literature reviews are available by request. The topics covered include precedent gap calculations, affordable housing reports for Minnesota and Minneapolis, long-term affordable housing, long-term funding strategies, the cost of unaffordability, and homeownership trends and benefits.

- **Interviews with local developers:** We intended to interview multiple developers to help determine the cost of housing, validate research assumptions, and provide locations of long term affordable housing units. Because of time and schedule limitations, we were only able to speak with Alan Arthur of Aeon and our client, Jeff Washburne of CLCLT.

- **Calculating Capital Investments:** To calculate the actual gap we looked at the existing gap and the future gap separately because of the many unknowns in the housing market. Sections 3 and 4 of this report offer the specifics of the calculations for this portion of the research.

**Key Terminology**

Before jumping into the report, this list is meant to clarify terms and explain how each term is interpreted for this document.
- **Long Term Affordable Housing (LTA):** We are using the working definition for long-term affordable housing that is based on the City of Minneapolis’ definition. LTA housing is currently defined by the City Council as “housing that is affordable for a minimum 30-year period to households below 80% of area median income ($80,000 in 2019 for a family of four).” Our working definition is housing that is affordable for a minimum 30-year period to households at all income levels below 80% including 30% and 50% of area median income.

- **AMI:** Area Median Income

- **Cost-burdened Household:** households spending more than 30% of their income on housing.

- **Affordability:** We used the standard assumption used by HUD and most commonly used in affordable housing. Households should spend no more than 30% of their income on rent or mortgage.

- **Owner-occupied:** We use the term “owner-occupied” at times to reference units owned by homeowners that live in the unit they purchased. This term is often used to differentiate between the population of renters.

- **NOAH:** Naturally Occurring Affordable Housing

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Defining the Problem

State-Wide Housing Trends

In order to get a good idea of the current housing crisis in Minnesota, it is important to investigate housing costs across the state and include both rental and homeownership numbers. According to the Minnesota Housing’s *Key Issues and Trends in Housing* report, rent increased by 13% across the state from 2000 to 2017. Broken into 8 year periods, 2000-2008 median rent prices increased less than 1%, but increased from $836 to $939 (12%) from 2008 to 2017. However, from 2008 to 2017 the median rent rose from $836 to $939, a 12% increase over the course of 9 years. This short term trend is alarming compared to the previous 8-year change that had been measured (Figure 2.a).7

![Figure 2.a: Median housing cost change in Minnesota](source picture)

Over the same time period (2000-2017) mortgage costs decreased by 2%. Over the long term mortgage prices appear fairly stable, but zoom into short-term patterns and costs appear more volatile especially near the 2008 housing crash. Median monthly costs went from $1,536 to $1,773 from 2000 to 2007, with that number then retreating once again around 2012 to $1,513 and staying relatively stable into 2017 ($1,500). This quick change in price was caused by low home prices and decreasing interest rates that were lowered after the recession and remain low today.⁸

From 2000 to 2017 homeowners who do not have a mortgage saw their housing costs rise more than both renters and homeowners with costs rising 26% from $399 to $503 a month. This increase of costs can be attributed to higher property taxes, insurance premiums, and utility costs. While the increase is significant compared to the previous costs associated with owning without a mortgage, it should be noted that the monthly price of owning without a mortgage is still much cheaper than renting or having a mortgage.⁹

**Trends in Housing Demand vs. Supply**

One reason rent prices have risen so much from 2000 to today is the failure of the market to keep up with housing demand. A balanced housing market will typically have a vacancy rate that hovers around 5%. The current vacancy rate in the Twin Cities Metro is 2.3% (2018). This number is not new in the last 2 years but has been stabally low since 2012. The vacancy rate has stayed between 2 and 3 percent during this time with the

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market failing to respond. This low vacancy rate means rising rents (Demonstrated by Figure 2.b) which can pose problems for low income individuals disproportionately, who are slowly being pushed out of their affordable housing by rising rents with nowhere to turn. As long as vacancy rates stay below 5% rents will continue to rise.  

![Figure 2.b: Twin Cities rent and vacancy rate](image_url)

Determining the Gap: Scenario Testing

Methodology

We focused our calculations on quantifying the capital investment needed to fill the existing affordable housing gap. Our ability to locate and quantify the existing stock of long term affordable housing was limited and prohibited us from making a very accurate calculation of the exact amount of housing needed to be constructed versus subsidized. Therefore, our approach to calculating the gap focused on assessing the demand for housing, rather than focusing our efforts on quantifying the existing supply.

The intent of our calculations is to establish the amount of investment needed to provide long-term affordability, whether through a yearly rental subsidy or through homeownership. The following sections further explain the assumptions and limitations to these calculations influencing the accuracy of the final numbers. Following this is an explanation of four different calculation scenarios. We calculated a range of capital investments instead of one single number to account for and illustrate how the unknowns and how these unknowns might factor into a final number.

The following figures help explain the basic logic behind the calculations. We calculated the gap between the ability to pay and the actual cost of rent/mortgage and multiplied this gap number by the number of people in each income stratification. Below is a simplified version of our calculation methodology. Figure 3.a provides a
brief overview of each of the elements of this calculation. The tables for the actual calculations are available in Appendix A.

![Figure 3.a: Graphic of Calculation Process](image-url)
Assumptions and Limitations for Calculating the Gap

Stratification of affordability

To establish the number of households in each stratification of affordability we used the 2018 AMI Cheat Sheet for Minneapolis developed by CURA\textsuperscript{11} and the 2016 Ward profiles from the city of Minneapolis.\textsuperscript{12} We made the assumption that to determine the unmet need for affordable housing we would only focus on existing cost-burdened households. From there, we assumed that the cost-burdened households are likely at or below 80\% AMI, therefore we used the AMI Cheatsheet to determine the stratification of each level of affordability - meaning at and below 30\% AMI, above 30\% to 50\% AMI, and above 50\% to 80\% AMI. For ease of calculations and because of limited data on specific households, we assumed this stratification is the same throughout all wards.

Gap per Unit

As the cost of construction is volatile and variable, so are rent levels and for-sale prices. The strength of the overall economy, mortgage interest rate levels, and the

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{Figure_3_b.png}
\caption{Minneapolis AMI Cheat Sheet}
\end{figure}

changing popularity of one neighborhood are just some of the factors that might affect market rate housing levels. Unexpected events, such as the 2008 financial crash, can significantly affect market prices. Because of all these factors, we are unable to accurately identify and predict the actual average market rate price of rental and for-sale units. To establish the amount of cost it would take to fill in the gap per unit we used a few different measures.

- **Cost of Rental Units by Ward:** For the cost of rental housing unit by ward, we assumed the housing type was a one-bedroom apartment. If we had more time we would have determined the cost of housing at each affordability level and by housing type. Ward Data was derived from MNCompass by building a profile for each Ward using the Custom Geographic Profile Tool. The Build Your Own tool uses only 2010 Census counts, American Community Survey (ACS) 5-year estimates, and Longitudinal Employer-Household Dynamics (LEHD). To account for the increase in rent since 2010, we increased average rent for each Ward by 17% which was the overall average increase in rent in Minneapolis between 2010 and 2017. We determined the median cost of a one-bedroom apartment in 2017.

- **Cost of Rental Units Citywide:** For the citywide calculation of rental units, we included a more variety in the unit type by assuming half one-bedroom and half-two bedroom units. These rent level data were sourced from Marquette

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13 Data in the Build Your Own tool have been adjusted to fit current geographical boundaries using the 2010 Census counts for population and housing to provide the best estimate of how many people or housing units relate to each characteristic. From http://www.mncompass.org/about/profile-sources (See Appendix A)

Advisors’ first-quarter review of rental properties, for the months January through March 2019.¹⁵

- **Cost of Owned units, Citywide:** We used Minnesota Housing Finance Agency’s 2019 LIHTC cost containment thresholds for the for-sale unit price.¹⁶

- **Ability to pay for Rental Units and Owned Units:** To determine the amount a household could pay using 30% of their income at each of the affordability levels, we used the data from the Metropolitan Council’s 2019 Affordability Limits¹⁷ for rental income qualification levels for both rental and owner-occupied units and double-checked this against the Minnesota Housing Finance Income limits.¹⁸ A limitation to this method is that it does not accommodate the actual amount each individual can afford.

**Homeownership Rate**

We assumed that current homeownership trends are consistent across all income levels for ease of calculations. The current homeownership rate is sourced from the American Community Survey.

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Homeless Population
We used the estimate for Hennepin County for our count of people experiencing homelessness. It is difficult to determine the exact number of this population within a smaller jurisdiction because they are often mobile. By using county-level data we are hopefully able to account for some of the mobility. This data was taken from the Wilder Research Center’s 2018 Minnesota Homeless Study. The sub-group of people experiencing *chronic* homelessness (which was not separately accounted for by the Wilder study) was estimated by taking the percentage of Minnesotans experiencing homelessness in Hennepin County and multiplying by the U.S. Interagency Council on Homelessness’s 2018 chronic homelessness statistics for Minnesota (which were only supplied at the statewide level).\textsuperscript{19,20}

Fluctuating Costs of Construction
It is difficult to accurately estimate or project the cost of a unit, both for-sale and rental because the costs of construction are volatile. We used Minnesota Housing Finance Agency’s LIHTC cost containment limits for the cost of construction per unit as stated above. We also assumed for ease of calculation that the cost of different unit types (single family versus apartment) are the same.

Calculating the Gap: Scenarios

Scenario 1: Rental & Ward specific
Uses all rental units to house households below 80% AMI. Uses rental averages by ward to capture the cost-of-living variation in the city. Uses all one-bedroom units.\textsuperscript{21}

Scenario 2: Rental & Citywide
Uses all rental units to house households below 80% AMI. Uses citywide rental averages as a baseline. Uses half one-bedroom units and half two-bedroom units.

Scenario 3: Owner-Occupied & Citywide
Uses all owner-occupied units to house households below 80% AMI. Uses the same cost per unit for all units.

Scenario 4: Rental & Owner-occupied, Citywide
Uses some rental and some owner-occupied units to house households below 80% AMI, based on current homeownership levels. Uses citywide rental averages for rental units. Uses half one-bedroom units and half two-bedroom units. Uses same cost per unit for all owner-occupied units.

Conclusions from Scenario Testing

Based on the scenario testing we came up with a potential range of needed capital investment to fill the existing need for affordable housing. Figure 3.c below is a summary of the numbers.

\textsuperscript{21} For another study on assessing the gap for housing that supports families (i.e. two+ bedroom units) see the study called \textit{Estimating the Gap in Affordable and Available Rental Units for Families} by the Joint Center for Housing Studies of Harvard University. See Appendix for the literature review.
As illustrated in the figure above, there is a range of the potential capital investments needed to fill the gap, and this figure could be seen as a yearly investment in rental subsidies or a one time mortgage subsidy to cover the cost of owned units. One note for Scenarios 1 and 2, is that the rental gap only accounts for monthly rent. It does not take into account the initial capital investment needed to build the building in the first place. Scenario 3 is also not completely accurate because it assumes that the city would fill the affordable housing gap through the sale or new construction of all owner-occupied units. Scenario 4 attempts to capture more reality in assuming that some cost-burdened households will continue to live in rental housing, but that would be long-term affordable housing with controlled rental levels. The other portion of residents in Scenario 4 would either be building new housing or buying existing housing which makes up the $6.36 billion gap.
Because these numbers are so large, here are a few figures to provide context. The mayor came out with a statement in 2018 that the city was investing $40 million into affordable housing.\textsuperscript{22} US Bank Stadium construction costs amounted to about $1.1 billion.\textsuperscript{23} The entire city budget for 2019 was $1.7 billion.\textsuperscript{24} These comparisons put into context the incredible scale of capital investment needed to start to meet the housing affordability gap. To put this into context, San Francisco found in their assessment that to meet the affordable housing demand for new residents they would need an annual subsidy of $3.2 Billion.\textsuperscript{25} Using this comparison, the number we calculated seems more accurate. The last section of the report will begin to offer some ideas on how to address this gap through a variety of financing options.


\textsuperscript{25} Housing the Workforce Working Group. (2014). \textit{Affordable Housing Funding Gap Analysis}. City of San Francisco: Department of Housing and Urban Development.
Affordable Housing Gap is Growing

Methodology

Using the current housing stock in the Streams dataset with production and preservation data from the Housing Counts\textsuperscript{26} report, we projected the net change of the affordable rental unit stock through 2035. The Streams dataset provides the “final obligation date” for subsidized units. Figure 4.a shows how many units will be lost between 2020 and 2035 as well as outlier units that have remained affordable past the expiration of obligation. The Housing Counts report provides data on the number of units produced and preserved every year from 2002-2018. This data was used to project the average yearly production and preservation of units.

\begin{table}[!h]
\centering
\begin{tabular}{|c|c|c|c|c|c|}
\hline
 & 30\% AMI Units & 50\% AMI Units & 60\% AMI Units & 80\% AMI Units & All Units \\
\hline
Expire 2025 & 1262 & 1064 & 2337 & 7 & 4670 \\
Expire 2030 & 393 & 1162 & 1627 & 23 & 3205 \\
Expire 2035 & 833 & 536 & 1079 & 82 & 2530 \\
Expire Total & 2488 & 2762 & 5043 & 112 & 10405 \\
\hline
\end{tabular}
\caption{Expiration of Subsidized Affordable Rental Units (2025-2035)}
\end{table}

Assumptions and Limitations

Current Affordable Housing Stock

There is limited data available for affordable housing units at the city level, particularly owner occupied affordable units and NOAH units. Due to this, the assessment of affordable housing stock in Minneapolis will take a more qualitative

approach, relying on literature, estimates and higher level inventory numbers to assess the current affordable housing conditions in Minneapolis.

The quantitative aspect of this assessment will be limited to subsidized affordable rental units. HousingLink’s Streams dataset includes public housing, project subsidized and LIHTC rental units at 30, 50, 60 and 80% AMI. There are limitations to this data, however. HousingLink has identified some properties that receive some sort of subsidy, but are missing data on the number of units provided at what AMI level. The assessment will operate under the assumption that these properties do not provide affordable units at this time.

Affordable Housing Production and Preservation

Using the Housing Counts report we determined the yearly average production and preservation of subsidized affordable rental units. This includes 30, 50 and 60% AMI, however, the report did not provide data for 80% AMI units which were excluded from the projection. Using this approach assumes that the production and preservation trends between 2002 and 2018 will remain consistent between 2020 and 2035.

Loss of Affordability

The Streams dataset includes units that have remained affordable past the expiration of their obligation. These units are considered outliers that are in consideration for being designated NOAH units. Per the recommendation of HousingLink staff, the frequency of this occurrence is low enough to assume that all units will convert to market rate upon expiration. However, the current outlier units will still be counted in assessing the 2020 stock.
Affordable Housing Trends

The housing crisis that is happening in Minneapolis and across the state of Minnesota has also taken a major toll on the stock of affordable housing. Across the state we are seeing Naturally Occurring Affordable Housing Units decrease as property values go up and rents rise. This could be offset by an increase in housing supply, however the stock has not kept up with demand. The gentrification of many neighborhoods across the city has seen huge losses of NOAH units. In the Twin Cities metro alone, 1,300 NOAH units are being lost each year due to their loss of affordability after property values go up, increasing rent. That statistic reaches 2,000 when the rest of the state is added in.27

The classes of housing that are losing their affordability the fastest are B, and C with class C properties accounting for 76% of lost affordable units. Class C properties are properties that are typically 30+ years old, are in less than desirable locations and are often in need of renovations. They also tend to have little to no amenities. The average rent for these properties in the Twin Cities metro area ranges from $775 for a studio to $1,400 for 3+ bedrooms. Class B properties are properties that are between 10 and 30 years old, are well maintained, and have some amenities. Average rent for these units in the Twin Cities typically ranges from $1,000 for a studio to over $1,700 for 3+ bedrooms.28

Affordable Class B housing accounts for 24% of lost NOAH Units to increased property values. Furthermore, two bedroom units are more likely than studio units to

lose their NOAH status to increased property values. This has negative implications for those low income individuals who also have a family that they need to support.  

This loss of affordable housing has real consequences for low income individuals who struggle to find housing they can afford already. Those who make less than 30% of the annual median income (AMI) have the greatest need. It is estimated that there are 179,495 households (30% of all renter households) statewide that make less than 30% AMI yet the supply of rental housing that would be considered affordable to these people is only 114,325 units (Roughly 1% of all units). This would put the current supply gap at 65,100 for 30% AMI. And of those 114,325 units that are considered affordable 48,645 of them are currently occupied by those who make above 30% AMI. This would make the gap even larger at 113,745 units. This gap is demonstrated in Figure 4.b.

![Figure 4.b: Gap of Households at or Below 30% AMI](image)


In Minneapolis, there are currently 24,211 subsidized rental units affordable at or below 80% of the area median income. This stock only meets 9.4% of the demand as there are currently 255,241 residents living at or below 80% AMI in Minneapolis, leaving 231,030 of those residents unserved.

![Cost Burdened Households by Ward](image)

**Figure 4.c**: Comparison of percentage of cost-burdened households across Minneapolis

Approximately 85,750 households in Minneapolis are considered cost-burdened or around 40% of households. Wards 4, 5, and 6 have the highest rates of cost-burdened households which correlate with concentrated areas of poverty. Conversely Wards 11 and 13 have the least number of cost-burdened households and corresponds with areas in the city considered concentrated areas of affluence.

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**Figure 4.d** breaks down the stock of subsidized rental units compared to population based on 30, 50, 60 and 80% AMI thresholds. This shows that there is a significant deficit in demand within all four affordability levels. In terms of percentage, 91% of demand is unmet at 30% AMI, 92% at 50% AMI, 73% at 60% AMI and 98% at 80% AMI. The impact of these supply deficits are more severe at the 30% and 50% AMI threshold, as the population at these two thresholds make up over half of the population below the AMI, with 30% AMI making up 45%. Additionally, the cost to subsidize units for lower income renters is higher than the cost to subsidize units for higher earning residents. Knowing that population is projected to increase significantly by 2040.

![Affordable Rental Units vs. Population Income By Percent of Area Median Income](image)

**Figure 4.d**: Comparison of housing stock to households by percent of area median income

**Homeownership Trends**

As discussed above, the 2008 financial crisis hit the real estate market hard. Minnesota was not immune to this crash and has been seeing homeownership rates
across the state decline ever since, with a couple blips of increase along the way. The market peaked in 2002 at a rate of 77.2 percent, and hovered around there until about 2006, when it really began to fall. By 2011 the rate had fallen to 71.3 percent and bottomed out in 2018 at 69.8 percent, the lowest it has been since 1994 (68.9 percent). It is no coincidence that during this same time period (most noticeably from 2011 on) we see vacancy rates across the Twin Cities Metro also decrease to between 2 and 3 percent, which negatively impacts affordability.\textsuperscript{33} We found limited data for homeownership trends for Minneapolis. From the data we did find, we can conclude a similar decline in homeownership is occurring in the city (see Figure 4.c).

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{mnhsown.png}
\caption{Minneapolis Homeownership Rates, Data taken from the American Community Survey}
\end{figure}

Why do we care about homeownership

Within the housing affordability discussion, it often feels that rentals are discussed more as that is the world most low income folks operate in. However, we feel it is important to also include home ownership in the discussion as it is beneficial to both the ownership and rental market if more people own. If low income folks are able

\textsuperscript{33} Homeownership Rate for Minnesota . (2019, April 4). Retrieved from FRED Economic Data: https://fred.stlouisfed.org/series/MNHOWN
to buy instead of rent they are no longer taking up affordable rental units and are overall have more stability as they cannot be forced out of their homes due to higher property values. In fact it benefits them more if their property values rise.\textsuperscript{34}

Homeownership in Minnesota has historically been a market dominated by white folks at the expense of minority populations. As of 2017 only 24\% of African American/Black folks owned a home compared to 76.8\% of white folks (\textbf{Figure 4.d}). This is a disparity that was brought about by racist housing policy in the early 20th century whose effects can still be seen in figures like this. Transitioning low income renters into homeowners could help close this gap. Another argument for getting more low income individuals into the home ownership market is that home ownership historically helps individuals and families build wealth through equity, something that is not possible in the rental market. In fact, researchers have generally found that those who rent rarely make gains in wealth, while successful homeowners see their wealth increase even through downturns in the market.\textsuperscript{35}

\textbf{Figure 4.d}: Graphic taken from Key Issues in Housing report

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure4d.png}
\caption{MN: Homeownership Rates by Race (2017) – Disparity for African Americans is Dramatic}
\end{figure}

\textsuperscript{34} (2019). \textit{Key Issues and Trends In Housing}. Minnesota Housing.
\textsuperscript{35} (2019). \textit{Key Issues and Trends In Housing}. Minnesota Housing.
Movement to Minneapolis

Population growth in Minnesota sees growth primarily concentrated in the Hennepin County area (Figure 4.e). Over the next 20 years Hennepin County is expecting a 19% increase in population from 1,260,590 to 1,414,960. Minneapolis will share in this growth and experience a 15% increase in population from 423,300 to 459,200. This indicates that the need for housing in Minneapolis will only increase as more housing stock is needed to meet a growing population. A growing population and upward pressure on housing supply likely means that housing affordability is not going to go away and continue to affect a large portion of Minneapolis residents.

Figure 4.e: Projected Population Change Statewide

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36 Metropolitan Council. (2019). *Thrive MSP 2040*
The population growth in Minneapolis is based on projections and it is possible that if housing trends continue, the observed growth may be limited or negative. With a shortage of affordable housing, residents will see a reduction in spending power and seek opportunities elsewhere. This will also impact Minneapolis employers, as this will weaken the workforce. It is worth noting that 374,259 of Twin Cities workers are already living in cost burdened households.37

**Projecting Affordable Housing in Minneapolis**

According to our projections, Minneapolis will preserve 8,258 and produce 5,583 subsidized affordable rental units between 2020 and 2035, given trends from the past 16 years remain consistent. However, this is not enough to keep pace with the expiration of the stock. Over the 15 year period, 19.9 % of units will be lost. As mentioned above, this will have serious economic impacts, considering the Minneapolis population is expecting to grow by 15%. The workforce is already severely strained in the Twin Cities, as

For a more detailed look at the projection, changes in affordable housing stock for each threshold between 2020 and 2025 can be seen in graph below Figure 4.f. The data suggests that roughly half of the units above 50% AMI will be lost over the 15 year period, further intensifying the gap. This places an even greater strain on the market at or below 50% AMI. As units that are affordable at lower AMIs are filled, residents that fall within those thresholds rely on units that, while they are relatively

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higher cost, are still affordable. As those units disappear, residents are forced to settle for higher rent options.

Figure 4.f: Projection of affordable housing stock
The Cost of Unaffordability

Housing unaffordability is often framed, as it has been thus far in this report, as a problem requiring costly investments to solve. It is necessary to address the costs associated with maintenance of the status quo of the housing gap. These costs manifest themselves across numerous dimensions and are borne both by the individuals most directly impacted and society at large (or, in alternative parlance, “the taxpayer”). From research linking rent burden and housing instability to increased risk of poorer health to analyses of health and justice system costs incurred by people experiencing chronic homelessness; housing unaffordability and scarcity has negative impacts across the housing continuum that may cost more to continue to manage than they would cost to actually solve.

The Housing Continuum

First, it is necessary to understand the existence of a housing continuum, which establishes the range of housing affordability and options available across a spectrum of means, ranging from homelessness to affordable rental and home ownership options provided by the market or by public assistance pathways where the market fails (Figure 5.a). Minnesota Housing, the state’s housing finance agency, aims to create, preserve, and finance affordable housing, with one of its priorities being to prevent and end homelessness. Per HUD funding requirements, the agency engages in a strategic community plan called Continuum of Care, intended “to reduce the incidence of
homelessness by assisting homeless individuals, youth and families with children to move [along the continuum] to self-sufficiency and permanent housing.”

![Diagram](https://www.mnhousing.gov/sites/multifamily/coc)

**Figure 5.a: The housing continuum in the Greater Twin Cities metro area**

Basic principles of economics prescribe that given constant or decreasing demand, increasing the supply of affordable housing serves to lower overall housing costs, which would in turn enable state, county, city, and other non-governmental agencies to house a greater number of individuals and families with the same budget and move them along the housing continuum toward “self-sufficiency and permanent housing,” per Minnesota Housing’s stated goal. (In the case of increasing demand, as

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Minneapolis’s continued population growth would appear to point to, an increase in supply would help maintain and stabilize costs.) Specific dollar figures for potential savings would be difficult to estimate given the dynamic nature of the housing market and the assumed movement along the continuum, involving continuously changing costs, but it follows that increasing investment in creation and preservation of affordable housing can create cost savings by increasing the effectiveness of taxpayers’ dollars in combating homelessness, housing insecurity, and housing instability through existing programs and systems designed to do just this.

**The Costs of Chronic Homelessness**

Facilitating greater movement rightward along the housing continuum may also enable greater focus on the left extreme of the continuum: chronic homelessness, which many studies have shown would cost less to solve than to continue to manage. Malcom Gladwell’s 2006 article “Million-Dollar Murrany” for *The New Yorker* explained this dynamic to a mainstream audience through the story of Murray Barr, a veteran struggling with alcoholism and chronic homelessness on the streets of Reno. Gladwell explains that chronic homelessness has a power-law distribution, rather than the normal distribution we are accustomed to defining distributions as: a very small number of people at the extreme end of the spectrum suffer the largest impacts—and incur the largest costs to the system. The costs of Barr’s many hospitalizations and detentions over the years were astronomical—over one six-month period, his hospital bill alone totaled $100,000. Gladwell contrasts these costs with the costs of programs like one in
Denver, which provides permanent housing along with supportive services to help people stay off the streets—this program cost at most $15,000 per person in 2006.\textsuperscript{40}

It is difficult to impossible to quantify the exact number of people in Minneapolis experiencing chronic homelessness; people in these situations can be difficult to reach and highly mobile. However, between Wilder Research’s October 2018 study of people experiencing homelessness (both chronic and temporary) across the state (including a Hennepin County breakdown) and the U.S. Interagency Council on Homelessness’s January 2018 tally of state-level totals by category of homelessness experienced (including chronic homelessness), the number of people experiencing chronic homelessness in Hennepin County can be conservatively estimated at 424.\textsuperscript{41,42} Studies show that the annual per-person cost to health care and justice systems vary widely (recall Murray’s $100,000 hospital bill incurred over six months), but the National Alliance to End Homelessness has estimated an average cost of $35,578 per person experiencing chronic homelessness.\textsuperscript{43} Consequently, Minneapolis and Hennepin County spend an estimated $15.1 million per year to serve people experiencing chronic homelessness. Additional investments in permanent supportive housing (such as the Denver example described above), at an estimated cost of about $12,800 per person, will likely be necessary to stably house many who experience chronic homelessness. These


investments are estimated to cut those system costs by 49.5% for a net savings to taxpayers of about $4,800 per person. This means that investment in permanent supportive housing as a way to end chronic homelessness can yield Minneapolis and Hennepin County annual savings of just over $2 million.\footnote{Ibid.} Perhaps counterintuitive to many, it actually saves society money to give people experiencing chronic homelessness a house and proactively care for them for free.

**The Health Costs of Unaffordability, Insecurity, and Instability**

In any conversation on the costs of housing insecurity and instability, it is necessary to understand housing’s centrality as a social determinant of health—and the higher individual and system costs associated with higher levels of insecurity and instability. To be clear, while the power-law distribution described above persists—with a small number of people at the far-left end of the housing continuum incurring far greater costs on a per-person basis than others experiencing temporary homelessness or other levels of housing unaffordability—the fundamental importance of housing to a person’s physical and mental health means that it is intricately linked to other aspects of life, and higher healthcare costs are strongly correlated with higher rent burden.\footnote{Cox, R., Henwood, B., Rodnyansky, S., Rice, E., & Wenzel, S. (2019). Road Map to a Unified Measure of Housing Insecurity. *Cityscape*, 21(2), 93-128. Retrieved from www.jstor.org/stable/26696378} \footnote{Bowen, E. A., & Mitchell, C. G. (2016). Housing as a Social Determinant of Health: Exploring the Relationship between Rent Burden and Risk Behaviors for Single Room Occupancy Building Residents. *Social Work in Public Health*, 31(5), 387–397. https://doi-org.ezp3.lib.umn.edu/10.1080/19371918.2015.1137518} Furthermore, the housing continuum is not one-directional. People have to work very hard to move to the right (toward stable rental or ownership), but it takes only one large health or income shock to slip leftward from being stably housed to experiencing
instability in the form of doubling-up with other households, frequently moving, forced
displacement, and other forms of housing transience (including homelessness). Studies
have shown that housing unaffordability, insecurity, and instability are inextricably
linked to poorer physical and mental health outcomes. These costs, while difficult to
quantify, must be considered in weighing the net cost and benefit of investments aimed
at addressing Minneapolis’s long-term affordable housing needs.

The Unequal Burden of Housing Unaffordability

When thinking about housing costs it is important to place discussions within
the context of who is or will be affected. Housing affordability and the burden of
housing costs on low-income families are inherently issues that affect those that have
the least. Housing that is expensive affects everyone within Minneapolis even those that
earn the most, but housing being unaffordable or being cost-burdened by housing are
issues that affect low-income households. They are affected by housing stock that is
substandard and dilapidated but have little ability to implement changes or
improvements without assistance. Low-income households face trade-offs when their
housing costs increase and are forced to make cuts from other essential areas of their
livelihoods. Figure 5.b shows income level by census tract within Minneapolis and the
areas of lighter color are more likely to have large amounts of households that are
cost-burdened or feel the effects of housing unaffordability more readily than higher
income areas.

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https://doi-org.ezp3.lib.umn.edu/10.2105/AJPH.2019.305210
Looking at poverty rates in Minneapolis disaggregated by race also indicates who may be most affected by unaffordable housing. Figure 5.c shows that approximately 30% of white and Black residents in Minneapolis live below the national poverty line and both groups are likely to be affected by unaffordable housing costs.

Figure 5.c: Poverty by Race and Ethnicity

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49 Ibid.
Another indication of who is affected by housing unaffordability is by examining the existing home values in Minneapolis. Figure 5.d shows the percentage of housing at each price point with values between $150,000 and $750,000 representing more than 60% of all homes in Minneapolis. This helps explain why most low-income households are renters rather than homeowners. The available housing stock simply prices most families out of the local market with an area median income of around $60,000. Predatory mortgage lending practices already contributed to the housing market collapse in 2008, and the number of foreclosures affected middle and low-income residents that were unable to afford mortgages.

Figure 5.d: Percentage of housing at each price point

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Perception of Affordability

If Minneapolis is perceived as an unaffordable place to live the area can feel the effects by people seeking higher wages to move to the area, displacement of low-income households, and younger-college age people being priced out of the area. Economic labor theory helps us understand why higher wages and displacement might occur, while we can intuitively imagine situations in which entry level jobs and a housing stock mismatch may encourage younger people to settle elsewhere.

Labor theory and why individuals make decisions on where to live and work is primarily explains the decisions by compensating differentials. Individuals make decisions by weighing the costs and benefits of a specific place, and are willing to deal with undesirable traits or aspects of locations if they are given compensation in the form of higher wages. As an example, if a person had the choice between the same job in Minneapolis, MN and Austin, TX, within their decision they would consider amenities (like access to entertainment or professional sports), climate (cold winters, lots of snow, likelihood of tornadoes, etc.), available housing (proximity to work, ownership vs rental, price), and number of other personal preferences in order to make a decision about what city to live in. If both cities are willing to pay the same wage, then the person would only make a preference decision based on which city offers them the most. If a person sees Minneapolis as having unaffordable housing relative to Austin, one way in which the Minneapolis firm could convince the person to move to Minneapolis, is buy paying a higher wage and compensating for this undesirable trait.
This leads to worker sorting, as Minneapolis firms will constantly need to raise wages in order to attract workers, and this in turn leads to the displacement of low-wage workers that are priced out of housing and are forced to move in order to find adequate housing.

Attracting younger people has become increasingly important to a city and state that are projected to have more people over the age of 65 than under 18 for the first time in history by 2050. But if housing is seen as unaffordable in Minneapolis, or if there is not a robust enough housing mix that provides entry level housing, college graduates and younger people may be priced out and Minneapolis may miss out on attracting new talent. This may in turn lead to declining levels of productivity and labor force participation as there are fewer workers available to replace retiring workers.
Recommendations on Filling the Gap

What other cities have worked on this?

A number of studies conducted at the national level attempt to quantify the affordable housing gap in the U.S. Most studies conducted at the municipal level, however, often only quantify and report the number of units needed to close a city’s affordable housing gap. Such studies do not always go on to quantify the cost of closing a city’s affordable housing gap. This report analyzes efforts of three U.S. cities currently working to close their respective affordable housing gaps.

Austin, TX

Austin, Texas is among those cities which have quantified the cost of closing their affordable housing gap. According to Austin’s 2017 Strategic Housing Plan, the city needed 48,000 units, or $6.48 Billion, to close the affordable rental housing gap in 2018. The working group estimated the cost of closing the gap in 2025 would be $11.18 Billion. It is worth noting these figures are for rental units only and were derived from very basic calculations. The City of Austin leveraged those figures, however, to inform housing and community development strategies.

Austin has adopted a variety of strategies toward meeting the city’s affordable housing needs. In 2016, the City Council voted to increase the amount of dedicated

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51 (2017) Austin Strategic Housing Plan, NHDC. The City of Austin used a very basic calculation to arrive at this figure. Notably, this figure is based only on the number of rental units needed and does not account for ownership options. The calculation is determined by the number of rental units needed and a presumed construction cost of $135,000. From: http://www.austintexas.gov/edims/document.cfm?id=273820

52 Ibid
funding for the city’s Housing Trust Fund by allocating 100% of tax revenues generated by property previously owned by the City.\textsuperscript{53} The increase in dedicated funding is expected to exceed $68 Million over the next decade which will more than quadruple the amount received by the Housing Trust Fund since its inception in 1999.\textsuperscript{54}

Another tool used by the city to finance affordable housing is the issuance of bonds. A report produced by the Urban Institute analyzed housing market, population, and economic data for the City of Austin between 2000 and 2015 to assess the state of low- and middle-income housing options in the city. The authors found Austin, like many other cities, experienced significant population growth over the past 15 years and is seeking innovative ways to mitigate negative externalities associated with urbanization, particularly its affordable housing shortage.

The report found development of new housing units generally kept pace with the population growth during the analyzed period, but the number of cost-burdened households increased dramatically. This prompted the authors to review policies and practices Austin communities are using to address housing affordability. They found the city issued general obligation bonds twice during the 15-years analyzed totaling $120 Million in affordable housing development.\textsuperscript{55} The bonds funded a number of programs assisting with development of new affordable units, access to homeownership, and retention. Notably, the study found these investments yielded a high return on investment at a 4-to-1 ratio.\textsuperscript{56}

\textsuperscript{53} Anderson, M. \textit{Austin Builds Its Housing Trust Fund}, 2016.
\textsuperscript{54} Ibid.
\textsuperscript{56} Ibid.
A separate study from 2012 by Civic Economics, IMPLAN, and HousingWorks specifically examined the performance and economic impact of using general obligation bonds to fund affordable housing in Austin, TX. It found that bonds issued in 2006 produced an economic impact upwards of $350 Million for the city and estimated the expenditure of remaining bonds will result in an overall economic impact of $420 Million over a decade.\textsuperscript{57} Civic Economics developed the methodology for this study and noted the findings reported therein are conservative.

**Denver, CO**

The City of Denver has reported an affordable housing shortage of 26,000 units. It has not quantified the cost of closing this gap but has expressed the need for an estimation of costs in its comprehensive housing plan. According to the Urban Institute, the rental housing conditions in Denver are largely representative of other US cities.\textsuperscript{58} To produce an interactive tool which demonstrates the costs and feasibility of developing affordable housing, the Urban Institute examined housing data from the Denver Metro area. Predictably, development costs are one of the greatest barriers to closing the gap which is why Denver is pursuing collaborative strategies to fund affordable housing.

In 2018, the City of Denver and the Denver Housing Authority entered an Intergovernmental Agreement to increase funding for the production and preservation of affordable housing in the coming years. The final agreement resulted in the issuance of nearly $130 Million in affordable housing bonds to be used over the next five years.

\textsuperscript{57} Civic Economics et al. *The Economic Impact of General Obligation Bonds for Affordable Housing in Austin*, 2012.
\textsuperscript{58} Urban Institute, National Housing Conference. *The cost of affordable housing: Does it pencil out?*, 2016.
through the “DHA Delivers for Denver Program” (D3). The announcement made in October 2019 outlines how funds from so-called “D3 Bonds” will contribute to the creation and preservation of 2400 units of affordable housing over the next five years.

Similarly to Austin, the Denver City Council voted to establish a dedicated funding source for the city’s affordable housing fund. “Through a thoughtful balance of property tax revenue and a one-time fee on new development, the fund is estimated to raise $150 million over the next 10 years to create or preserve 6,000 affordable homes for low- to moderate-income families.”

Denver is also prioritizing needs across the housing continuum through an unconventional employment of bonds for housing stability and social impact. Social Impact Bonds (SIBs) are used to address nuanced social issues that sometimes intersect with housing. The City of Denver worked with private investors to fund supportive housing programs with $8.6 Million in bond financing. “The supportive housing program aims to stabilize people caught in a homelessness-jail cycle through housing and intensive services, leading to increased housing stability and decreased jail stays.”

Housing stability outcomes and payment success of the program are being analyzed on an ongoing basis.

Finally, Denver is pursuing a two-year pilot program called the Lower Income Voucher Equity Program, or “LIVE Denver”, which matches working residents to

vacant market-rate units through a subsidy. The primary goal of the program is to expand immediate housing affordability for working families in the city. The program serves residents with incomes between 40%-80% area median income and requires at least one member per household to be employed full-time. Participants contribute 35% of their income toward rent payments, and the remaining amount is subsidized by the program through the City of Denver, private employers and foundations.

Nashville, TN

A Nashville Housing Report from 2016 found an 18,000 unit affordable housing deficit for households earning at or below 60% area median income and estimated a deficit of 31,000 by 2025. The findings elicited a significant response from community organizers, affordable housing advocates, and public officials. As a result, Nashville recently announced “a sweeping affordable housing initiative designed to significantly accelerate the city’s efforts to address housing needs”.

Nashville’s “Under One Roof 2029” is a $750 Million initiative to create at least 10,000 new units over the next decade. The initiative commits $150 Million to the Barnes Fund, the city’s housing trust fund, over the next ten years and dedicates $350 Million to the Metro Development and Housing Agency (MDHA) through general obligation bonds. The additional $250 Million, however, is posited as a “challenge to the private sector to step forward with matching dollars”. While the latter is likely not

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63 Ibid
64 Mulgrew, T. Mayor Briley Commits Unprecedented Funding for Affordable Housing, 2019.
65 Ibid
forthcoming, the aforementioned investments from the city represent a significant advancement toward closing the affordable housing gap in Nashville.

Analysis of other cities’ efforts to address the affordable housing gap must account for their respective political, social, and economic environments. Certain policies or initiatives adopted in one city may be infeasible both economically and politically in another. Additionally, outcomes of such policies can not necessarily be generalized. Although Denver’s rental housing conditions are largely representative of other U.S. cities, its governmental structure and political composition may differ drastically from other cities. For instance, Denver re-elected its mayor for a third term in 2019 and enjoys relative political stability, whereas Nashville elected its third mayor in three years in 2019 and is experiencing political volatility. Thus, the political climate can play a significant role in a city’s ability to meaningfully address the affordable housing gap.

**What is Minneapolis doing right now?**

The City of Minneapolis made the unprecedented decision to eliminate single-family zoning. The rezoning takes effect as of January 1, 2020 and will increase the allowable residential density throughout the city. This has been reported as the city’s primary effort to address its affordable housing issue. “The City will prioritize the creation of units affordable to households with incomes less than 30% and 60% of Area Median Income (AMI) through new construction/positive conversion, preservation,
acquisition and substantial rehabilitation.” To supplement the unrestricted zoning, the city also enforces inclusionary zoning requirements. In addition, the city allocated just over $40 Million toward affordable housing in 2019.

The city’s Affordable Housing Trust Fund (AHTF) will receive $21 Million of that amount. The 2019 funding is a one-time infusion into housing programs in Minneapolis. The AHTF receives annual funding from the city through the annual budget approved by the City Council but does not have a dedicated funding source.

The City has a Housing Bond Revenue Program to “finance the acquisition and rehabilitation or new construction of owner-occupied or renter-occupied residential units where the intended occupants of the units qualify the Project for tax-exempt status in conformance with the Internal Revenue Code, the Statutes of the State of Minnesota and the City Ordinances.” There is an application guide for developers wishing to pursue bond funding, but there is little available information concerning how many bonds are issued annually.

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Recommendations on Next Steps

Policy Recommendations

Using this research, especially the gap calculations and housing projections, we envision this study will prompt conversations around the real cost of housing. The unprecedented move to increase the allowable residential density throughout the city is reflective of forward-thinking planning. However, this approach will not adequately enable development of affordable housing or even mitigate housing price appreciation if unaccompanied by supplemental policies to account for market failures and negative externalities. Reliance on rezoning to meet present and future housing demand may result in increased supply, but it will fail to meet the city’s housing demands.

The gap calculations can be useful as a tool to inform and influence institutional policy- and decision-making, specifically regarding funding. We envision this is especially useful for organizations, like CLCLT, who are working to increase access to permanently affordable housing. Below are a few specific policy recommendations guided by our findings.

1. Minneapolis Affordable Housing Trust Fund needs a dedicated funding source.
2. The City should expand the issuance of Housing Revenue Bonds and Social Impact Bonds.
3. The City should expand access to permanently affordable ownership options through limited- and shared-equity models.
4. Protect existing affordable housing, both subsidized and NOAH by expanding programs such as the Tax 4D program.

5. Advocate for the formation of a City database for reporting of rent amounts by landlords.

**Recommendations on Future Research**

Future research should be paired with the City’s ongoing Long Term Affordable Housing Study. The findings of this report can supplement that research. Considering the limitations of this study, we recommend working with the City’s Housing Department to establish more accurate predictions for the future housing needs. Additionally, future research on the Minneapolis affordable housing gap will benefit by incorporating CoStar data. This will ensure greater accuracy of rental market calculations. Finally, future research on this topic will benefit from an investigation of community organizations’ efforts to leverage affordable housing gap figures to effectively advocate for increased affordable housing funding.
Appendix A: Calculations Table (see separate file)

Appendix B: Literature Review (see separate file)